Despite another decline in sales of dental materials and equipment in Australia last year, the organisers of the country’s largest dental exhibition have reported that they have sold out all available booth space for this year’s ADX14. They also said that they expect a record number of dental professionals to attend the show, which will be held at the Sydney Exhibition Centre @ Glebe Island this weekend.

Exhibitors are showcasing the latest dental products from Australia and overseas at ADX14, including new materials and solutions for an improved workflow in dental practices and laboratories. According to the Australian Dental Industry Association (ADIA), which stages the biennial event, many of these products will be available to dentists in Australia for the first time. Particularly in focus are Dental CAD/CAM and new digital practice solutions, which have become common in many dental practices. Visitors will be eligible for discounts offered by several manufacturers for on-site purchases.

In addition to the industry showcase, the event will feature an extensive continuing professional development programme, which is supported by dental associations and suppliers of dental equipment from Australia and abroad. These seminars are free to visitors and will cover a wide range of dental topics, including oral surgery, implant dentistry and practice management. Well-known oral health care professionals from universities in Australia and other countries will give presentations on issues in aesthetic and preventative dentistry, such as restoration with new ceramic materials, over the course of three days.

There is no mistake about it: this is the event that provides dentists and allied oral health care professionals with the best opportunity to see more, buy more and learn more,” ADIA CEO Troy Williams commented.

According to him, the upcoming ADX14 is shaping up to be the largest edition ever in the short history of the event, which has seen increasing two-digit participation since it was first held in 2008. The latest edition in 2012 in Sydney attracted slightly more than 6,000 dental professionals, according to ADIA figures, which the association expects will be exceeded this year by another
“Oral health promotion training is a tick-box exercise”

An interview with Stacey Bracksley, Melbourne

Despite being taught at university level, there is little information on the effectiveness of oral health promotion programmes in dental education, according to La Trobe University teaching fellow Stacey Bracksley. At ADX14 Sydney this Friday, she will be presenting the findings of a recent review on this matter, which she authored as part of her PhD. today international had the opportunity to talk to her about the reasons for this lack of data and the importance of increased efforts to train dental students adequately in this area.

today international: Ms Bracksley, your paper is currently under review by a scientific journal. Could you tell us a bit about your findings nevertheless?

Stacey Bracksley: The aim of the review was to establish what has been published concerning health promotion training in dental schools internationally. There is a dearth of research and this was demonstrated by the inclusion of only four published studies, which were from Australia, Brazil, Canada and Belgium. It was interesting that the health promotion content was delivered in very different ways. One dental programme used a hospital setting, where the students were interns providing oral health education to patients, whereas another dental and oral health course had a rural outreach programme.

It has been demonstrated that little evaluation of the health promotion training within these courses is taking place or may be taking place but not published, with only one of the papers using students’ personal accounts for evaluation. In some cases, health promotion was tack on to other components in the course. Not one of the studies included evaluated the outcomes of the health promotion training concerning the students’ knowledge, both short and long term.

There are many health promotion frameworks that are used internationally as best practice but they were not widely applied in studies. Health promotion needs to include a spectrum of activities, from individual based to community-based activities. What was found was that they are too focused on individuals, which has been shown to be ineffective. Using smoking as an example, we know that just telling people that smoking is bad for them is largely ineffective, but when we introduce a range of programmes, including legislation, community attitudes, regulations and settings, there is improvement in smoking rates.

While it is good that students are gaining some exposure to health promotion within their degrees, working at the individual level alone will never be as effective as using a range of strategies.

So we know little about what effect these programmes can have on future dental professionals. Do you consider oral health promotion to be a relatively new concept, and if so could this be one of the reasons for the lack of information?

I would disagree that oral health promotion is a relatively new concept. One of the reasons why Promotion (an international framework used to prevent noncommunicable diseases) developed by the World Health Organization has been around since 1986. Campaigns like Prof. Aubrey Sheiham from the University College London School of Life and Medical Sciences have also been talking about the importance of oral health promotion for decades.

I think there are a number of reasons for this lack of data. For example, oral health promotion has taken some time to be accepted and implemented into higher education. One of the main reasons however is that the ethos of dentistry itself is still very much centred on individual treatment care, rather than a holistic approach. This is deeply ingrained in the culture of the profession, making it difficult to implement oral health promotion.

Dentistry is also firmly rooted in the medical model of health, which does not fit well with the underpinning ideas of oral health promotion.

Why is training in oral health promotion generally needed in dental education?

In Australia and similarly in other countries, there has been a push to focus on prevention of disease, rather than a reactive approach to treating them. Dental diseases have been highlighted as preventable and costing a substantial amount of money to treat. With this push towards prevention, we will need trained dental professionals to undertake these prevention efforts.

I think that by not providing oral health promotion training to dental professionals a key aspect of the overall picture is missing. It is like training students in one aspect of health care and leaving out the rest. Dental professionals need to be trained in dental procedures, but they also need to see the bigger picture of a whole person and how the environment affects their patient. Oral health promotion training can provide students with this holistic view.

Despite international efforts like World Oral Health Day in March, oral health promotion still appears to play a minor role in daily practice in general. Is there any evidence that increased oral health promotion has an impact on disease rates for example?

There is evidence to support oral health promotion. One of the major oral health promotion efforts was and still is water fluoridation, this has been attributed to a decline in caries rates. Increasing rates peaked in the 1940s and then a decline in rates was seen from the late 1940s until the early 1990s in industrialised countries. Although the decline cannot be credited to any single cause, it is thought that factors such as dietary changes, daily use of fluoridated toothpaste and the use of systematic (water) and topical fluoride may have all played a part in decreasing caries rates. All of these factors that contributed to the decline are oral health promotion efforts.

If we look to other successful stories in population health, like the decreasing smoking rates, it was health promotion that made the difference. A whole of community approach using solid health promotion theory was taken towards smoking, with strategies such as legislation, smoking bans and taxation on cigarettes making the difference.

Should dental schools generally be required to offer more oral health promotion in their degree?

In Australia and other countries, health promotion is a competency for dentists and oral health therapists (hygienists and therapists). Therefore, health promotion training does occur to some extent in these courses. In theory, graduating dental professionals should be able to understand oral health promotion and be able to apply this knowledge in the field.

However, there needs to be evaluation of this training in my opinion. At this stage, oral health promotion training is often a tick-box exercise: it just has to be somewhere in the course to meet this competency. There appears to be little regard as to whether the students’ understanding of health promotion is adequate and whether this will lead to long-term application once they have graduated. What I would like to see are dental professionals who have a solid understanding of things like the social determinants of health and have the ability to take these into account when treating patients.

Are dental schools adequately prepared to teach oral health promotion?

To some extent, dental schools are prepared. In Australia, this training is actually happening and it differs between schools as to who delivers this training, either dental professionals or public health professionals.

However, I think for oral health promotion training to be successful it needs to be integrated into the whole course and not separated from the clinical content. It must also be monitored and evaluated. At this stage, I do not think that this is being done adequately, so there is definitely room for improvement.

Thank you very much for the interview.
Welcome to our harbour city! Sydney is a vibrant, eclectic, hospitable and beautiful place that we are proud to call home. By attending ADX14 this year, you are joining the almost three million visitors who come to Sydney each year.

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On New Year’s Eve, more than one and a half million people enjoy our spectacular fireworks over the harbour, while Sydney’s Chinese New Year Festival has become the largest celebration of its kind outside Asia. Our beautiful parks, outstanding theatres, concerts and exhibitions, quirky laneways and world class shopping are also highlights.

During your visit, the city will be filled with art for the nineteenth Biennale of Sydney, and you can also enjoy the great exhibitions and activities that are part of our Living in Harmony Festival.

I wish you a memorable and rewarding stay.

Lord Mayor of Sydney Clover Moore
Researchers evaluate implementation of rapid oral HIV tests in dental practices

- HIV infections in Australia jumped by 10 per cent last year, according to recently published figures from the University of New South Wales. A group of researchers from Sydney have recently started investigating whether dental practices and pharmacies could help stop the further spread of the virus by diagnosing more people who are infected and not aware of it through rapid oral HIV testing.

- The trial, conducted in collaboration with the University of Sydney's Faculty of Dentistry, Western Sydney University's School of Health, and Sydney School of Public Health, is currently being conducted in the states of New South Wales, Victoria and Queensland. It seeks to examine knowledge of HIV, attitudes towards people living with HIV and the willingness of Australian dentists to conduct rapid HIV testing, lead researcher Dr Adrian Webster.

- "Evaluations would also need to be done to explore whether it is cost-effective to implement rapid HIV testing in the dental setting versus other settings," Santella added. "Assuming it is cost-effective, we would then explore reimbursement mechanisms so dentists and possibly other dental professionals could bulk bill the government for the test."

- Rapid HIV tests have been available to medical practitioners in Australia since late 2012, but the country has been slow to implement them. The OraSure ADVANCE Rapid HIV-1/2 Antibody Test developed by US company OraSure Technologies and used in the trial has not yet received approval from the Australian Therapeutic Goods Administration. It has been available to dental practitioners in the USA since early last year, when it was approved by the Food and Drug Administration. The latest studies suggest that rapid dental practices could increase testing frequency among regular testers, as well as testing rates.

- According to the Kirby Institute at the University of New South Wales, about 25 per cent of HIV cases in Australia are undiagnosed. In total, more than 31,000 infections were reported in 2011, with almost every second one occurring in New South Wales.

Aussie study suggests dentists are prone to visual illusion

- Objects in a mirror appearing to be farther away than they are is a common illusion encountered by car drivers around the world every day. Misleading visual perception of an object could also be the reason that dentists sometimes drill larger cavities than necessary to fill a tooth or prepare a root canal, a team of psychologists and dental researchers from Australia and New Zealand has suggested.

- In clinical field tests involving eight practising endodontic specialists from New Zealand and conducted in 2002 and 2006, the researchers found that dental professionals tend to fall trap to the Delboeuf illusion, which makes enclosed areas appear smaller than they actually are when seen in a larger context. In their case, a cavity drilled into a tooth appeared to be smaller when the surrounding tissue was in range of the parameters of the illusion, leading to more healthy tissue being removed at the expense of patients.

- The researchers said in the report that it remains unknown whether dentists are aware of this when drilling but recommended that their findings be incorporated into the early stages of clinical training to decrease the risk of cracking or perforating the root end due to having removed too much healthy tissue. It should also be extended to other fields of health care treatment that could be affected by visual illusions, they added.

- “When operating, health-care providers try to save as much healthy tissue as possible. It is important to know that their eyes can deceive them into removing more healthy tissue than necessary,” lead author of the study and psychology expert from the University of Southern Cross in Australia Prof. Robert O’Shea commented.

- Named after its creator, Joseph Remi Leopold Delboeuf, a Belgian scientist, the illusion was first documented in 1865. It has been reported to be used by restaurants to make plates look smaller, among other things.

- For the latest study, more than 20 extracted and root-filled teeth were treated by each participant, who had not been informed about the parameters of the illusion. The participants were asked to judge the size of their dishes by using smaller plates, among other things.

Roland DG Australia expands into dental business

- Roland DG Australia, a provider of milling and 3-D engraving technologies, has opened a 3-D and dental creative centre at its headquarters in Sydney. The facility was established, in part, to strengthen the company’s position in the dental and manufacturing industries throughout Australia, New Zealand and the ASEAN region.

- The facility is mainly focused on Roland’s Easy Shape Dental Solution and the DWX range of dental milling machines, including the DWX-50, which was specifically designed for dental laboratories and technicians for the production of dental prostheses, including crowns, bridges and abutments, and the DWX-4, which was released last October as the world’s smallest dental milling machine by the company.

- “While dentistry is traditionally a male-dominated profession, the proportion of female dentists rose from around 35 per cent to almost 37 per cent between 2011 and 2012,” said AIDW spokesperson Dr Adrian Webster.

- The report also revealed that 97 per cent of employed dental therapists, 95 per cent of employed dental hygienists and 85 per cent of employed oral therapists in 2012 were female, while dental prosthetists were much more likely to be male, with women making up only 15 per cent of this group. With regard to age distribution, there were more men than women across all age groups except in the youngest (20–34 years), with the most in the 45–54 age group (38.7%), followed by the 55–64 age group (18.4%).

- Overall, 19,462 dental practitioners were registered in Australia in 2012, of whom 14,687 or two thirds were dentists. The report also showed that 1,600 (8.3 per cent) worked as dental hygienists, 1,276 (6.6 per cent) as dental therapists, 1,161 (6 per cent) as dental prosthetists and 738 (3.8 per cent) as oral health therapists.
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Unveiling management programmes

The importance of learning how to structure and organise a dental business

By Dr Toni Surace, Melbourne

Let’s face it, when we think of investing in learning and improving our practices, it is usually to help us keep up with the latest clinical techniques and technology. So why would you bother investing valuable time and money in developing skills to run your business, especially if you have placed that burden on someone else, such as your staff or practice manager?

I used to think this way. It took a while to change my mind and now I am happy to share my honest perspective as a principal dentist on what a dental management programme really is all about. Initially, I was not about to abdicating the responsibility of running your practice to someone else. It is not about bold, brash American-style marketing campaigns, and pushing patients to accept treatment. It is also not about persuading patients to pay for dentistry they do not want and cannot afford. To my great amazement, I found that a management programme is all about taking away my ethical responsibility of doing what was best for the patient. I could not possibly become one of those practices after all. I had sworn to an oath on my graduation that I would always do what was in the patient’s best interest. I had thought and that many dentists are perfectionists, become burnt out or suffer from overwhelm.

An exciting revelation was that I could be a dentist and have a life. I knew I had the intelligence to work out systems to make my practice run more smoothly and if I did a little advertising I would attract more patients and hopefully make more money. What I was short on though was time. I finally was such a nice change from working hard, paying all the bills and taking home what was left over for me and my family. My staff also learned how the business ran, which helped me explain why hours needed to be cut at times, why they could not receive a pay rise every year and why we needed to reach our daily targets.

It helped us all work towards a common goal and be on the same page. This is a journey your team embark on as well, and through which they develop personally and professionally. Initially my team were not all committed. A few staff members resigned. In the past, this would have been devastating for me, but I soon learned that this was a fabulous opportunity to obtain the support I really needed from my team. I learned how to hire and train staff to be an engaged and empowered team member, something I had never experienced with my previous team. Not only did I grow, but so did my team. Personal and professional growth is something that anyone who puts in the effort in a management programme will experience. It is this personal growth that is worth more than financial gain for me.

To watch members of my team grow, develop and become more passionate about the practice and their roles was worth more to me than the money that followed. These employees have become loyal staff members and continue to work with me in my practice. They have become family.

Of course, joining a management programme will help you reach your financial goals and will help you structure and organise your business. For me personally, it was important that I create more time, more time for my patients, more time for my young family and for me, and more time to work on my business. I was able to cut down my days dramatically. I went from working more than five days a week clinically to working three days between 10 a.m. and 2 p.m. (school hours) and still earning the same amount of money.

Obviously, it took some time to reach this stage. Now I run my practice remotely. I perform clinical dentistry about one day per month and the rest of the time I have a highly trained and enthusiastic team attending to my patients. It is truly an amazing, life-changing and too good to be true. I wish I could say it is easy and all of it is done for you, but to be honest, it takes a great deal of effort. Going through a programme involves change and moving out of your comfort zone, two things at which I was not terribly good.

I learned to run my business by the numbers: to look at monthly key performance indicators, to have annual plans and budgets, and to make all decisions for the practice based on whether the practice could afford it and not on emotion. This way, I could confidently agree to purchasing a new piece of equipment and not be worried about the repayments. It was a journey that was worth every effort and money spent.

I have a highly trained and engaged team who understand the practice and the numbers: to look at monthly key performance indicators, to have annual plans and budgets, and to make all decisions for the practice based on whether the practice could afford it and not on emotion. This way, I could confidently agree to purchasing a new piece of equipment and not be worried about the repayments. It was a journey that was worth every effort and money spent.
C.E. SYMPOSIUM

Booth 7-9
Dental Tribune Study Club at the ADX 2014 - Australian Dental Expo, 21-23 March 2014

FRI, 21.03
10:00 – 11:00 | Sabine Nahme
Clinical and diagnostic advantages before, during and post endodontic treatment to investigate the root morphology in 3-D
Live Lecture

11:00 – 12:00 | Dr. Marius Steigmann
Implant Placement and Treatment in the Aesthetic Zone - Part 1
Recorded Lecture

12:00 – 13:00 | Dr. Rana Al-Falaki
An Overview of Minimally Invasive Periodontal Surgery Using Er:Cr:YSGG Laser Technology
Recorded Lecture

13:00 – 14:00 | Dr. Hon-Lay Wang
MBF Socket Augmentation
Recorded Lecture

14:00 – 15:00 | Gilles P. Chaumaneet
Lasers in Oral Implantology
Recorded Lecture

15:00 – 16:00 | Sabine Nahme
3-D imaging solutions for powerful diagnostic value without guesswork
Live Lecture

16:00 – 17:00 | Prof. Lorenzo Breschi
Adhesive systems: Overview, Evaluation, Development
Recorded Lecture

17:00 – 18:00 | Dr. Marius Steigmann
Implant Placement and Treatment in the Aesthetic Zone - Part 2
Recorded Lecture

SAT, 22.03
10:00 – 11:00 | Dr. Marius Steigmann
Implant Placement and Treatment in the Aesthetic Zone - Part 3
Recorded Lecture

11:00 – 12:00 | Sabine Nahme
3-D imaging solutions for powerful diagnostic value without guesswork
Live Lecture

12:00 – 13:00 | Didier Dietschi
Ultra-conservative smile and aesthetic rehabilitations: indications, limits and clinical procedures
Recorded Lecture

13:00 – 14:00 | Prof. Dr. Roland Frankenberger
Preparation techniques and luting of all-ceramic restorations - What are the key issues?
Recorded Lecture

14:00 – 15:00 | Dr. Derek Mahony
Early interceptive orthodontic treatment for the general dental practitioner
Live Lecture

15:00 – 16:00 | Sabine Nahme
CBCT-assisted treatment planning, implant placement and prevention of surgical failures. Confident surgery, powerful tools
Live Lecture

16:00 – 17:00 | Stephane Browet
Fibre reinforced composites … a real break-through
Recorded Lecture

17:00 – 18:00 | Dr. Ed McLaren
The “BFEP”: Bonded Functional Esthetic Prototype: a little PSD
Recorded Lecture

SUN, 23.03
10:00 – 11:00 | Dr. Marc Geissberger
Quarterbacking Difficult Cases in Restorative Dentistry
Recorded Lecture

11:00 – 12:00 | Sabine Nahme
Clinical and diagnostic advantages before, during and post endodontic treatment to investigate the root morphology in 3-D
Live Lecture

12:00 – 13:00 | Prof. Andre Pelegrine
Dr. Luz Antonio Cosmo
Soft Tissue Regeneration - The State Of The Art With a Clinical Approach
Recorded Lecture

13:00 – 14:00 | Didier Dietschi
Ultra-conservative smile and aesthetic rehabilitations: indications, limits and clinical procedures
Recorded Lecture

14:00 – 15:00 | Dr. Marius Steigmann
Implant Placement and Treatment in the Aesthetic Zone - Part 4
Recorded Lecture

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I learned all this through a comprehensive examination process, and I was able to perform the type of dentistry I wanted to do. Life became much less stressful.

Well, those are the good points. What is the downside of joining a management programme? Well, firstly, such programmes appear to be costly. Most are around $3,500 per month. I looked at this as being less than two crowns a month. I personally began doing more than two crowns a day after a year in the programme. I had case acceptance rates skyrocketed and I was able to perform the type of dentistry I wanted to do. Life became much less stressful.

The final challenging aspect, which got me out of my comfort zone, was the verbal skills I was taught. I struggled with some of the statements I was supposed to use. One day I just gave up and started saying the same things but in my own words and it was so much better. In Australia, we need much more of an Australian spin to the things we say to patients. I always say the verbal skills are the recipe, but you need to add your own ingredients to make it comfortable and yours. As Aussies, we do not like anything that sounds fake or non-genuine and we can detect it from miles away. It is important that the conversations you have with people are genuine and not forced or fake.

There are many other great reasons that make joining a management programme a good idea. Of ten, as dentists who practise on our own, we can feel quite isolated. Unless you have friends from university with whom you keep in touch or you are involved in other dental groups, you may never socialise with other professionals who face the same issues you do. It is amazing how even dentists in the same suburb can become friends and genuinely help each other with support, ideas and companionship, and in doing so share their knowledge and grow their businesses. The community spirit and opportunity to talk about difficult cases, patients and business and start to help ease the burden we all endure in being a practice owner. Why spend your time trying to reinvent the wheel when there are companies out there that have done it and proved it works in practices all over the world?

I must reveal that I have a bias towards Momentum Management. I found the programme so life-changing for me, I had to be part of it and help others to experience the same. With my own successful practice practically running itself, I now help with the time and financial means to purchase Momentum and continue the great work it has done for over 13 years. And yes, I can now use the famous tag line “I loved it so much, I bought the company!”.

A Dental Science graduate of the University of Melbourne, Dr Paul Surace is a principal dentist and the Managing Director of Momentum Management in Melbourne. This Friday, she will be lecturing on the importance of marketing in dental practice as part of the ADX14 continuing professional development programme.
Patient expectations are changing

By Gary Smith, Melbourne

Business as it stands today is fast and ever-changing. Trying to build a more sustainable business while just keeping our heads above water is at times somewhat challenging and time-consuming. It is even more difficult if we do not understand the basic principles of practice management.

Our health care industry is currently under tremendous pressure from the government, as well as the public and private sectors, to improve health care access and control escalating costs. Changes in legislation, regulations and reimbursement options are forcing our health care industry to address and address these issues. The delivery of health care is a business and, as such, is subject to the same market factors, risks and constraints as other service industries, which require sound business principles and techniques to survive and thrive.

What is shaping your future as a small or medium enterprise in dentistry? Besides changing dental practice patterns owing to governmental and private insurers’ influences, it is new autonomous, as well as patients’ demands and expectations. In the changing world in which we live at both work and play, we are continually challenged to have to learn to use new tools and new ideas that we cannot navigate without a charted course. The ocean is too vast, too immense and too unforgiving. The same is true for our future. A fulfilling, rewarding profession is on the horizon, but with a map and a compass, we might sail right pass it. Over the past ten years, there has been a paradigm shift in health care. No longer is it good enough to simply be a great ball pitcher, Satchel Paige, once counselled the public with these words, “Don’t look back; someone may be gaining on you.” Without education, we will lose ground. The gaining of knowledge sets the blueprint for us to chart our own destiny. The skills needed in the past to be a successful owner/employer are not going to be adequate for the future. With the rapid evolution of health care practice management, successful practices, multidisciplinary teams of course all those new government compliance requirements and private health insurers’ products, we are going to have to be at the cutting edge, and in many cases develop entirely new sets of skills, to cope with the environment we will be facing in the next number of years. These include risk management, productivity management, e-commerce, clinical services management and accreditation.

There are key areas for the person who is to manage the practice. This person is known as the practice manager. Associated with this developing role of practice manager, or the person performing the management role, are a number of responsibilities (Fig.1). The time devoted to each of those responsibilities will vary, depending on the requirements of the practice at specific times; however, all will be performed at some stage.

Practice management is about having to learn to use new tools and gather information that may or may not be currently on the horizon. The phrase “we don’t know what we don’t know” is very apt when it comes to practice management because generally in the health environment we will be facing in the next number of years. These include risk management, productivity management, e-commerce, clinical services management and accreditation.

An experienced sailor once told me that you cannot navigate without a charted course. The ocean is too vast, too immense and too unforgiving. The same is true for our future. A fulfilling, rewarding profession is on the horizon, but without a map and a compass, we might sail right pass it. Over the past ten years, there has been a paradigm shift in health care. No longer is it good enough to simply be a great dentist. Today’s patients expect to receive excellence in health care and health consumers are increasingly raising the bar when it comes to what they expect from their health providers, such as the level of service competing with the demands of a payment/reimbursement system. Similarly, the concept of a practice manager adding value to a health care practice has been increasingly recognised as an essential component in the formula for the successful operation of any health related business.

Today, practice managers undertake a wide range of practice management responsibilities, including human resources management, financial management, compliance, the patient journey, risk management and marketing. If you have professional, well-educated staff who are aware of the fundamentals of practice management and are looking after those aspects of your practice then congratulations: you are well on your way to meeting your patients’ expectations of what they consider to be excellence in health care.

Now more than ever, practice managers are charged with the responsibility of reviewing and implementing processes in practices to increase efficiency and contribute to patients’ overall experience of excellence in health care. But, just like your clinical skills, practice management skills need to be continuously refined through a combination of ongoing education, understanding of your health care discipline environment and the application of skills learnt on a daily basis. Remember, practice management is not my job; it is my profession.

Gary Smith is a life member of the Australian Association of Practice Managers, a Melbourne-based partner association of ADX14 Sydney. He has been a practice manager for nearly 30 years.

Fig. 1: Change in average allocation of time to practice management responsibilities.
Detecting dental caries: Is there anything new?

An overview of the latest technologies and their clinical potential

By Prof. David J. Manton, Melbourne

Dental caries is still one of the most prevalent but preventable diseases in the world. There is increasing evidence that those with poor oral health have poorer general health outcomes as well. Whether this is a causative relationship or an association with other factors is yet to be determined.

Even though a large proportion of the population in developed countries has seen improvement in their oral health over the past three or four decades, individuals from certain groups, such as lower socio-economic groups and the medically compromised, are still at high risk of developing dental caries. There has been a change in the philosophy around what is considered appropriate treatment, with a move away from the surgical model to a disease management model, often termed minimum intervention dentistry. As a result of the decline in caries experience, the sensitivity of caries diagnosis has been reduced. Early diagnosis is vital, as it allows intervention to remineralise or heal the carious lesion, whilst also addressing the caries risk factors and undertaking preventative actions, such as fissure sealing (Figs. 1a & b).

Dental caries is confusing to many due to the profession using the same term for both the disease process and its outcome. A distinction should be made between three separate but interlinked processes: the diagnosis of dental caries, the detection of a carious lesion, and the assessment of that lesion. While caries diagnosis involves the use of an objective instrument to detect the disease in the form of carious lesions, with assessment characterising and quantifying the extent and status of disease.

The development of the International Caries Assessment and Treatment System (ICAS) for the quantification of carious lesions has recently provided a valid method for assessing and quantifying lesions, and the recent addition of an associated management system, the International Caries Classification and Management System (ICCMS), provides evidence-based management options for the various stages of the carious lesion, allowing for individual circumstances. ICAS rates lesions from a score of 1, the earliest stage where the tooth needs to be identified to a white spot lesion, to 6, which represents an advanced lesion. Educational software is available (www.icdas.org) and recently software to aid in the use of ICAS in epidemiological surveys has been released (www.icdas.org/software-tools).

Using a probe or explorer as a caries detection method persists in both clinical practice and undergraduate dental education but it may damage the surface layer of demineralised enamel, increasing the likelihood of the need for restorative intervention. Probing provides no advantage over other detection methods, even when interpreted in conjunction with them, so it is recommended that only a ball-ended probe be used, especially to check enamel surface integrity/roughness.

The sensitivity of a detection method relates to its ability to detect the disease when it is present, and the specificity relates to the ability to detect the absence of the disease when it is not present. Occlusal caries detection is complicated clinically by surface morphology, past fluoride exposure, anatomical fissure topography, and the presence of plaque and stains. Commonly used methods for this type are visual and tactile inspection, radiography, transillumination and laser fluorescence. This method, namely DIAGNOdent (KaVo), is promoted for use for both occlusal and interproximal lesion detection, with the technology based on the fluorescence of porphyrins excited by laser light at a wavelength of 655 nm (Figs. 2a & b). The sensitivity and specificity of laser fluorescence in detecting intradentinal lesions varies greatly, with false positives, the major limiting factor of the technology. In order to achieve better results, the exposure of the tip should be consistent, and the results should be seen in conjunction with other detection methods, not as a stand-alone gold standard.

Recently developed quantitative light-induced fluorescence systems (including GEL, Inspektor Research Systems, and SOPROLIFE, Acteon) utilise differences in auto-fluorescence between sound and demineralised enamel and dentine (Fig. 3).

Demineralised enamel appears darker than the adjacent sound tooth structure, and the carious dentine fluoresces red depending on the filter used. The use of GEL (wave-length 405 nm) enables the early detection of enamel demineralisation, and it may be used to discriminate between affected and infected dentine. Like DIAGNOdent, GEL technology is reliant on standardised techniques, especially control of ambient light, and the results must be seen in conjunction with other methods. SOPROLIFE uses a longer wavelength of 450 nm, and has settings for the diagnosis of carious dentine, as well as a treatment mode, which assists in determining which dentine should be removed.

A new system recently released uses laser-based photothermal re-dimmetry (The Canary System, Quantum Dental Technologies), detecting luminescence and change in temperature to quantify mineralisation changes (Fig. 4). Further research is required on this technology.

The method of fibre-optic transillumination is based on the principle that sound tooth structure has a higher index of light transmission than a carious tooth does. Units such as the SDI diagnostic tip for SDI’s light curing unit or the NSK transillumination handpiece are simple to use. The light source is placed on the buccal or lingual side of the tooth as in Figure 5 illustrating the head of the SDI unit. Transillumination is primarily used for the detection of proximal carious lesions, although studies have indicated it can also improve visual detection of occlusal lesions. Carious lesions limited to the enamel appear as grey shadows, and those in the dentine appear as orange-brown or bluish shadows.

The use of digital radiography has become commonplace among many practitioners. The detection capabilities of digital radiography are reported to be similar to that of film-based methods, and there is the benefit of reduced radiation exposure and the ability to readily transfer the images.

The recent development of multi-tone disclosing gels (Tri Plaque ID Gel, GC Corporation) may aid caries detection, as old and coagulative plaque can be identified relatively easily—and white spots tend to occur under older plaque, so this can target the areas to be investigated after gel removal. These products are potentially good for patient education, as the area of risk can be easily pointed out to the patient.

Obtaining diagnostic reproducibility between examiners is difficult, as clinicians tend to develop individual concepts based on experience regarding caries detection and the subsequent preventive or restorative treatment options. Length of experience also contributes, with experienced examiners having higher sensitivity, higher specificity and greater reproducibility than those less experienced. Owing to the lack of a single detection method that provides both high sensitivity and high specificity, combining a number of methods is recommended to increase the accuracy of detection. For example, this may mean combining DIAGNOdent or SOPROLIFE findings with direct visual and radiographic images. Several factors, such as fluorescent lighting, can upset the results of fluorescent-based detection methods, so care in control of ambient lighting and standardization of methodology are imperative when using these new detection methods.

The development of new technologies to assist in the detection and diagnosis of caries can provide increased reliability; however, they must be used in the context of traditional visual and radiographic assessment still being the gold standards of care at present. The current development of ICCMS by a worldwide group of cariologists will use ICAS and the current evidence base to provide information that will allow clinicians to use information such as lesion charac- teristics and caries risk to formulate valid treatment decisions.

Fig. 1a & b: Detection of occlusal caries can be difficult. (DTI/Photo courtesy of Prof. David Manton) Fig. 2a & b: The DIAGNOdent from KaVo works with laser fluorenceses. (DTI/Photo courtesy of KaVo, Germany) Fig. 3: SOPROLIFE, a quantitative light-induced fluorescence system, is available from Acteon. (DTI/Photo courtesy of Prof. David Manton) Fig. 4: The Canary System. (DTI/Photo courtesy of Quantum Dental Technologies Inc, Canada) Fig. 5: Transillumination with SDI diagnostic tip and collimator. (DTI/Photo courtesy of Dr Narisha Chawla, Australia)
“Reach a point where dental restorative materials are rare for everybody”

An interview with Christopher H. Fox, Executive Director of the International Association for Dental Research

The adoption of the Minamata Convention in Japan recently made way for a ban on mercury-containing products on a world-wide scale. Provision was also made for phasing down the use of and trade in dental amalgam. Dental Tribune International had the opportunity to speak with the Executive Director of the International Association for Dental Research (IADR), Christopher H. Fox, who attended four of the intergovernmental negotiating committee sessions on behalf of the dental profession, about the impact this could have on dentistry and the future of dental amalgam as a restorative dental material.

DT: The recently adopted Minamata Convention on Mercury includes provisions on phasing down dental amalgam on a global scale. What impact do you think this will have on the dental community and particularly restorative dentistry in the long run?

Christopher Fox: I think it must be first pointed out that the Minamata Convention is a very broad treaty designed to reduce all use of and international trade in mercury, as well as the demand for mercury in products and processes. In addition, it is intended to address the need for the restoration of atmospheric emissions of mercury, as well as mercury releases on land and in water.

Dental amalgam is included in the treaty as a mercury-added product contributing to the global demand for mercury. In this regard, it is important to note that the treaty calls for phasing down the use of dental amalgam, as opposed to phasing out or banning the use of it. This will give the dental profession and profession time to make a transition and preserve dental restorative choices for our profession and patients.

One of the provisions for phasing down dental amalgam is for countries to set national objectives aimed at dental caries prevention and health promotion, thereby minimising the need for any dental restoration. A greater emphasis on prevention and health promotion is indeed welcome and will provide the greatest benefit to populations.

Another area of discussion was the need for best environmental practices in dental facilities to reduce releases of mercury and mercury compounds to water and land. Dentistry must be a good steward of the environment and implement best environmental practices for dental amalgam, as well as for all other dental materials, medical waste and consumables.

You mention that in the dental community amalgam is still considered to be effective and safe. So why phase down its use at all?

Dental amalgam is a safe and effective restoration. The US National Institute of Dental and Craniofacial Research funded two large-scale randomised clinical trials on the safety of dental amalgam, but failed to find any adverse health effects. The reason for the agreed-upon phase-down is solely the environmental and health effects of mercury in the environment, not the direct health effects of the use of dental amalgam.

IADR-FDI workshop on dental amalgam – is there any viable alternative, and what needs to be done to implement and sustain its use in the future? The symposium at the recent FDI Annual World Dental Congress in Istanbul was actually a much-condensed summary of a two-day workshop held in December 2012 at King’s College London. In brief, yes, we can have much improved, innovative dental restorative materials, but it is going to take a significant commitment from government funders, academia and industry. Keep in mind that even if a new material could be developed within a one- or two-year time frame, clinical safety and effectiveness trials and regulatory approvals will take significantly more time. Practising dentists have an important role here too, as they can participate in research networks evaluating new materials and identifying research questions, not to mention advocating for research funding with policymakers in their country.

For a more complete answer to your question, I would refer your readers to the proceedings, which have just been published in the November issue of the Advances in Dental Research, an e-supplement to the Journal of Dental Research.

With the advent of preventative dentistry, stem cell research and the sophistication of tooth replacements, will restorative materials become obsolete someday?

Dental restorative materials are already obsolete or nearly obsolete for the socially advanced post-fluoride generation. Our greatest challenge is addressing the oral health needs of socially disadvantaged and vulnerable populations. The IADR has a research agenda to reduce these oral health inequalities across populations and hopefully we will reach a point at which dental restorative materials are rare for everybody.

Thank you very much for the interview.
It is the journey, not only the destination

An international view on dental education and dental careers

By Prof Julián Conejo Gutiérrez, Costa Rica

Dental education is also witnessing positive changes owing to an increase in new technological tools that have become recently available to the profession. The internet, for example, allows us to take continuing dental education, webinars and even obtain CE credits without having to leave our offices. We can study, discuss and even outline treatment plan cases using a variety of user-friendly software options through mobile devices like tablets or smart phones from the comfort of our homes.

This technological revolution in dental training has also benefits for the patients. Nowadays, patients are able to conduct extensive research online and access lots of information in regard to dental treatments and protocols. Online research and education allows patients to feel more comfortable with their decision by alleviating fears that stems from doubt and misunderstanding.

With better education, patients are not only able to seek the best possible treatment; they also challenge us to be better informed professionals. Globalization has opened the doors of many dental practices to the entire world. Clinicians can now attract patients from different countries and cultures through strong internet marketing. This concept of dental tourism has encouraged dental professionals to become more efficient with their time they use for providing quality service to patients. With the help of current dental technology, high quality dental care can be provided with great time savings, allowing patients to travel for quality dental care at measurable savings when compared to dental care in their home countries.

With the continued development of new dental materials and stronger bonding systems we can now practice minimally invasive dentistry, maintaining as much healthy tooth structure as possible. With this approach we can save more dentine and enamel, natural materials that will always outperform manmade dental materials. The present and future in dentistry must be focused on prevention and patient education, reducing the needs for unnecessary treatments while providing patients with the highest level of personal care.

We must not forget the ethical responsibilities that we as healthcare providers must respect in our care for each patient. We must always take our time to develop a correct medical history, as well as clinical and radiographic evaluations. The most important part of our work however is listening. We must take the time to listen to our patients and to hear what they are saying and often what they are not saying. They have come to us for answers, but we must first listen intently to properly formulate our solutions. We also need to take our time to propose the best possible treatment plan which in many cases may require an interdisciplinary approach, seeking the advice of other trusted colleagues. This collaborative approach will help us avoid performing unnecessary procedures, and guides us in the correct way of treatment.

As dental professionals, we are fortunate to live in this age of advanced technology and communication. Remember not to allow your daily obligations at your practice to distance you from your patients, from your family or from your other passions in life. Always take some time off to practice your favourite sport or hobby. Make sure you protect yourself properly while working, caring for your eyes and joints, and promote a positive working environment for your team with a commitment to teamwork.

Embrace technology. Take advantage of continuing enrichment and education. And take time to care for each other and for yourselves. Remember that happiness and fulfillment in our dental careers is not only the destination, but also the journey.

Dr Julián Conejo Gutiérrez is currently professor at the Universidad Latina de Costa Rica in San José and visiting professor at the Universidad Intercontinental Mexico in Mexico City. He also maintains a private practice specialised in prosthodontics and implantology with CAD/CAM technology in particular. He is the Director of Perlas de Porcelana Dental Laboratory in San José, and is the founder of www.jceducaciondental.com, a website dedicated to online dental education. Julian was awarded the Young Clinician Award at the Nobel Biocare World Tour, in Mexico City, 2008, and serves as a consultant to several international dental corporations. This Friday morning, he will be lecturing on aesthetic restorations with new ceramic materials as part of the ADX14 continuing professional development programme.
Bio-Emulation™ Colloquium
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"Take CAD/CAM to the next level"

Planmeca’s vice-president on the company’s strategic investment in E4D Technologies

Finnish dental technology manufacturer Planmeca has recently made a significant equity investment in the US-based high-tech medical device company E4D Technologies. In this interview, vice-president at the Planmeca Group and acting CEO for E4D Technologies Tuomas Lokki sheds light on this new venture.

today international: Mr Lokki, why did Planmeca choose to invest in E4D Technologies?

Tuomas Lokki: We believe in the tremendous possibilities and future growth of CAD/CAM dentistry. As dentistry will be completely digital in the future, we believe it is vital to invest in the development of new and efficient practices. E4D is a long-term leader in advancing modern CAD/CAM dentistry, so we knew that joining forces with this high-tech medical device company would be a valuable addition to our own leading expertise in 3-D imaging and software solutions. Their special expertise and innovative ideas provide a great foundation for future projects that will combine the know-how of both companies.

What advantages will this investment offer dental customers worldwide?

The new partnership with E4D Technologies will enable us to offer our customers the most modern CAD/CAM innovations. Our product distribution in over 120 countries combined with the cutting-edge E4D innovations will increase global product availability and take computer-aided dentistry to the next level. Our customers will also benefit from the innovative combination and seamless integration of Planmeca’s and E4D’s products and services.

How will this improve the daily workflow at clinics?

One great advantage is the integration of X-ray imaging and CAD/CAM into a single software platform, Planmeca Romexis. For the first time, customers will have the option of one software interface for both X-ray imaging and CAD/CAM work. All patient data is also saved in the same database and it can be shared immediately and easily through the clinic’s network or with the Planmeca Romexis Cloud service. Furthermore, the restorations designed in the CAD module can easily be combined with the patient’s 3-D X-ray images for implant planning purposes, for example. For the patients, this means convenient same-day dentistry.

Can you also tell us about the brand new intra-oral scanner that you launched recently?

Our new Planmeca PlanScan intra-oral scanner is an ultra-fast, powder-free and open solution for 3-D digital impressions. Its advanced blue laser technology accurately captures hard and soft tissue of various translucencies, dental restorations, models and impressions. It is the world’s first dental unit-integrated intra-oral scanner and can be used through a laptop as a standalone version. Together with our Planmeca Romexis software, the system supports an ideal digital treatment workflow.

How will both Planmeca and E4D benefit from this investment?

On the one hand, this investment strengthens Planmeca’s position in the fast-growing CAD/CAM business and Planmeca benefits from E4D’s cutting-edge solutions and long-term CAD/CAM expertise. On the other hand, Planmeca’s extensive distribution network enables E4D Technologies to grow globally and our leading dental imaging solutions will be a valuable addition to the E4D CAD/CAM platform.

Has this venture created any new needs for your company?

Definitely, as we need to provide extensive CAD/CAM training for our distribution and customer network in over 120 countries. Therefore, we have recently invested in new training, warehouse and production facilities alongside our Helsinki headquarters. These new 10,000 sq. m. facilities will also address the increasing need for training and education in this new field of dentistry.

We are thrilled to be able to take CAD/CAM to the next level. Our innovations will change the concept of same-day dentistry completely and facilitate the workflow of dental professionals worldwide.

Thank you very much for the interview.
TOTAL ENDODONTICS WITH ENDOCENTER

Satelec has announced that it is the first dental manufacturer to have successfully combined an electric motor and ultrasonic functionality with an irrigation system. With the new compact ENDOCENTER, specialists now have access to a single device that allows them to perform all endodontic treatment procedures, such as root canal treatment, retreatment, condensation and apicectomy, the French company said.

Equipped with Satelec’s ultrasonic Newton handpiece, the device has four power settings, and can be used with all the company’s conventional tips, such as ENDSUCCESS and IRRISAFE. The micro-motor uses both rotating and reciprocating motion, which offers more freedom in terms of the file tip and differentiates the device from its competitors. In motor function, a colour-coding system differentiates the various modes (ultrasonic, rotating and reciprocating), as well as irrigation and purge.

According to the company, ENDOCENTER obtains the best performance of each file system with the help of an integrated encoder that constantly assesses the rotation speed and angle. The contra-angle’s mechanical inertia is controlled by an integrated encoder system for a perfect match. The micro-motor is compatible with all contra angles equipped with an ISO 3964 connection.

The device has four power settings, and is also intended to keep the canal open for further treatment, such as retreatment, canal treatment, and retreatment. The contra-angle is identified by a simple click of a button. In ultrasonic function, each tip is identified by a simple click of a button. In motor function, a colour-coding system differentiates the various modes (ultrasonic, rotating and reciprocating), as well as irrigation and purge.

The contra-angle’s mechanical inertia is controlled by an integrated encoder system for a perfect match. The micro-motor is compatible with all contra angles equipped with an ISO 3964 connection.

The three auto-reverse modes can be selected when the motor is in rotating motion. Once torque has been reached, an advanced microprocessor offers an extremely short response time. In reciprocating motion, Satelec said ENDOCENTER is the only device to allow free control of the forward and reverse angles, from 10 to 360 degrees.

Since the micro motor is very reliable, torques of 0.5 to 10 Ncm with a 16:1 contra-angle handpieces can be attained. The speed range (without a contra-angle) varies from 1,000 to 10,000 rpm (100 to 600 rpm with a 16:1 contra-angle). Five default and customizable programmes in both modes (rotating and reciprocating) are currently available.

According to the company, ENDOCENTER obtains the best performance of each file system with the help of an integrated encoder that constantly assesses the rotation speed and angle. The contra-angle’s mechanical inertia is controlled by an integrated encoder system for a perfect match. The micro-motor is compatible with all contra angles equipped with an ISO 3964 connection.

Switching the device from ultrasonic to continuous rotation or reciprocating motion can be done with a simple click of a button. In ultrasonic function, each tip is identified by a colour-coded band, also visible on the unit, for easy selection of the power setting (green–soft, yellow–medium, blue–high, and orange–boost). In motor function, a colour-coding system differentiates the keys dedicated to rotating modes (green), reciprocating motion (grey) and common functions (white).

ENDOCENTER also comes with a multifunctional foot switch to activate the device and provides easy selection of the various modes (ultrasonic, rotating and reciprocating), as well as irrigation and purge.

An ergonomic and silent pump adds to the benefits of the device, as it supplies an accurate irrigation flow suitable for all treatments (0 to 40ml/min.). An opening and closing magnetic system is intended to provide easy insertion of the cassette and an intuitive irrigation line set up.

ENDOCENTER is compatible with all of the company’s autoclavable and disposable irrigation lines.

ACTEON GROUP, FRANCE
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Booth 343

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DUPLICATION SYSTEMS FOR DENTAL PRACTICES

With the Denture Duplication System from Lang Dental, a US manufacturer of dental products, clinicians worldwide have a simple tool at their disposal to offer maintenance and immediate care to their patients with dentures. In addition, its Implant Duplication System allows implant surgical guides, such as stents, to be produced in-house, obviating the need for an off-site laboratory.

According to Lang Dental, the duplicate dentures fabricated with the Duplicator Flask compare favourably to the aesthetics and fit of the original dentures. The company recommends using its hydraulic pressure curing unit Aquapres for dense, porous-free, colour-stable finished appliances and best results from start to finish. Lang’s self-curing acrylic resin Jet Tooth Shade offers a wide range of colour options and sets in 6–9 minutes for a durable temporary crown or bridge. For ultimate protection, the self-curing sealant Jet Seal enhances colour stability and decreases porosity, the company said.

The system also includes a silicone spray that aids the removal of the alginate from the metal flasks and trays.

ULTIMATE DENTAL
Booth 106
Launched at the recent CIOSP dental show in São Paulo in Brazil, the Clàriont bleaching line from Angelus is intended to simplify bleaching through an anatomical syringe design. The system, which also includes gingival barriers, plates for trays and a desensitising gel, is available for use both at home and in the dental office.

Available in concentrations of 10%, 16% and 22%, the home formula comes with a tray that offers high adaptation through flexible plates. The professional version contains 35% hydrogen peroxide and provides immediate results in a single application, the Brazilian company said. As part of the treatment, Angelus recommends using Clàriont Dam, a gingival barrier that can be polymerised, and the desensitising gel Clàriont D-Sense to treat dental sensitivity caused by external stimuli.

Clàriont will be available in Europe soon, according to the company. Additional products in the range are anticipated later this year. Despite tooth-whitening products, Angelus manufactures and distributes a number of materials, instruments and other equipment for use in endodontics, dental laboratories and paediatric dentistry to over 80 countries.

ANGELUS, BRAZIL
www.angelus.ind.br

NEW BLEACHING LINE LAUNCHED BY ANGELUS

Planmeca has introduced a new imaging mode that was developed especially for use in endodontics and in cases dealing with small anatomical details, such as imaging of the ear. The new mode, which produces extremely high-resolution images with a very small voxel size of only 75 μm, is available for all Planmeca ProMax 3D imaging units.

According to Planmeca, the new mode provides clinicians with perfect visualisation of even the smallest anatomical details. Owing to new intelligent noise and artefact removal algorithms, noise-free and crystal-clear images can be produced, the Finnish dental equipment manufacturer said. With Planmeca ARA, for example, artefacts resulting from metal restorations and root fillings in the patient’s mouth that cause shadows and streaks in CBCT images can be removed effectively. In addition, the new Planmeca AINO Adaptive Image Noise Optimiser is intended to reduce noise in CBCT images resulting from a particularly low radiation dose or small voxel size without losing valuable details. The company said that the filter particularly improves image quality in the endodontic mode, where noise is inherent due to the extremely small voxel size. It has also proven useful when used in accordance with the Planmeca Ultra Low Dose protocol, where noise is induced by the particularly low dose.

Planmeca AINO also allows the reduction of exposure values and consequently the radiation dose in all other imaging modes, according to Planmeca.

NEW ENDODONTIC IMAGING MODE AVAILABLE FROM PLANMECA

www.planmeca.com
Madama Butterfly  
• Dates: 21–23 March  
• Venue: Sydney Opera House Forecourt  
• Start time: 7.30 p.m.  
• www.sydneyoperahouse.com

With the famous Sydney Harbour skyline as its backdrop, this stage built over the water off the Royal Botanic Gardens has featured unique outdoor opera performances since 2012. This weekend, director Alex Ollé is staging Puccini’s classic love story of a US Navy lieutenant and a Japanese girl in wartime, with artists Georgy Vasilev (Russia) and Hiromi Omura (Japan) in the leading roles. English subtitles will be provided.

Manly-Warringah Sea Eagles vs. Parramatta Eels  
• Date: 23 March  
• Venue: Brookvale Oval  
• Start time: 3 p.m.  
• www.seaeagles.com.au

Sydney teams the Sea Eagles and Parramatta Eels have one of the longest rivalries in Australian rugby, so expect things to get hot and fierce at Brookvale this Sunday. If you’re not fazed about seeing the real thing, you could also watch the match with a cold beer in your hand at any sports bar, like the nearby 24/7 or the Courthouse Hotel in Darlinghurst.

Forecourt

Maggie Gerrand presents Isabella Rossellini in Green Porno  
• Dates: 22 and 23 March  
• Venue: City Recital Hall Angel Place  
• Start time: 8 p.m.  
• www.cityrecitalhall.com

If you’ve ever wanted to know more about the sex life of the world’s fauna or see Isabella Rossellini (Blue Velvet) dressed up as an earthworm, then this one-woman comedy show is for you. Inspired by the series of Sundance short films that featured the Italian actress explaining the mating habits of animals while dressed up as them, Green Porno has earned widespread acclaim by critics since its première in the US last year. UK newspaper The Guardian wrote, “Rossellini’s hilarious appreciation of the natural world and its sexual wonders is infectious.”

Maggie Gerrand presents Isabella Rossellini in Green Porno

Travelling North  
• Date: 21 and 22 March  
• Venue: Wharf 1 Theatre  
• Start time: 8 p.m.  
• www.sydneytheatre.com.au

Based on the 1979 play by Australia’s best-known playwright David Williamson, this tale of transformation paints an interesting landscape of human relationships. With actor Bryan Brown (F/X, Australia) in the leading role, the story centres around Frank and Franc, an unmarried older couple who decide to leave their lives in Melbourne behind and resettle in Queensland. Their new life however is soon challenged by a new love and old family threats that seem impossible to escape.

Maggie Gerrand presents Isabella Rossellini in Green Porno

Travelling North

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