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By Dr Shikha Sharma

Dr Giampiero Rossi-Fedele is currently a professor in endodontics at the University of Adelaide, South Australia, and since 2014 the course convener for the doctor in clinical dentistry in endodontics. Currently, he is one of the 32 global experts working towards the development of the European Society of Endodontology S3-level guidelines for the treatment of pulpal and apical diseases. Dr Giampiero is the lead author of the "Revised guidelines for educational requirements for specialisation in endodontics in Australia and New Zealand (July 2022)". Apart from being the associate editor of the *European Endodontic Journal,* Dr Giampiero is a reviewer and editorial board member of several reputed international endodontic journals, including the *Journal of Endodontics* and *International Endodontic Journal.*

Dr Giampiero, it's a pleasure to have the opportunity to chat with you. You've had an extensive academic journey, from your initial qualification in dentistry to your current position as a professor in endodontics at the University of Adelaide. Could you share with us what initially sparked your interest in Endodontics, and how that passion has evolved over the years?

I studied dentistry at the University of Rome, La Sapienza in the 1990s. We had a very motivating professor called Vinio Malagnino. He made the discipline very enjoyable to all students and he was very approachable. He motivated me as well as many other colleagues—some very famous peers—who studied under him and engaged us with endodontics. My passion evolved with working and, from the clinical point, the ability to predict technical outcomes from the start is what keeps me going.

Dr Giampiero Rossi-Fedele interviewed by Dr Shikha Sharma, Section Editor, Endodontics, Dental Tribune South Asia (Image: Dr Giampiero Rossi-Fedele)

Your academic achievements are impressive, including obtaining your MClinDent in endodontology from UCL/Eastman Dental Institute and your PhD from PUCRs in Porto Alegre. How have these experiences shaped your approach to teaching and research in endodontics?

Every experience helps to shape who you are. I have been very fortunate to be exposed to many different philosophies, which has allowed me to create my own views. I have learned that endodontology is not black or white, but there are many subtle differences that are very meaningful and valid at one time.

As the course convener for the doctor in clinical dentistry in endodontics at the University of Adelaide, you play a pivotal role in shaping the next generation of endodontists. What are the key principles or skills you emphasise in your teaching to ensure your students excel in this specialised field?

Candid communication with patients. Update yourself critically throughout your career as your specialty course is the stepping stone in your life as a specialist.

In addition to your academic roles, you're also involved in various committees and societies, such as the Australian Society of Endodontics Education Subcommittee. How do you balance your academic responsibilities with your contributions to these professional organisations?

I believe that there is no separation between teaching, clinics, research and external engagement. They are managed in unison.

Obtaining your postgraduate certificate in learning and teaching from the University of London reflects your commitment to enhancing the educational experience for both students and fellow educators. Could you share some insights into the innovative teaching methods or approaches you've implemented in your endodontics courses?

This course allowed me to have a robust educational background. The specialty helped me to be a good clinician, the PhD to be a good researcher, but I needed a structured course to learn about education. At the end of the day, as a professor at the university, teaching represents one of my main duties.

This course helped me to understand that deep thinking and learning requires a period of search, of doubts, that makes students feel very uncomfortable as they seek a final answer to things, which does not exist.

Endodontics is a field that continuously evolves with advancements in technology and techniques. How do you stay updated with the latest developments, and how do you incorporate these advancements into your teaching and clinical practice?

In the presence of extensive novelties, it is hard to be aware of all of them. Attendance to international quality meetings and reading relevant literature helps. But a lot is missed, I am afraid. I feel that the use of engine-driven instrumentation and cone-beam computed tomography have been the two fundamental changes since I graduated as a dentist. These have been incorporated in specialist clinics extensively, but also are part of the research component of our post-graduate students.

You are one of the 32 global experts working towards the development of the European Society of Endodontology S3-level guidelines for the treatment of pulpal and apical diseases. What are your top three key points for ensuring success in root canal therapy?

Case complexity assessment before treatment and referral if required. Adequate prompt restoration. These are not exclusively based on the guidelines.

Are there any emerging trends or areas of interest that you believe will significantly impact the field?

We need to shift from technical outcomes to more meaningful clinical outcomes. Apart from the radiopacity of a root filling, many other outcome measures should be considered.

Beyond academia and clinical practice, are there any other passions or interests that you pursue in your free time? How do you find balance amidst your busy schedule?

Taking care of my family, and enjoying the open air. My children's football matches. Adelaide is a place where work-life balance is still possible being a compact place.

Let us have a glimpse of a typical weekday in your life from morning to evening. How do you start your day by calling it a day?

I have a fair share of my clinics, and seminars with postgraduate students, and try to squeeze research when a gap is available, as research tends to be left behind. There are a lot of emails to attend to that alter the daily program.

With your wealth of experience, what advice would you offer to aspiring endodontists who are just starting their journey in this field?

Endodontics is a polarizing discipline. You either love it or hate it. If you love it, you are

lucky to be one of us and you will have a life full of satisfaction.

Could you recall any lecture, book, or article that influenced you so much that its application changed the way you practice endodontics for the better?

The lecture for the undergraduate students at the University of Adelaide regarding tooth resorption by Prof. Geoff Heithersay. Amazing content and delivery. A paper I recommend is "Life as an endodontic pathogen". A classic story of root canal microbiology.

Which are your top three book recommendations in endodontics?

Essential Endodontology (the edition by Pitt-Ford and Orstavik), Problem-Solving in Endodontics (Gutmann, Dumsha, and Lovdahl), and Seltzer and Bender's Dental Pulp (Hargreaves and Goodis).

Which are your top three favorite journals in endodontics?

The *Journal of Endodontics, the International Endodontic Journal* and the *European Endodontic Journal*.

Lastly, if you could sum up your philosophy or approach to endodontics in one sentence, what would it be?

Communication, communication, communication.

About the author

Dr Shikha Sharma

Dr Shikha Sharma is the editor of the endodontics section of Dental Tribune South Asia. Dr Shikha completed her BDS at Punjab Government Dental College and Hospital, Amritsar, where she was a Gold Medallist and Best Graduate. She secured Rank 1 in the Punjab State Post Graduate Entrance Exam in 2011 and earned her MDS in Conservative Dentistry and Endodontics from Punjab Government Dental College and Hospital, Amritsar. Dr Shikha is currently serving as a Medical Officer (Dental), Punjab Government — providing expert dental care to the community since 2014. Pursued Observership at the Department of Endodontics, Dental School, University of Adelaide, Australia in 2017. She was adjudged the Best Postgraduate Student at the BITEIN Awards 2014.

Landmark moment: Cancer vaccine trials begin in UK

By Dr Rajeev Chitguppi

In a historic leap for cancer treatment, thousands of patients are set to receive cutting-edge cancer vaccines, marking the beginning of a new era in personalised medicine.

Thousands of patients will soon have access to groundbreaking cancer vaccines, as a significant milestone is reached with the first patient in England receiving the treatment for bowel cancer. Thirty hospitals have joined NHS England's Cancer Vaccine Launch Pad, aiming to expedite patient access to these vaccines through various trials.

Dozens of patients have already enrolled in these trials, with the majority expected to participate from 2026 onwards. Thousands more are anticipated to join in the next year. A 55-year-old man, a higher education lecturer, became the first patient to receive the bowel cancer vaccine after a diagnosis following a routine health check. Post-surgery and chemotherapy, he was referred to a Birmingham hospital for participation in the clinical trial, which aims to prevent the return of cancer by targeting remaining cancer cells.

As part of an NHS trial, Thousands of patients will be able to access "ground-breaking" cancer vaccines. (Image: Canva)

Health leaders emphasise that while successful surgeries can remove tumors, residual cancer cells can cause recurrence. The personalised vaccine, developed using mRNA technology by BioNTech and Genentech, seeks to eliminate these remaining cells. This technology, also used in COVID-19 vaccines, works by identifying specific mutations in a patient's tumor to create a tailored treatment that stimulates the immune system to recognize and attack cancer cells post-surgery.

The trials are part of NHS England's efforts to fast-track access to cancer vaccines, collaborating with various pharmaceutical companies. This initiative could potentially expand to include other cancers such as pancreatic and lung cancer. Eligible participants will undergo blood tests and tissue sampling before being referred to participating NHS hospitals.

NHS England's leadership highlights the potential of these trials to improve cancer survival rates, leveraging the NHS's capacity for large-scale, cutting-edge research. Clinical trials are seen as a crucial option for patients and their families, offering hope and potential advancements in cancer treatment. If successful, these vaccines could revolutionise the prevention and treatment of cancers, significantly impacting patient outcomes.

AI beats humans in some but not in all tasks — current status

Current status of AI in healthcare-AI Index Report 2024 (Image: Canva)

By Dr Rewant Chauhan

The AI Index is recognised globally as one of the most credible and authoritative sources for data and insights on artificial intelligence (AI). The AI Index report tracks, collates, distills, and visualizes data related to AI. This article summarises the relevant points from the 2024 report that are of significance to all healthcare professionals.

This article summarises the seventh edition of the AI Index report. Previous editions have been cited in major newspapers, including The New York Times, Bloomberg, and The Guardian, have amassed hundreds of academic citations, and have been referenced by high-level policymakers in the United States, the United Kingdom, and the European Union, among other places. This year's edition surpasses all previous ones in size, scale, and scope, reflecting the growing significance that AI is coming to hold in all of our lives.

Top 10 takeaways from the report:

1. AI beats humans in some tasks, but not in all. AI has surpassed human performance on various benchmarks, including some in image classification, visual reasoning, and English understanding. Yet it trails behind on more complex tasks like competition-level mathematics, visual commonsense reasoning, and planning.
2. Industry continues to dominate frontier AI research. In 2023, the industry produced fifty-one notable machine learning models, while academia contributed only fifteen. There were also twenty-one notable models resulting from industry-academia collaborations in 2023.
3. Frontier models get way more expensive. According to AI Index estimates, the training costs of state-of-the-art AI models have reached unprecedented levels. For example, OpenAI's GPT-4 used an estimated $78 million worth of computers to train, while Google's Gemini Ultra cost $191 million for computing.
4. The United States leads China, the EU, and the U.K. as the leading source of top AI models. In 2023, 61 notable AI models originated from U.S.-based institutions, far outpacing the European Union's 21 and China's 15.
5. Robust and standardised evaluations for LLM responsibility are seriously lacking. New research from the AI Index reveals a significant lack of standardisation in responsible AI reporting. Leading developers, including OpenAI, Google, and Anthropic, primarily evaluate their models against different responsible AI benchmarks. This practice complicates efforts to systematically compare the risks and limitations of top AI models.
6. Generative AI investment skyrockets. Despite a decline in overall AI private investment last year, funding for generative AI surged, nearly increasing from 2022 to reach $25.2 billion. Major players in the generative AI space, including OpenAI, Anthropic, Hugging Face, and Inflection, reported substantial fundraising rounds.
7. The data is in: AI makes workers more productive and leads to higher quality work in 2023, many studies assessed AI's impact on labor, suggesting that AI enables workers to complete tasks more quickly and to improve the quality of their output. These studies also demonstrated AI's potential to bridge the skill gap between low- and high-skilled workers. Still, other studies caution that using AI without proper oversight can lead to diminished performance.
8. Scientific progress accelerates even further, thanks to AI. In 2022, AI began to advance scientific discovery. 2023, however, saw the launch of even more significant science-related AI applications—from AlphaDev, which makes algorithmic sorting more efficient, to GNoME (8), which facilitates the process of materials discovery.
9. The number of AI regulations in the United States sharply increases. The number of AI-related regulations in the U.S. has risen significantly in the past year and over the last five years. In 2023, there were 25 AI-related regulations, up from just one in 2016. Last year alone, the total number of AI-related regulations grew by 56.3%.
10. People across the globe are more cognizant of AI's potential impact—and more nervous. A survey from Ipsos shows that, over the last year, the proportion of those who think AI will dramatically affect their lives in the next three to five years has increased from 60% to 66%. Moreover, 52% express nervousness toward AI products and services, marking a 13-percentage point rise from 2022. In America, Pew data suggests that 52% of Americans report feeling more concerned than excited about AI, rising from 37% in 2022.

Chapter 5: Science and Medicine

1. Scientific progress accelerates even further, thanks to AI. In 2022, AI began to advance scientific discovery. 2023, however, saw the launch of even more significant science-related AI applications—from AlphaDev, which makes algorithmic sorting more efficient, to GNoME, which facilitates the process of materials discovery.
2. AI helps medicine take significant strides forward. In 2023, several significant medical systems were launched, including EVEscape, which enhances pandemic prediction, and AlphaMissence, which assists in AI-driven mutation classification. AI is increasingly being utilized to propel medical advancements.
3. Highly knowledgeable medical AI has arrived. Over the past few years, AI systems have shown remarkable improvement on the MedQA benchmark, a key test for assessing AI's clinical knowledge. The standout model of 2023, GPT-4 Medprompt, reached an accuracy rate of 90.2%, marking a 22.6 percentage point increase from the highest score in 2022. Since the benchmark's introduction in 2019, AI performance on MedQA has nearly tripled.
4. The FDA approves more and more AI-related medical devices. In 2022, the FDA approved 139 AI-related medical devices, a 12.1% increase from 2021. Since 2012, the number of FDA-approved AI-related medical devices has increased by more than 45-fold. AI is increasingly being used for real-world medical purposes.

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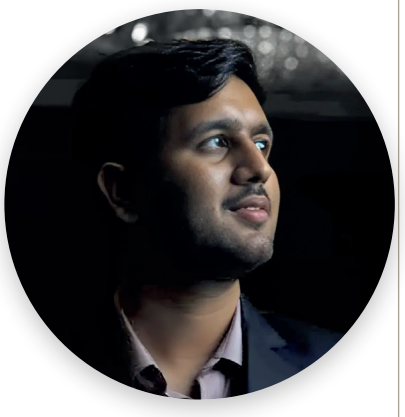
Artificial Intelligence Index Report 2024: https://aiindex.stanford.edu/wp-content/uploads/2024/04/HAI_2024_AI-Index-Report.pdf

About the author



Dr Rewant Chauhan

Dr. Rewant Chauhan is a dental professional with a passion for using technology to improve the practice of dentistry. He has a strong analytical mind and a knack for problem-solving, which he brings to his work as an independent dentist and healthcare innovator. He is particularly interested in using artificial intelligence and machine learning in dentistry. He believes that these technologies have the potential to revolutionize the way dental professionals diagnose and treat patients. To this end, he has been involved in healthcare initiatives that explore the use of AI and machine learning in dentistry.

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INTERNATIONAL HEADQUARTERS

PUBLISHER AND CHIEF EXECUTIVE OFFICER: Torsten OEMUS

CHIEF CONTENT OFFICER: Claudia DUSCHEK

Dental Tribune International GmbH
Holbeinstr. 29, 04229 Leipzig, Germany
Tel.: +49 341 4847 4302
Fax: +49 341 4847 4173
General requests: info@dental-tribune.com
Sales requests: mediasales@dental-tribune.com
www.dental-tribune.com

dti Dental Tribune International

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PUBLISHER
Ruumi J. DARUWALLA

CHIEF EDITOR
Dr. Meera VERMA

CLINICAL EDITOR
Dr. Dilip DESHPANDE

RESEARCH EDITOR
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ASSOCIATE EDITOR
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ASSISTANT EXECUTIVE EDITOR
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DESIGNER
Anil LAHANE

PRINTER
Mehernosh MISTRY
Burzin MISTRY
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"We promote and empower oral pathology specialty practice"—Dr Bhuvan Nagpal

There is a rise in the number of exclusive oral pathology practitioners in India. POPMA is an association that empowers & supports oral pathologists in India. (Image: Canva)

By Dr Geetpriya Kaur

Dr Bhuvan Nagpal, MDS is a practicing oral pathologist and the founder of the Practicing Oral Pathologists and Microbiologists Association (POPMA)—a professional body established to safeguard the interests of practicing oral pathologists in India.

Dr Bhuvan Nagpal is currently serving as Laboratory Director, Quality Head, and Senior Consultant Oral Pathologist at Tohana Manglam Diagnostics, Tohana, Haryana. He is a Govt.-notified and NABL-approved authorized signatory for laboratory reports. He is also the Founder and current President of the Practicing Oral Pathologists and Microbiologists Association (POPMA). He is the Director of the Academy of Oral Pathology and Laboratory Medicine (AOPLM). Dr. Nagpal is also the Director of the Centre for Oral Pathology and Maxillofacial Diagnostics (C-OPMD). He has been affiliated with more than 23 Oral Pathology/General Pathology/Clinical Biochemistry/Oncology/Dental Professional Associations.

Dear Dr. Nagpal, please share with us your inspiring journey in the medical diagnostics industry.

I started my journey in the medical diagnostics industry immediately after completing my MDS. I first approached Manglam Diagnostics, a reputed diagnostic center with more than 30 years of experience in pathology/laboratory medicine, radiology, nuclear medicine, and blood bank services in Hisar City, Haryana. It is an NABL & NABH-accredited Diagnostic Centre. At Manglam Diagnostics, I was exposed to a variety of allied branches of laboratory medicine such as hematology, serology, clinical pathology, clinical biochemistry, cytopathology, histopathology, microbiology, immunoassay, and molecular pathology. I proved my worth with hard work and dedication.

Initially, I joined Manglam Diagnostics as a Consultant Oral Pathologist. Over time, I was promoted to Laboratory Administrator and Quality Manager. A few years later, I took on the role of Project in-charge for establishing new diagnostic centers at Jind, Tosham, Tohana, Fatehabad, Bhiwani, and Moonak. I then became the Chief Administrative Officer (CAO) and later a Medico-Legal Consultant. Currently, I am working as the Laboratory Director of my diagnostic center, Tohana Manglam Diagnostics. Tohana Manglam Diagnostics is an NABL-accredited laboratory with ISO number 15189-2012. I became the primary NABL-approved authorised signatory for laboratory reports. My name is also registered with the Clinical Establishment Act – District Registrar Authority (CEA-DRA) at Fatehabad. My scope of signatory includes Hematology, Clinical Biochemistry, Clinical Pathology, Infectious disease serology, and Microbiology along with Histopathology and Cytopathology of the Oral, Head, and Neck regions.

I also have a specialised Oral Pathology practice dedicated to diagnosing Oral Cancer & Maxillofacial Diseases, named the Centre for Oral Pathology & Maxillofacial Diagnostics (C–OPMD). I evaluate clinically and then conduct histopathological examinations of Oral Potentially Malignant Disorders, cystic lesions, swellings, benign and malignant tumors, cysts and tumors of odontogenic origin, and non-odontogenic lesions from the Head and Neck region, along with salivary gland disorders and tumors, and other orofacial anomalies.

Dr Bhuvan Nagpal

Recently, I established a national-level association—Practicing Oral Pathologists and Microbiologists Association (POPMA). It is a professional body of practicing oral pathologists and microbiologists in India. It is registered under section 9(1) of the Haryana Registration and Regulation of Societies Act, 2012, with Registration number HR/12/2023/01797 dated 29th September 2023. The main concern of this association is to safeguard the interests of oral pathologists in India who want to practice this subject.

What is the scope of an Oral and Maxillofacial Pathologist in India?

According to the Dental Council of India (DCI) Revised M.D.S. Course Regulations, 2007 and 2017 published in The Gazette of India: Extraordinary (Part III, Section 4), an Oral Pathologist should have adequate training and competency to report the following laboratory tests: Histopathology & Cytopathology of specimens belonging to oral & perioral tissues, Routine Hematology, Clinical Pathology, Routine Microbiology, Routine Serology, Routine Clinical Biochemistry, Molecular Pathology and Ultrastructural Investigations.

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According to the Medical Council of India (MCI) and the National Medical Commission (NMC), Dentistry is one of the 29 recognized broad medical specialties and is also taught during the MBBS curriculum. According to the recent Judgment passed by the Honorable Madras High Court on 23.03.2023 which states that BDS is also a recognized modern system of medicine dealing with dentistry. Oral Pathology & Microbiology is an overlapping branch of dentistry as well as pathology and in turn, signifies an integral part of modern scientific medicine.

Can you tell us about your legal journey to achieve a signatory status for MDS oral pathologists?

I filed my first RTI in 2015 during the second year of my postgraduation, concerning the scope of oral pathology. From 2016 onwards, I have filed numerous RTIs to the MCI, DCI, and prominent government and private dental colleges with the Oral Pathology and Microbiology Department. I have written many emails regarding the authorized signatory status of MDS oral pathologists to the Ministry of Health & Family Welfare (MOHFW), Government of India. I have also advocated for making MDS Oral Pathology and Microbiology one of the requisite qualifications for authorized signatories for lab reports to the National Accreditation Board for Testing and Calibration Laboratories (NABL) and to the suggestions working committee for the Clinical Establishments Act, Government of India.

As per the replies to RTIs filed to various dental colleges, qualified Oral Pathologists holding MDS degrees in the subject of Oral Pathology & Microbiology have been signing lab reports for many years. These reports cover routine hematological, cytological, microbiological, biochemical, immunological, and histopathological investigations referred to the Dept. of Oral Pathology & Microbiology in government and private dental colleges recognized by the DCI. Another RTI reply from the Dental Council of India confirmed that a dentist can perform procedures included in the syllabus/course curriculum of MDS Oral Pathology & Microbiology.

> The specialty practice of the domain of oral pathology & microbiology is not only limited to oral, head and neck histopathology and cytopathology but also includes hematology, clinical pathology, clinical biochemistry, serology, microbiology, and even molecular pathology/diagnostics.

What are the documental proofs that empower Oral Pathologists to sign clinical laboratory/pathology reports with the specified investigations?

According to the current Bhartiya Sakshya Adhiniyam (BSA), 2023, and Indian Evidence Act, 1872 (which is repealed), the term "document" means "any matter expressed or described or otherwise recorded upon any substance by means of letters, figures or marks or any other means or by more than one of those means, intended to be used, or which may be used, for the purpose of recording that matter and includes electronic and digital records". Primary Evidence is the best available proof of the existence of an object or a fact because it is an actual document or the authentic source of evidence. Secondary evidence is the evidence that has been duplicated from a unique report or has been substituted from the first thing. Public Documents are those documents that are authenticated by a public officer and subsequently which is made available to the public at large for reference and use. They include Central Acts, orders, or notifications which are certified by the Heads of the departments concerned, and Proceedings of the Legislatures – Journals of those bodies or copies printed by the Govt. Information obtained under the RTI Act is part of the documents held by Public Authority, who are Gazetted officers. A certified copy of a document received by virtue of the RTI Act is secondary evidence. It can be used as Secondary Evidence in Court, since it is part of the Government records and provided by Govt. Authorities, certified under Govt. Seal.

Primary Evidence Under Section 57 Of Bhartiya Sakshya Adhiniyam, 2023 (which corresponds to Section 62 Of Indian Evidence Act, 1872)

- Dental Council of India (DCI) MDS Regulations, 2007 & 2017 for the subject of Oral & Maxillofacial Pathology and Oral Microbiology
- Dental Council of India (DCI) B.D.S. Internship Regulations, 2011
- Dental Council of India (DCI) Dentist Code of Ethics, 2014
- NABL approval letter to DCI regarding MDS Oral Pathology & Microbiology qualification as one of the authorized signatories for lab reports, 2018

Secondary Evidence Under Section 58 Of Bhartiya Sakshya Adhiniyam, 2023, And Section 63 Of Indian Evidence Act, 1872

- Replies to RTI filed to prestigious government dental institutions from different parts of India by Dr Bhuvan Nagpal from the year 2016 to 2019
- Minutes of the meeting of MOHFW regarding the Medical Diagnostic Laboratories including signing authority/ Technical head of medical diagnostic laboratory held in the years 2017 & 2018
- RTI reply stating that a dentist can perform the procedures whatever is present in the syllabus/course curriculum of MDS Oral Pathology & Microbiology, 2020
- NABL Decision Letter for grant of accreditation to Tohana Manglam Diagnostics, 2022 & 2024 in which Dr. Bhuvan Nagpal is the NABL-approved signatory for lab reports with hematology, clinical pathology, clinical biochemistry, infectious disease serology, and microbiology as the scope of accreditation.

What is the vision and mission of the Practicing Oral and Maxillofacial Pathologist Association (POPMA)?

We have laid down a strong foundation for the Practicing Oral and Maxillofacial Pathologists Association (POPMA), where our vision is to unite and empower oral pathologists in India.

The mission of POPMA includes:

- To promote the specialty practice of Oral and Maxillofacial Pathology & Oral Microbiology.
- To encourage Oral Pathology & Microbiology as a career by making an MDS Oral Pathology & Microbiology degree as one of the requisite qualifications to sign the laboratory reports/authorized signatory for lab reports.
- To elevate the scientific and professional status of those practicing this specialty of dentistry/medicine/pathology.
- To advocate the highest standards in education, research, and the practice of Oral Pathology and Microbiology.
- To represent and magnify the value of oral pathology & microbiology to other medical and dental organizations, legislative bodies, and government agencies.
- To encourage closer cooperation of oral and maxillofacial pathologists with clinicians of different specialties and with other medical/dental/pathology/biochemistry/microbiology organizations.

What would be the take-home message from this interview?

Overlapping scope of practice is a reality in a rapidly changing healthcare environment. Several health sciences and medical technology professionals play a key role in diagnosis, treatment, and patient care. No single healthcare professional can claim an exclusive role in diagnosis and treatment. The criteria related to who is qualified to perform functions safely without risk of harm to the public are the only justifiable conditions for defining the scope of practices as per the suggested parameters. ***Competency is someone's subjective dedication & ability, and not based on qualifications alone.*** It is rightly said "survival of the fittest," so competent people will survive. Oral Pathologists are qualified healthcare and laboratory professionals who are authorized to sign laboratory reports and they can play a major and important role in medical diagnostic laboratory.

About the author

Dr Geetpriya Kaur

Dr Geetpriya Kaur is an MDS Oral Pathologist, running a dental diagnostic center for the past 9 years. She taught Oral Pathology courses as a Professor at the Department of Oral Pathology and Microbiology at the Institute of Dental Studies and Technologies (IDST), India. She has also worked as an assistant editor with the Journal of Clinical and Diagnostic Research and has many national and international publications to her credit. Additionally, she has peer–reviewed articles in national and international journals.

Her master's thesis looked into "Detection of oral squamous cell carcinoma metastasis with cathepsin D: An immunohistochemical study" and concluded that patients with lymph node metastasis had higher Cathepsin D(CD) expression and that increasing tumor size seemed to correlate with higher CD expression. Thus, based on the active potential of CD in regulating the prognosis of oral squamous cell carcinoma (OSCC), the design and synthesis of specific CD inhibitors can have significant research and therapeutic consequences.

Shaping the future of implant dentistry: 6th Global AAID and 12th WCOI Implant Conference, Delhi—Dr Mahesh Verma

6th Global American Academy of Implant Dentistry (AAID) & 12th World Congress of Oral Implantology (WCOI) Conference, co-sponsored by WCOI (Japan) will be held in Delhi in Nov 2024. (Image: Canva)

By Dr Rajeev Chitguppi

As the dental world eagerly anticipates the 6th Global American Academy of Implant Dentistry (AAID) and 12th World Congress of Oral Implantology (WCOI) Conference, co-sponsored by WCOI (JAPAN) and other academy partners—in New Delhi this November, we sat down with the visionaries driving this monumental event. Dr Mahesh Verma (Conference Chairman), Dr Shankar Iyer (President, 6th AAID), and Dr Brij Sabherwal (Organising Secretary) are at the forefront of implantology, shaping the future of implant dentistry through cutting-edge discussions, workshops, and scientific presentations. In this exclusive interview, they share their insights on the global impact of this event, what attendees can expect, and why this conference is set to redefine implant dentistry for years to come.

As the Chairman of this landmark conference, what do you believe makes the 6th Global AAID and 12th WCOI particularly special compared to previous events in implantology?

Dr Mahesh Verma: The 6th Global AAID and 12th WCOI is a truly unique event where East meets West, and New Delhi, at the heart of India, serves as the perfect host. This conference brings together decades of experience and the latest innovations in implantology, creating an opportunity for participants to immerse themselves in the most recent advancements. What makes this event stand out is the wealth of clinical takeaways, offering attendees evidence-based treatment solutions and the chance to unlearn and relearn from the world's top experts in implant dentistry. With hands-on workshops, international trade exhibits, and invaluable networking opportunities, the event ensures participants remain at the forefront of the field. Indian experts, whose contributions are making waves globally, also highlight the progress in implant education within the country. This event builds on the legacy of previous conferences, pushing the boundaries of what's possible in oral healthcare and setting new global standards in implantology.

As the President of the 6th AAID, how do you envision this event influencing the global implantology landscape, particularly for emerging markets like South Asia?

Dr Shankar Iyer: This conference is designed to benefit practitioners in South Asia by combining state-of-the-art techniques with proven, reliable methods. It offers practical, evidence-based solutions that practitioners can trust, without being swayed by corporate-driven trends. We've gathered eminent researchers and clinicians to share not only their successes but also their failures, providing a real, unfiltered perspective. This event will have a significant impact on South Asia's implantology landscape, offering practitioners insights that will help them grow in this evolving field.

Organizing an event of this scale requires significant effort and attention to detail. What has been your vision in putting together the 6th Global AAID and 12th WCOI Conference, and what are the key highlights attendees can look forward to?

Dr. Brij Sabherwal: Our vision for the 6th Global AAID and 12th WCOI Conference is to provide cutting-edge education, foster global collaboration, and create meaningful networking opportunities. Key highlights include keynote speakers sharing the latest trends, hands-on workshops for mastering new techniques, research presentations, diverse panel discussions, a showcase of the latest tools and technologies in the exhibition hall, and networking events to build professional connections. We've tailored educational tracks for various expertise levels to ensure inclusivity and relevance for all attendees.

Implant dentistry has seen significant advancements in recent years. How will this conference shape the future of implantology and address the current challenges?

Dr Mahesh Verma: This conference will serve as a global platform for collaboration, bringing together experts, researchers, and practitioners from around the world to exchange ideas and experiences. It fosters an interdisciplinary approach, combining oral surgery, prosthodontics, and periodontology, which will help tackle complex issues and improve patient outcomes. Through hands-on sessions, expert lectures, and workshops, attendees will be able to refine their clinical skills and stay updated on the latest techniques. The event will also promote future research and development, encouraging participants to explore new solutions to existing challenges. With over 35 years of experience, I can attest to the transformative power of such meetings. This conference will offer the guidance needed to navigate challenges, from digital impressions to material choices, ensuring that attendees are equipped for the future of implant care.

With over 1200 delegates expected, this conference is shaping up to be a global hub of innovation. What networking opportunities will be available for professionals looking to expand their horizons?

Dr Shankar Iyer: We are expecting delegates from over 15 countries, including the USA, Canada, and UAE, who are eager to learn about the developments in

India's implant dentistry scene. India is emerging as a leader in technology, with products and software that are unavailable in many other countries. This conference will offer dentists from abroad the chance to experience these innovations firsthand, while also providing ample networking opportunities to exchange ideas and form new professional relationships.

You've brought together a mix of scientific presentations, workshops, and a trade exhibition. How does this balance contribute to a holistic learning experience for delegates?

Dr Brij Sabherwal: The balance of scientific presentations, workshops, and the trade exhibition creates a well-rounded learning experience. Presentations offer theoretical insights, workshops provide hands-on practice, and the exhibition allows attendees to explore the latest tools and technologies. This blend of learning methods connects theory with real-world application, while also encouraging networking and the exploration of innovations that can enhance professional practice.

The theme of this conference is 'Shaping the Future: Trends & Insights in Dental Implants.' Could you give us a glimpse into the key innovations and discussions that delegates can expect to witness?

Dr Mahesh Verma: The theme, "Shaping the Future: Trends and Insights in Dental Implants," offers a forward-looking perspective on innovations that will keep delegates at the forefront of implantology. Attendees will explore advancements in implant materials like biocompatible alloys and ceramic composites, which enhance durability and reduce complications. Digital transformation will be another key focus, with innovations in 3D imaging, computer-guided surgery, and digital implant planning revolutionizing precision in implant placement. Minimally invasive surgical techniques, real-time imaging, and AI in diagnosis will also be discussed, highlighting the importance of mastering today's innovations for future success.

The conference brings together world-renowned experts from across the globe. What message do you hope these experts will impart to delegates, especially young implantologists?

Dr Shankar Iyer: The key message for young implantologists will be to focus on what's real and practical, not on shortcuts or short-term gains. The world experts attending this event are here to share techniques that are reliable and reproducible, not just impressive demonstrations. They will also discuss failures and what doesn't work, reinforcing the importance of understanding the learning curve in this field.

With both surgical and prosthetic principles being core focuses of the event, how will this conference cater to practitioners with varying levels of expertise, from beginners to seasoned professionals?

Dr Brij Sabherwal: The conference will cater to practitioners of all levels by offering structured learning tracks. For beginners, there will be foundational sessions and hands-on workshops to build basic clinical skills. Intermediate practitioners can look forward to advanced topics and interactive case discussions. Seasoned professionals will benefit from specialized lectures, masterclasses, and panel discussions on cutting-edge techniques and innovations. This approach ensures that everyone, regardless of experience, can gain valuable knowledge and practical skills.

In your experience, how has the collaboration between AAID and WCOI enriched the overall learning experience for participants?

Dr Mahesh Verma: The collaboration between AAID and WCOI has enriched the learning experience by merging the strengths of both organizations, and creating a global platform for knowledge-sharing. This partnership brings together a diverse range of international experts, offering unique insights and perspectives. AAID's influence in the West, combined with WCOI's impact in the East, creates a dynamic environment where participants can learn from the best. India's role as the host highlights the country's growing prominence in implant dentistry, and the overwhelming response to the Diplomat and Master Fellowship exams showcases the dedication of young practitioners. This collaboration ensures that attendees gain cutting-edge knowledge, actionable strategies, and networking opportunities, enabling them to address challenges in implantology with confidence.

Looking at the current trends, what do you believe are the biggest opportunities for implant dentistry in the next five years, and how will this event address them?

Dr Shankar Iyer: AI and digital dentistry are on the rise, but the focus will also shift towards managing implant complications and long-term failures, such as peri-implantitis and implant component fractures. Companies are already making changes in design, surfaces, and connections to address these issues. Our event will focus on evidence-based protocols that ensure long-term success, offering delegates practical strategies to navigate these challenges.

What are the long-term benefits for delegates attending this conference, and how will it impact their practice or academic pursuits after the event?

Dr Brij Sabherwal: Attending this conference will have long-lasting benefits, enhancing both clinical practice and academic pursuits. Delegates will improve their clinical skills through exposure to advanced techniques and hands-on training, leading to better patient outcomes. Networking opportunities will foster collaborations and mentorship, supporting career growth. For those in academia, the insights gained will enrich teaching and research, while practitioners will benefit from adopting the latest technologies, giving them a competitive edge and driving practice growth. Additionally, delegates will contribute to the broader dental community by sharing knowledge and assuming leadership roles, influencing future advancements in implant care.

About the author

Dr Rajeev Chitguppi

Executive Editor, Dental Tribune South Asia.

Research & marketing head, ICPA Health Products Ltd.

Founder, Perioindia. Educator in Periodontics & Implantology.

Holds copyright for the concept Perionomics - an effective and efficient practice-building tool.

Rise of unethical at-home dental services in India

According to the Dental Council of India, certain dental service providers in the country send untrained and unregistered staff to patients' homes, posing a threat to patient safety. (Image: Jaromir Chalabala/Shutterstock)

By Iveta Ramonaite,
Dental Tribune International

NEW DELHI, India: According to the online Indian newspaper ThePrint, the number of unethical at-home dental services is slowly increasing in India. Certain companies in the country offer services that include tooth whitening, tooth extraction, the fabrication of night guards and dentures, and orthodontic treatment at the patient's home. Alarmingly, a significant part of these dental services are carried out by untrained and unregistered staff, thus violating existing laws and threatening patients' oral and overall health. Toothsi is a dental technology start-up that was launched in 2018 and has since merged with cosmetic solutions provider makeO. The company refers to itself as India's first and largest at-home smile makeover service provider and says that it uses groundbreaking clear aligner technology to make tooth straightening simple and affordable. Some prominent celebrities in India are among toothsi's brand ambassadors.

The Dental Council of India (DCI) has criticised the company and other similar dental service providers, stating that they are breaking multiple regulations established by the Dentists Act, 1948, and the Revised Dentists (Code of Ethics) Regulations, 2014. For example, DCI reported that it has come to the council's attention that certain service providers employ untrained and unregistered personnel to perform dental services. Additionally, it noted that some companies are providing services such as intra-oral scanning and clear aligner treatment to patients at their homes. As these services are reportedly offered by individuals who are not registered dentists, such behaviour jeopardises professional standards and patient safety.

In light of the illegal dental activity, DCI has directed state councils to promptly issue orders to halt activities to companies and individuals violating the provisions of the Dentists Act, 1948, and to take appropriate legal action against dental service providers that breach these regulations.

"I have been hearing about companies like toothsi which, riding on mega advertising campaigns, trap gullible people and, in many cases, use salesmen to offer dental health services. This is totally unacceptable," said Prof. Mahesh Verma, vice chancellor of Guru Gobind Singh Indraprastha University in New Delhi and a former vice president of DCI, in a news article.

Although DCI has issued multiple public notices on the matter throughout the years as well as a directive to state dental councils just recently, there is currently no evidence that DCI or the state councils have taken any action against companies offering unethical dental treatment. These companies include the Mumbai-based Doctor 365 and Dr. Arry's Mediclinic, which offers dental services in the National Capital Region and the city of Jaipur, according to *ThePrint*.