Lack of mobility could undermine job demand in ASEAN, reports says

The main obstacles to the implementation of the arrangements remain different systems of qualification and professional recognition, the report states. It also suggests that some countries still favour filling certain positions with native labour rather than professionals from abroad. Language, culture and social acceptance appear to be further barriers to foreigners seeking to work in another country.

Multinational mutual recognition arrangements between ASEAN members exist for a number of occupations, including engineers, architects, accountants and nurses. An agreement regulating the migration and employment of dentists was signed by ten ASEAN member states in 2009. According to the report, highly skilled workers are estimated to constitute only 1 per cent of the workforce in the entire ASEAN region. Combined with the lack of mobility, it predicts that they will not be able to satisfy demand, which is expected to grow by 41 per cent, or 14 million additional jobs, owing to the introduction of the ASEAN Economic Community (AEC).

“National admissions and visa policies, the source countries’ policies on outward migration, and the recruitment policies and preferences of employers in the private sector are likely to weigh any changes to labour mobility that the AEC might introduce,” the report states.

Intended to establish a single regional market and to foster economic development, the AEC is anticipated to be fully established by the end of 2015.
Stable implant integration and functionality, along with aesthetic outcome are important aspects in modern implantology. The anatomical situation, however, rarely supports an optimal implant insertion. To ensure a predictable and aesthetic treatment outcome, specific principles for the augmentation should be considered.

Today, soft tissue surgery together with modern materials and techniques (mucoderm®, etc.) permit minimally invasive treatments with improved aesthetic results. Already in 2007, membranes were developed to improve the width and strength of the keratinized gingiva as well as change the gingiva typography.

Over the last years, specific materials and techniques have been established for improved and more predictable results of plastic peri-implant surgery. These concepts may be supported with other modern technologies, such as the PRF-technique, aiming to further improve and accelerate hard and soft tissue healing.

Similarly, the average number of primary teeth affected by tooth decay decreased steadily in the period from 1977 to 1995. Yet, researchers have noted a gradual rise in this number again from 1996 onwards.

“Contrast to these negative trends in oral health, the trends in dental visiting patterns have generally been more positive,” said Dr. Adrian Webster, spokesperson for the Australian Institute of Health and Welfare.

He said that the proportion of people aged 15 and over who had visited a dentist in the previous 12 months increased from 56 per cent in 1994 to 62 per cent in 2010.

“But despite this, the cost of dental care remains a barrier for some,” Webster stated.

According to the National Dental Telephone Interview Survey, there was an increase in the proportion of adults avoiding visits to a dentist owing to cost, from about 25 per cent in 1994 to 50 per cent in 2010.

The report also showed that the number of employed dentists and practitioners increased from around 18,700 in 2011 to nearly 19,600 in 2012. Over this period, the ratio of dentists per 100,000 population rose from around 55 to 57 dentists.

The report, which was published on 18 August, can be accessed on the institute’s website.
Surgeons in Saudi Arabia have found a white bony mass inside the nose of a 22-year-old, which they identified later to be an extra tooth growing in the young man’s left nasal cavity.

The patient had suffered from nosebleeds once or twice a month for the past three years, the doctors reported. Owing to these symptoms, he was admitted to King Fahd Military Medical Complex in Dhahran.

Close examination of the man’s nasal cavity found a 1 cm-long white cylindrical bony mass arising from the floor of the nose, according to the case report. A consultant dentist made the diagnosis of intranasal eruption of a supernumerary tooth. The prevalence of such teeth is not known, as they usually remain asymptomatic in many patients and the mechanism of eruption is poorly understood. “One theory is that there is a defect in the migration of neural crest derivatives destined to reach the jawbones. A more plausible explanation is multistep epithelial and mesenchymal interaction,” the surgeons stated.

While supernumerary teeth are usually asymptomatic, patients may present with a variety of symptoms, including nasal obstruction, headache, nosebleed and external nasal deformities. They may be associated with conditions such as cleft palate. The surgeons further said that such teeth can be easily detected using nasal endoscopy, panoramic radiographs, and CT scans.

In the present case, the patient underwent endoscopic extraction of the supernumerary tooth with its surrounding granulation tissue under general anaesthesia. After three months, the area was completely healed and the patient did not experience further nosebleed.

Supernumerary tooth grows in man’s nose

NDC appoints new head

Singapore: Dr Kwa Chong Teck has been heading the National Dental Centre in Singapore almost since its inception. Lately, the institution said that he has stepped down from his position as Executive Director.

Kwan has been with the centre for over 17 years. He will continue to serve as Senior Advisor in recognition of his experience and contributions to dentistry in Singapore, representatives of the NDC said.

Associate Professor Poon Choy Yoke, who prior to his appointment has been serving as the Centre’s Director of the Department of Oral & Maxillofacial and Deputy Executive Director for Research and Education, is assuming Kwa’s position which will also be renamed Director. She is also Academic Chair of the recently established SingHealth Duke-NUS Oral Health Academic Program. Her former duties will be taken over by NDC’s senior surgical consultant Dr Goh Bee Tin.

Established in 1997, the NDC is Singapore largest public facility for delivering specialist oral health care. It has also become an important hub for dental research and an education.
Dear reader,

In a recent study by the PewResearchCenter in the US, a large gap was found in the income of journalists and people who work in Public Relations. In fact, the number of PR specialists have grown to such an extend that they outnumber reporters 5 to 1 by now.

Could this be the start of a new tyranny? Not the kind that uses fists and guns, but rather ideas and concepts that show the world how it is supposed to be according to few and not how it actually is? In my opinion, we are not far away from such a situation as publishers increasingly struggle to stay in the market while, at the same time, corporations use to make obscene amounts of money.

My only recommendation is to permanently question your sources of information because this trend is unlikely to reverse anytime soon. ❖

Yours sincerely,
Daniel Zimmermann
Group Editor
Dental Tribune International

Changes in the oral health workforce

Dr. Jack Dillenberg

The aging of the dentist population, projected retirements and mal distribution of providers coupled with an increasing population supports the projections of significant provider shortages in the decades to come. Health professions in general and the dental profession in particular have to recruit, educate and promote a new kind of health provider that is community minded, service oriented with leadership skills and committed to interdisciplinary collaboration and utilizing innovative technology to meet the compelling societal needs the health system requires.

The selection of traditional dental school candidates in years past had focused on candidates that were analytical, and had a strong science background with good hand skills. The anticipated outcome after dental school graduation was establishing a solo private practice in the geographic area of their choice. There was not a lot of attention paid to community service/volunteer experience, leadership skills and an understanding of basic public health principles. The current societal needs and demands are changing the skill set needed for success as a dentist and the practice environment that dental graduates will find themselves.

Dental school applicants today must have the academic prowess to succeed in the rigorous science courses they will take in dental school, but they must have other critical skills to succeed and flourish. Dental students will now learn to a level of competency, not just productivity, they will treat patients with special needs; collaborate with other health professionals in interdisciplinary settings and participate in community based activities to develop the communication and leadership skills to thrive in an interdisciplinary work environment.

This new culture of health care delivery incorporates prevention and personal responsibility for an individual's health and wellbeing. The "new" dentist will have to be comfortable practicing in this environment utilizing skills, training and experience reminiscent of the stomatological training of physicians of the past.

Norman Greitz, PhD, a historian of the "stomatological movement" in American dentistry notes, "Today's dentists need to be more broadly trained in general medicine and public health in order to more effectively respond to the oral and related health needs of their patients and the larger community." ❖

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Shaking things up
Implant competitors defy economic uncertainty

Kristina Vidug
USA

In 2013, the global dental implant market—composed of the sale of dental implant fixtures, final abutments and other devices—was valued at over US$3.7 billion. The European market, valued at nearly one-third of the global market at close to US$1.2 billion, contracted through 2014, as uncertain economic conditions continued to reduce procedure volumes and as more low-cost competitors entered the market, driving down prices.

These factors hampered the expected economic recovery and resumption of growth projected for 2015. As a result, the dental implant market will continue its decline before stabilising in 2015. Only then will the European market slowly begin to recover. Factors such as low gross domestic product growth and high unemployment continue to render dental implant procedures—which are primarily paid out of pocket by patients—cost prohibitive, while alternatives, such as bridges and dentures, that are perceived as more affordable will represent attractive options.

Dental implants were invented in Sweden; as a result, it is not surprising that a great number of premium manufacturers are based in Continental Europe. In the past, premium manufacturers, such as Straumann and DENTSPLY Implants, were able to rely on their long-standing reputations in the market and the high quality of their products to command higher prices than did some of their competitors.

More recently, however, some of the premium competitors have employed strategies to appeal to increasingly cost-conscious consumers. For instance, Straumann has reduced the price of its titanium implants by 15 per cent in Austria, Germany and Switzerland. While the price change only came into effect in the first quarter of this year, the strategy appears to have been effective because the company reported a 6 per cent rise in first-quarter revenue compared with a 6 per cent decrease in the same period last year.

The price reduction has come at a perfect time: while economic conditions begin to slowly improve, consumers are still extremely price sensitive. These price cuts therefore allow dental professionals to offer premium implant products to their patients at a reduced rate.

Straumann’s price reduction is not its only foray into the value market. In the first quarter of this year, the company purchased US$30 million worth of bonds from low-cost South Korean dental implant manufacturer MegaGen. The investment, which will be converted to shares in 2016, will help bolster Straumann’s revenue while allowing it to participate in both the premium and value segments, thus appealing to a wide range of practitioners and patients alike.

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Inconsistent recommendations on toothbrushing

LONDON, UK: A comparison of advice on toothbrushing for adults and children given by dental companies, textbooks and dental associations has found that recommendations on brushing method, frequency and duration vary to an unacceptable degree.

The researchers cautioned that such inconsistencies confuse dental patients and undermine trust in the dental profession as a whole.

“The public needs to have sound information on the best method to brush their teeth,” said study author Aubrey Sheiham, Emeritus Professor of Dental Public Health at University College London. “If people hear one thing from a toothbrush company and something else from their dentist, or a dental association, another from a toothbrush company and something else from their dentist, no wonder they are confused about how to brush.”

Overall, the most commonly recommended method was the modified Bass technique, which involves gently jiggling the toothbrush back and forth to shake loose food particles. However, there is no scientific evidence that this method is more effective than basic scrubbing with the brush held at an angle of 45 degrees, Sheiham said.

Sheiham further pointed out that dental associations in particular should provide consistent guidelines on toothbrushing. However, the current lack of agreement can be attributed to the lack of strong evidence suggesting that one method is conclusively better than another. Thus, better research into what toothbrushing technique is the most effective and easiest to learn is needed.

While both companies are better known for their orthopaedic products, they are fairly significant competitors in the dental industry as well. Lay-offs are not uncommon when companies merge, especially when the companies in question offer the same types of products. This can have a negative impact on sales in the short term, as the newly combined companies’ sales force decreases, leading clients to switch to other competitors.

However, this will not be the case with the Zimmer-Biomet merger, at least not in the short term, as the sales teams from both companies are expected to be retained through the merger. The cost of retaining both sales teams has been estimated at US$400 million.

There is discussion of merger and acquisition activity among other companies in the segment too, with Nobel Biocare reportedly in talks to sell to private equity firms and strategic buyers. While these talks are still in the very early stages, what is certain is that there has been a great deal of activity in the competitive landscape in the past several years.

This, combined with the afore-mentioned economic factors, is turning this once stable and mature market into a dynamic, action-filled space. With the dental implant market set to rebound in Europe and with revenues expanding in other countries—particularly in the rapidly developing BRIC and Middle Eastern markets—the global industry is poised for even further change, and the competitive landscape could look entirely different a few years from now.

Sheiham recommended that patients should hold the brush with a pencil grip rather than a fist, be recommended. In addition, the analysis showed that the method recommended by dental companies differed from advice given by dental associations, as did advice in textbooks and research-based sources. In addition, the researchers found a wide difference in the toothbrushing methods recommended for adults and children.

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GI restorative from SDI offers strength, mimics dentin

PERTH, Australia: With Riva Self Cure HV, the Australian company SDI is offering a high viscosity, extremely strong self-curing glass ionomer restorative, which is strong enough to resist surface indentation and to withstand substantial mechanical loads. Among other things, it can be bulk placed and does not adhere to your instruments. In addition, Riva Self Cure HV’s packability is supposed to make restorations easy to shape and contour.

Riva Self Cure HV can also be used to replace missing dentin. According to SDI, it is the best dental material currently available that virtually mimics dentin. Sensitivity is non-existent and no adhesive is required, the company added.

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Customised protection of fissures with a chlorhexidine-containing protective varnish

Dr Gabriele David
Liechtenstein

Fissures are exposed to a high caries risk. Owing to their surface structure, they are difficult to clean and offer bacterial plaque an ideal breeding ground. However, appropriate measures can minimise the risk. Susceptible sites can be protected as early as the teeth erupt by means of a chlorhexidine-containing varnish. After the premolars and molars have fully erupted, they may be permanently sealed if necessary.

Fissure sealing is not indicated while the teeth are erupting. An alternative measure is therefore required, since premolars and molars are particularly susceptible to caries during this stage. The enamel is still relatively porous and no highly resistant.

Thorough dental care is difficult to achieve because the surfaces are not yet freely accessible. In addition, children between 6 and 7 years of age are not yet in a position to perform optimal oral hygiene because of their level of development. This applies to even a larger extent to children of younger ages. Even for these children, appropriate protective measures should be available, since the health of the deciduous dentition is an essential prerequisite for the health of the permanent dentition.

The application of a chlorhexidine-containing protective varnish represents a measure that meets the specific requirements necessary for the treatment of children during these critical stages. With Cervitec Plus from Ivoclar Vivadent, a material that is particularly suited for providing appropriate oral health care is available to dental practitioners. The varnish contains 1 per cent chlorhexidine and 1 per cent thymol.

Chlorhexidine (CHX) is regarded as the active ingredient of choice and quality standard in matters of achieving effective bacterial control in the oral cavity. Mutans streptococci are particularly sensitive to CHX. The active ingredient prevents bacteria from adhering to the teeth, inhibits the metabolism of the microorganisms, and, in its initial concentration, destroys the cell walls of the bacteria.

Chlorhexidine is characterized by long-term availability and consequently by extended efficacy. These favourable properties are enhanced by supplying CHX in a varnish delivery form. Undesirable side effects of chlorhexidine such as unpleasant taste, impaired taste perception or staining are mostly avoided.

Generally, the application of the varnish places less high demands on the working technique and the compliance of young patients than the application of a fissure sealant. The cleaned tooth surfaces are quickly dried with blown air from an air syringe and dabbed dry with a cotton stick. The varnish can be distributed rapidly and easily with a brush and cured in the course of a few seconds (Fig. 1). The material easily flows into the fissures and remains there for an extended period of time after curing.

Under normal circumstances, Cervitec Plus is applied every three months. In the course of a child’s teeth eruption, the varnish may be applied at shorter intervals, e.g. every six weeks.

The advantage of the varnish delivery form is that the active ingredients can be administered exactly to the area where they are needed. Professional application in the practice enables controlled dosing. In addition, the treatment does not cause pain and this positive experience encourages compliance for future treatments. Because of the targeted application of the varnish, chlorhexidine does not taste as strong as in other delivery forms. Generally, the varnish delivery form enjoys a high rate of acceptance among children.

Clinical studies with a CHX-containing varnish confirm the protective effect on fissures. The number of new carious lesions is clearly lower in patients with a high caries risk if the varnish is applied on a regular basis. Both deciduous molars and permanent teeth can be treated in this manner.

Furthermore, investigations document a clear decrease in mutans streptococci counts. Hence, the application of a protective varnish provides a viable alternative if fissure sealing is not possible.

Once the critical stage of tooth eruption has been successfully completed, fissure sealing may be considered. This measure is indicated if fissures and pits at high caries risk are present. Long-term international experience has confirmed the caries-preventive effect of this method. Composite-based sealing materials with or without fluoride release such as Helioseal F or Heliosel from Ivoclar Vivadent have proven to be particularly effective.

The working technique is key to achieving good quality. The teeth to be sealed should always be subjected to a risk.
analysis and caries risk diagnostics prior to the application of the sealant.13 Cleaning and isolation play an essential role in the long-term success of the sealing.

Professional cleaning with a prophylactic paste, e.g. Proxvent from Ivoclar Vivadent, and a rotating brush creates favourable conditions for the subsequent application of the sealant. The use of a fluoride-free paste is not mandatory. It is essential to rinse the teeth thoroughly as paste or plaque residues may adversely affect the subsequent working steps and therefore impair the quality of the sealant.

Next, the working field should be isolated as well as possible. Various devices to achieve access to the fissures and pits and obtain a dry working field are available. A flexible lip and cheek retractor such as Optralate from Ivoclar Vivadent provides excellent access and clear visibility of the intraoral area (Fig. 2).

If used in combination with cotton rolls, a saliva extractor and air syringe, this may be the best individual solution for some patients. For other patients, complete isolation with a rubber dam, e.g. OptraDam from Ivoclar Vivadent, may create the best conditions for the success of the sealing.

The sealant is applied in a fine, bubble-free coating and dispersed (Fig. 3). Care should be taken not to apply too much material to the upper jaw and to disperse the material rapidly as the sealant has a tendency to flow to the distal side due to the force of gravity. A waiting time of 15 seconds allows the material to penetrate the fissure and enamel pores, which has a favourable effect on retention.

The sealant is cured with an appropriate polymerization light, e.g. bluephase from Ivoclar Vivadent, for 20 seconds. With regard to curing lights, an important note should be observed: In general, the light performance of every polymerization light should be checked on a regular basis to ensure complete curing.

Next, the quality of the sealing is checked. If an opaque sealant such as Helioseal F has been applied, the margins can be checked more easily (Fig. 4). The occlusion is checked and, if necessary, the sealing is adjusted with finishing and polishing instruments. Polishing is recommended even if the contact appears optimal already during first occlusion. The treatment is completed with fluoridation. The fluoride-containing protective varnishes Fluor Protector or Fluor Protector N from Ivoclar Vivadent are particularly suited for this purpose.

Fissure sealings should be checked at regular six-month recalls. Experience has shown that defects, if any at all, tend to form within the course of the first twelve months after the sealing has been applied. If necessary, the sealing has to be partially or completely replaced. Long-term studies confirm that retention times of 10 years or longer are possible if an optimal working technique is used.14

Fissures can be protected from caries for extended periods of time. Applying a protective chlorhexidine-containing varnish and sealing fissures and pits on a regular basis are part of a successful dental care programme. Age-appropriate dental care at home and in the practice and fluoridation based on the patient’s individual caries risk complete the oral health care programme.15

Editorial note: A complete list of references is available from the publisher.
An efficient and safe cavity filling technique
Smart Dentin Replacement explained

Dr Frank Pfefferkorn
Germany

Do you remember how a crumbling mixture could turn an otherwise easy and safe amalgam filling into a nightmare? Have you found the stickiness of the material troublesome when placing tooth-coloured fillings with a composite material? Do you loathe constructing a filling using the layering technique?

If your answer to all these questions is “Yes,” it is probably time to think about a more simple solution. The use of flowable composites has gained popularity particularly in cases where a simple and safe initial adaptation is required. However, there is no proof that this generally comes with a reduction in polymerization stress.

Researchers at DENTSPLY have developed modified monomers that, combined with conventional methacrylate-based monomers, leads to significantly reduced polymerisation stress, regardless of the filler load. The idea behind this was to have a flowable material that allows clinicians to use an efficient and safe cavity filling technique. Since flowable consistency is usually not ideal for either occlusal reconstruction or to establish the necessary wear resistance, the occlusal capping with a universal composite was put into consideration from the beginning of the development process. In other words, dentine can now be replaced with Smart Dentin Replacement (SDR).

The chemistry of SDR is based on that of conventional universal composites. Therefore, a certain adhesive or a combination of a special material for occlusal coverage is not required. The key differentiator is a modulator that is incorporated into a urethane-based dimethacrylate. From this, a conventional network structure can be built from conventional monomers as well as the SDR monomer (Fig. 1). Instead of only becoming a part of the polymerised network, the modulator also influences its development and, in particular, influences how quickly the network is built. This way, there is less polymerization stress from the very beginning. Researchers at the University of Munich, who conducted measurements of the contraction force during polymerization at 0.2 sec. intervals, were able to demonstrate how SDR differs from other materials, even after polymerization (Figs. 2 & 3).

In addition to low polymerisation stress, it is important also to have a high depth of cure, which can be achieved with a universal shade providing sufficient translucency. Using a curing time of 20 seconds, samples prepared with different layer thicknesses have been tested. It was found that successful curing can be achieved when the hardness of the lower side of a sample reaches a minimum of 80 per cent of the upper side.

Applied in increments of up to 5 mm, SDR clearly demonstrated a much higher depth of cure compared to other flowable materials (Fig. 4). Combined with its very low polymerization stress, SDR even allows layering in 4 mm increments.

Representing many other studies on the compatibility of SDR with adhesives and composites for the capping layer are the results of a chewing simulation. Here, incrementally layered fillings, consisting of adhesive and composite from the same manufacturer, were compared with simplified filled cavities with regard to their marginal quality using the same bonding agent, composite and also SDR before and after a chewing simulation. All cases demonstrated that using SDR in 4 mm layers and capping with a universal composite provided the same level of marginal quality compared to a restoration using incremental layering.

Editorial note: This article was originally published in Die Zahnarztwoche, No. 10, 2010. A complete list of references is available from the publisher.

Contact Info
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Fig. 1: The SDR monomer with modulator establishes a network with conventional monomers. — Fig. 2: Contraction force in the first five seconds after polymerization (Illie N, 2009). — Fig. 3: Polymerization stress after five minutes (Illie N, 2009). - Fig. 4: Relative Knoop Hardness of different flowable composites as a measurement for depth of cure.
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Seven ways to increase dentine bond strength

**1. Etch for the appropriate length of time**

Whether you are using self-etch or phosphoric acid etch, etch for the appropriate length of time. Most phosphoric acid etch preparations can etch too deeply if left for too long on the surface. A filum silicate-type phosphoric acid like Ultra-Etch (Ultradent) is more forgiving in this regard (Fig. 5).

**2. Ensure dentine moisture conditions**

Manufacturers use solvents (acetone, ethanol, water) in adhesives to thin resin to flow into the depths of the etched zone. Since the solvents used are hydrophilic, they will actively carry the primer or adhesive into moist dentine better than into dry dentine. Each solvent type works differently with moisture levels. Ideal conditions for each are described below.

### Aqueous-containing adhesive systems

Ensure that the dentine surface is glistening with moisture. This can be easily achieved by using a cotton pledget and drenching off the excess moisture. Adhesives that contain acetone are particularly sensitive to overwetted. If the tooth surface is not moist prior to adhesive application, a substantial loss in bond strength will result.

### Ethanol-containing adhesive systems

Adhesives that contain ethanol do not require as much moisture. Leave the dentine surface damp by using the air syringe for no more than 3 seconds, blowing off visible surface moisture. Do not direct any substantial sustained air at the surface. A chalky white or over-dried surface will decrease bond value.

### Self-etching adhesive systems (water-containing)

Systems that contain water during adhesive application. A chalky white or over-dried surface will decrease bond value.

### 3. Pay attention to application time and technique

It is important to leave adhesives in place for as long as recommended by the manufacturer. In a busy dental practice, it is easy to count too quickly; watch the clock instead. It is crucial to give the adhesives time to penetrate or wet the deepest zones to be etched. With self-etch adhesives being less acidic than phosphoric acid, it is important to leave the adhesive in place for long enough to etch and penetrate the dentine and enamel properly. Also, ensure that you scrub in the adhesive if the manufacturer recommends it. Usually, scrubbing adhesives into dentine will increase bond strength by a few per cent and allow for a much more consistent and reliable bond. Conversely, scrubbing enamel will slightly decrease bond strength. When possible in the same preparation, treat enamel more delicately and dentine more aggressively.

### 4. Thin and dry the adhesive layer

Most adhesives need to be air-dried so that they are paper thin (in the case of Peak Universal Bond) and then air-dried. The best way to accomplish this is with a gentle air stream, using half pressure, at 5-5 cm from the surface. A properly thinned adhesive will appear uniformly glossy without pools; posited product contributes to a substantial decrease in bond strength due to trapped solvents. Leave the air on for long enough in a gentle stream so that there is no movement in the resin, just drying, to finish volatilising the solvents. This allows monomers to polymerise properly for the highest bond strength possible.

### 5. Light cure close to the surface with a compatible light

Place the curing light as close to the restored surface as reasonably possible. This ensures that the materials are exposed to sufficient energy for a proper cure. At a distance of 25 mm, most lights will only produce 10 per cent or less of the energy than they do at 1 mm.

Only a few of the newest generation of LED lights produce a light output of sufficient output meaning that they actually emit more than one colour of blue. This is important owing to the fact that many dental materials contain initiators (light-sensitive chemicals) that react to deeper blue and violet colours.
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[*] Based on research by Strategic Data Marketing. Dental product categories include chairs, delivery systems, lights, and cabinetry.
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**6. Place the first increment of composite in a super-thin layer**

In order to achieve a monoblock restoration (tooth, adhesive and composite acting as one), it is important to place the first layer of composite at a depth no greater than 0.2 mm so that thorough and complete adaptation can occur.

If a thicker first layer is applied, it is likely that slight voids will result beneath the composite, which can be a point of failure over time.

After the first layer has adapted, place standard increments of 1–2 mm in thickness. Another way to improve adaptation to the adhesive layer is to use a flowable composite for the first layer. However, avoid bulk filling owing to stress build-up issues.

**7. Never use an expired product**

Since all restorative materials contain reactive components, it is important to refrigerate materials that are not used on a daily basis in order to slow the degradation process. The higher the temperature, the faster the chemistry will react and become unsuitable for use. Manufacturers give expiration dates based on data that shows when the product becomes unacceptably degraded.

At Ultradent, we typically set that marker at not less than 90 per cent of new performance, meaning that the product's performance has not decreased by any more than 10 per cent since it was manufactured. Typically, it is even less than that. When the expiration date arrives, it does not mean that the product has suddenly gone bad, but it means that the product has reached a marker set by that manufacturer.

Products that contain solvent are subject to problems with evaporation. Tighten the lids of these products securely in order to reduce the risk of solvent loss, which could lead to poor product performance.

**Conclusion**

Many clinicians can increase dentine bond values in their practice by incorporating a few simple practices into their bonding procedures. It is important to start with a solid understanding of bonding fundamentals. After this base has been established, seven controllable steps contribute to the final bond value achieved; in combination, this increase or decrease can be dramatic.

**Editorial note:** A complete list of references is available from the publisher.

**Conflict of interest:** Dr Dan Fischer is president and CEO of Ultradent Products.
Welcome to the most significant international dental event in 2014

By Dr Tin Chun Wong, President of the FDI World Dental Federation

T here has been great excitement about the FDI Annual World Dental Congress (AWDC) in New Delhi ever since its official launch last year in Istanbul. The 2014 event will be the 102nd in a series spanning more than a century. The FDI is the international voice of dentists, representing some 200 national dental associations and specialist groups, speaking on behalf of dentists at international level and defending the interests of the profession.

What makes the FDI AWDC special? Some commentators have called it “intentionally international” because its principal strength is as a vehicle for bringing the world’s dentists together to share knowledge and experience, challenge preconceived ideas, widen perceptions, and better understand the problems and solutions of their colleagues working within different cultural, financial and technical constraints.

Congress participants will benefit from a well-thought-out scientific programme that covers more than 25 key topics in dentistry, including endodontology, oral medicine, preventive dentistry, practice management, and the latest innovations in imaging and digital dentistry. Papers will be presented by more than 30 distinguished speakers from 20 countries worldwide, as well as 70 outstanding Indian experts.

During the congress, we will be highlighting some of the major issues facing dental practitioners in particular and health services in general. One of these is improving access to oral health care, within the context of oral health as a fundamental right. The other is oral health care for ageing populations, which will be the subject of this year’s World Oral Health Forum under the title “Challenges of oral health care in an ageing society”.

India itself is one of the world’s largest growth markets for oral health care and dental products. Every year, some 25,000 newly trained dentists graduate from the country’s nearly 300 institutes offering dental qualifications. Furthermore, India is today one of Asia’s and the world’s largest and fastest-rising economies, with a dynamic dental industry whose value to the national economy runs into billions of US dollars. India is also one of the oldest civilisations in the world, and a prime attraction for both domestic and international tourists looking to revitalise their mind, body and soul.

On behalf of the FDI, welcome to the most significant international dental event this year’s calendar, the 2014 FDI AWDC.
An interview with associate professor Ramandeep Singh Gambhir, Gian Sagar Dental College in Rajpura in India

...in a country like India, the majority of people use dental services only when they are really needed.

The dentist–population ratio in your country so alarmingly low? What can the FDI congress contribute to the improvement of the oral health care situation in your country?

Much work will have to be done in minimum time to achieve the goal set by the Indian Dental Association, and policies and reforms will need to be made. There is a large gap between the actual dental needs of the population and the demand for dental care. In the present circumstances, I do not think the situation will improve much in India.

In the present circumstances, I do not think the situation will improve much.
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