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REPORT

Empowering the next generation: Advancing maxillofacial prosthetic education at the special Sydney edition of yMPE workshop

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From July 24-27, 2024, the Academy of Australian and New Zealand Prosthodontists (AANZP) hosted a special Sydney edition of the International Workshop for Young Maxillofacial Prosthetic Educators (yMPE) (Fig 1), set against the stunning backdrop of the Kimpton Margot Sydney. This unique event, organized in collaboration with Digitodontics International Academy and the University of Sydney, was held as part of AANZP's 2024 Biennial Scientific Meeting. The workshop aimed to equip young prosthodontic educators with the skills and knowledge necessary to excel in both clinical and academic settings, positioning them as future leaders in maxillofacial prosthetics. The workshop's articles, published with support from the *International Journal of Maxillofacial Prosthetics* (iJMP), added to its significance as a platform for advancing global standards in the field.

The primary objectives of this workshop focused on enhancing participants' clinical supervision and teaching capabilities. Young educators were exposed to case studies involving complex maxillofacial defects, encouraging in-depth discussions on treatment plans and the application of prosthetic solutions. Through a blend of lectures, participants were also guided in improving their teaching and presentation skills, an essential aspect for any academic career. A notable emphasis was placed on mastering publication processes, as attendees engaged with authors of international journals, gaining valuable insights into research dissemination in maxillofacial prosthetics.

Beyond the core objectives, the workshop served as a vital platform for integrating cutting-edge digital technologies into educational and clinical practices. With the rapid evolution of digital tools in prosthetics, educators were introduced to the latest advancements, such as virtual reality and digital workflows, with a particular focus on their application in teaching and research. The combination of theoretical knowledge and practical exposure provided participants with a holistic learning experience, setting the stage for their professional growth and the continued development of maxillofacial prosthetics education across Australia, New Zealand, and beyond.

Instructors

The workshop was led by a blend of Sydney-based and international experts in the field. Dr. Dale Howes, Associate Professor at the University of Sydney's School of Dentistry, served as the principal local organizer. Dr. Christine Wallace, Australia's only board-registered Maxillofacial Prosthodontist, lent her extensive expertise as Head of the Department of Oral Restorative Sciences at Westmead Centre for Oral Health. Dr. Tim Manzie, an Oral and Maxillofacial Surgeon at Chris O'Brien Lifehouse Hospital, offered insight into head and neck surgery. Internationally, Dr. Candice Zemnick, a Maxillofacial Prosthodontist with over 18 years of experience at Columbia University, and Dr. Mahmoud Elbashti, founder of yMPE and director of Digitodontics International Academy, contributed their global perspectives.



Fig 1. The special Sydney edition of the International Workshop for Young Maxillofacial Prosthetic Educators (yMPE) in Sydney, Australia.

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Participants

The workshop catered exclusively to 27 postgraduate participants from Australian and New Zealand universities offering Doctor of Clinical Dentistry in Prosthodontics programs. The participants represented five Australian universities—University of Sydney, University of Melbourne, University of Queensland, University of Adelaide, and University of Western Australia—as well as the University of Otago in New Zealand. These attendees, aiming for careers in academia and clinical service, were eager to enhance their expertise in treating maxillofacial defects and preparing for future roles as educators.

Workshop Program

The workshop program spanned two days, offering a well-rounded combination of lectures, and collaborative discussions that focused on the latest developments in maxillofacial prosthetics. Each session was designed to address the core objectives of the workshop, providing participants with insights and experience under the guidance of internationally recognized experts.

The comprehensive workshop program began on Wednesday, July 24, 2024, with an opening lecture by Dr. Dale Howes, titled "The Evolving Role of the Prosthodontist in a Head and Neck Team." Dr. Howes set the tone for the workshop by exploring the multidisciplinary nature of maxillofacial prosthetics, particularly the importance of collaboration between prosthodontists, surgeons, and oncologists in treating patients with complex head and neck defects. This session emphasized the critical role that prosthodontists play in patient rehabilitation, from surgical planning to prosthetic design, providing participants with a broad understanding of their responsibilities in a clinical team.

Following Dr. Howes, Dr. Tim Manzie took the stage with his lecture, "Virtual Reality in Maxillofacial Reconstructive Planning." Dr. Manzie's session introduced participants to the cutting-edge world of virtual reality (VR) and its potential for revolutionizing maxillofacial reconstruction. Attendees were given a glimpse into the future of treatment planning, where VR technologies enable detailed simulations of surgical interventions and prosthetic designs. This session not only highlighted the technological advancements available but also emphasized how these tools can improve the educational experience for students, helping them better visualize complex anatomical structures and surgical outcomes.

Dr. Christine Wallace followed with a detailed presentation on "Etiology and Traditional Prosthodontic Rehabilitation of Maxillary and Mandibular Defects." Dr. Wallace delved into the causesof various maxillofacial defects, including trauma, congenital anomalies, and cancer, before discussing traditional approaches to prosthodontic rehabilitation. Her lecture underscored the importance of understanding the underlying causes of defects in order to develop effective prosthetic solutions, bridging the gap between diagnosis and prosthetic application. The session also provided practical case studies, where participants were encouraged to evaluate different treatment approaches. (Fig 2).



Fig 2. A lecture by Dr. Wallace about the "Etiology and Traditional Prosthodontic Rehabilitation of Maxillary and Mandibular Defects".

After a short break, the focus shifted to the realm of digital technology, starting with Dr. Mahmoud Elbashti's presentation, "The State of the Art of Digital Technologies in Maxillofacial Prosthetics". Dr. Elbashti's session showcased the latest digital advancements, including 3D printing, CAD/CAM systems, and digital scanning, all of which have transformed the landscape of prosthodontics. Participants learned how these technologies are used not only in clinical practice but also in teaching, offering students more precise, hands-on learning experiences (Fig 3).



Fig 3. A lecture by Dr. Elbashti about the "The State of the Art of Digital Technologies in Maxillofacial Prosthetics".

The presentation highlighted the practical applications of these technologies, which allow for faster, more efficient production of prostheses and increased accuracy in treatment planning.

The morning concluded with Dr. Candice Zemnick's engaging lecture, "Aligning Digital with Traditional Approaches to Accommodate the Evolving Patient." Dr. Zemnick demonstrated how digital technologies can be integrated with traditional prosthodontic methods to create more personalized treatment plans for patients with complex maxillofacial defects. Her session focused on the design of removable substructures for implant-retained prostheses, offering practical advice on how to combine both approaches to improve patient outcomes (Fig 4). This session served as a bridge between the old and the new, giving participants a comprehensive understanding of how to balance innovative techniques with established practices.



Fig 4. A lecture by Dr. Zemnick about the "Aligning Digital with Traditional Approaches to Accommodate the Evolving Patient".



Fig 5. Participants engaged in informal discussions and network with their peers and instructors, fostering a collaborative environment for the exchange of ideas.

After a break for lunch, participants had the opportunity to engage in informal discussions and network with their peers and instructors, fostering a collaborative environment for the exchange of ideas. This session allowed for deeper conversations on the day's topics, encouraging participants to share their experiences and perspectives on the evolving field of maxillofacial prosthetics (Fig 5).

The second day of the workshop took place on Friday, July 26, 2024, during the AANZP's Annual General Meeting. In a special segment of the program, Dr. Candice Zemnick delivered a talk titled "You Can Take It With You: Supporting the Continuity of Education from Program to Practice." Her session addressed the challenges of transitioning from academic programs to clinical practice, particularly in terms of maintaining educational standards and ensuring continuity of care for patients. Dr. Zemnick highlighted the multiple benefits of bridging the gap between program-based learning and real-world clinical application, offering practical strategies to help educators support their students throughout this transition.

Dr. Mahmoud Elbashti concluded the workshop program with a forward-looking presentation on "The Future of Digital Technologies in Maxillofacial Prosthodontics." Dr. Elbashti explored the potential advancements that are on the horizon, from AI-driven prosthetic design to fully digital workflows that can streamline the production of complex prostheses. His presentation encouraged participants to think critically about how they can incorporate these technologies into their own teaching and clinical practices, preparing them for the next wave of innovation in maxillofacial prosthetics.

Outcomes

The Sydney edition of the International Workshop for Young Maxillofacial Prosthetic Educators (yMPE) successfully achieved its objectives, delivering significant outcomes for both participants and the broader field of maxillofacial prosthetics education. Over the course of the two-day event, participants gained a deeper understanding of their roles as educators, enhancing their ability to supervise clinical cases, develop effective teaching methods, and contribute to the academic community through research and publication. The workshop's comprehensive curriculum, coupled with the expertise of the instructors, equipped attendees with valuable tools for their future careers.

The workshop made a substantial impact on the participants' teaching and presentation abilities. Through a series of intensive lectures led by seasoned educators, attendees were introduced to advanced pedagogical techniques. They learned how to effectively structure and deliver lectures, communicate complex information in an accessible way, and engage students in a meaningful learning

experience. This aspect of the workshop not only enhanced the participants' classroom performance but also prepared them for the challenges of presenting at scientific conferences and engaging in public speaking, which are essential components of an academic career.

The integration of digital technologies into maxillofacial prosthetics was another critical outcome. Attendees were introduced to state-of-the-art tools such as 3D printing, CAD/CAM systems, and virtual reality, learning how these technologies can enhance both clinical outcomes and educational practices. Participants gained hands-on experience with these tools, exploring their practical applications in the design and creation of prostheses. This exposure to the latest digital advancements prepared educators to introduce these technologies into their own curricula, ensuring that students are trained in cutting-edge techniques that will define the future of the profession.

Finally, the workshop fostered a strong sense of community among the participants and instructors. The collaborative nature of the event encouraged networking and the exchange of ideas, helping to build lasting professional relationships. Participants left with not only a broadened skill set but also a supportive network of colleagues from across Australia and New Zealand. This sense of camaraderie is expected to contribute to ongoing collaborations in both research and education, further enriching the field of maxillofacial prosthetics.

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Fig 6. A group picture for the participants and instructors at the special Sydney edition of yMPE workshop.