

# DENTAL TRIBUNE

—The World's Dental Newspaper · Middle East & Africa Edition—

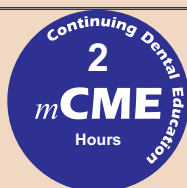
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## WHO calls potential health cutbacks a mistake

Reuters

**LONDON:** Governments should resist the temptation to cut their health budgets in response to a global financial crisis, the head of the World Health Organization (WHO) has said.

WHO Director-General Margaret Chan told the Graduate Institute in Geneva that steps to repair the economy should not only focus on rekindling trade and business growth but also on fighting poverty, misery, and ill-health. The credit crisis, paired with global warming and other pressures, could have "profound, and profoundly unfair" consequences for medical care, and particular efforts to confront and prevent disease.

Cutbacks to national health budgets during previous economic crises, such as the oil shock and global recession seen 30 years ago, have caused serious problems in poorer parts of the world, said Chan, a former Hong Kong health director.

"Huge mistakes were made in the restructuring of national budgets. Health throughout sub-Saharan Africa and in large parts of Latin America and Asia has still not recovered from these mistakes," she said. "There is too much at stake right now in our turbulent and tottering world to make the same mistakes again."

With the costs of health care rising and systems for financial protection in disarray, personal expenditures on health now push more than 100 million people below the poverty line each year, the latest WHO World Health Report states. Annual government expenditure on health varies from as little as US\$20 per person to well over US\$6000. For 5.6 billion people in low- and middle-income countries, more than half of all health care expenditure is through out-of-pocket payments.

Companies including Pfizer Inc have recently announced that they expect the economic slowdown affecting investments



WHO Director-General Dr Margaret Chan at the World Health Assembly in May. Photo: WHO.

in the medical sector and in pharmaceuticals.

Chan said it was essential that governments avoid putting health care on the backburner, stressing that healthy populations would help reinforce economies in tough times. "Health is the very foundation of economic productivity and prosperity," she said. [E]

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## HIV spreads in China

**LONDON:** Infection with the virus that causes AIDS is spreading beyond China's original high-risk groups and to heterosexuals, a recent study pub-

lished in Nature has found. According to the researchers, the number of estimated cases has risen by 8 per cent to over 700,000 from 2005. [E]

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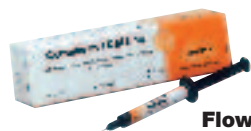
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# Community Development Authority research collaboration with Zayed University

Dubai: As part of its efforts to collaborate with local and international educational institutions and build strong relationships with academics, Dr Maryam Matar, Director General of the Community Development Authority, recently met with Dr Suliman Al Jassim of Zayed University to discuss ways in which the two organizations can work together to exchange social research and training in order to enhance Dubai's social development.

During the meeting the organizations discussed ways to enhance the workforce in the social service sector through government work or volunteer programs. One of the short-term solutions discussed was the implementation of specialized training programs to better equip the social workforce with the means to handle the UAE's requirements in the field, while long-term solutions discussed centered on the development of tailored university programs to provide professional degrees in social services.

It was also agreed that the CDA and Zayed University would share research to increase the CDA's capacity to pursue a strategic and targeted approach to providing social services for the special needs population by accurately determining the numbers and location of different special needs sectors of society.

"The CDA is looking to grow Dubai's social infrastructure in a strategic way that is built on knowledge and understanding of the needs of the various categories of society and incorporating best practice from around the globe. We believe that this partnership with Zayed University will enhance our ability to provide world class social services for the residents of Dubai," said Dr Maryam Matar.

# Qatar: Exhibition on hospitals opens

DOHA: H E Dr Sheikha Ghalia bint Mohammed Al Thani, Minister of Public Health, opened the Qatar International Medical and Hospital Show (Qmedic) at New Qatar International Exhibition Centre, yesterday.

Qatar's first medical exhibition has attracted more than 100 health care dealers, manufacturers and distributors around the world. The show is organised By OCnex Company under the patronage of the National Health Authority (NHA) and DHamad Medical Corporation (HMC). Qmedic has brought all medical products and services under one roof.

After the inauguration the minister toured various pavilions. She was received by Abdulla Al Khalaf, Director of Public Relations at the NHA and HMC stalls. She also visited the stand of Emergency Medical Services (EMS) and Children's Hospital stand.

The exhibition is focusing on different medical options available in the region and provides the opportunity for experts to be in touch with foreign expertise. It will also allow them to discuss the latest innovations and development with leading healthcare specialists and will provide vital access for companies penetrating the Gulf market.

It is also an opportunity for the medical companies to shed light on their technologies and innovations and to reveal the advances of the medical system, to accompany the rapid growth and expansion that the field is continuously witness

Muneer Hamadah, the Executive Director of Conex Company, said the show represents an exceptional opportunity for patients to present their cases to a variety of internationally famous consultants secured by the company.

# King Abdulaziz University campus to get nuclear research center

JEDDAH: Osama Tayeb, president of King Abdulaziz University (KAU) in Jeddah, announced at a press conference plans to establish a nuclear research centre on the university's campus

"The first phase of planning and research is complete; the project is moving along the required channels in order to be implemented," he said.

Tayeb is chairman of the executive committee organizing the Kingdom's first international symposium on the peaceful uses of nuclear technology in Gulf countries that begins this week. The symposium is held under the sponsorship of Custodian of the Two Holy Mosques King Abdullah.

More than 50 nuclear scientists from various parts of the world are expected to attend the three-day event scheduled to begin tomorrow. "It will identify the requirements for obtaining peaceful nuclear technology," Tayeb said.

When asked why Iran and Pakistan were not among the participants he said the committee had used certain criteria in choosing participants. He added that 53 studies and working papers from more than 25 countries had been chosen. The scientific committees have carefully revised and approved the papers, Tayeb explained.

The meeting will focus purely on scientific research and will not concern engineering, said nuclear scientists and experts from the United States, Russia, China, Canada, France, Germany and Japan have confirmed their participation.



The three-day forum will have 13 sessions dealing with five main points: Strategic planning for introducing nuclear technology into the GCC countries, nuclear power, nuclear research reactors, radioisotope applications and radiation protection.

Al-Johani said a number of GCC ministers are also expected to participate. A speech by Mohamed El-Baradei, director general of the International Atomic Energy Agency (IAEA), will be read out at the opening ceremony.

Al-Johani said participants would listen to the experiences of countries such as Egypt, the Czech Republic, Chile and others. Local and international companies will exhibit their products and services on the sidelines of the event. The university has set up an official website: [www.kau.edu.sa/cnts](http://www.kau.edu.sa/cnts) symposium for the forum.

# Two Awards for Ajman University

Two research projects by the College of Dentistry at Ajman University of Science and Technology (AUST) have won first and third awards at a research conference.

The conference, which is the fourteenth of its kind, was organized by Sharjah University in conjunction with Emirates Medical Association and the Ministry of Health, and took place from October 14-17, 2008. The topic of AUST's first winning project was "Aerosol & Bacterial Contamination during Ultrasonic Scaling," and it was the work of student Ms. Ola Abdurazzaq, carried out under the supervision of Dr. Vigie Deizy and Dr. Fahim Rashid. The third award was conferred to a project entitled "Thumb Sucking Habit" by Dr. Afraa Salah, College of Dentistry faculty member.

Commenting on these achievements Dr. Salem Abu Fanas, Dean of the College of Dentistry, said: "Our winning these two awards is the fruit of the innovative medical environment in which we work, which enables our students and faculty to pursue their skills and abilities and practice what they are taught in the classroom."



## NEW DTME EDITORIAL MEMBER

Dental Tribune Middle East and Africa is pleased to announce its new editorial board member, Dr. Aisha Sultan, Periodontist, Director of Dental services, Ministry Of Health, Dubai Zone. Her fine reputation as a prominent figure in the Ministry Of Health, and her long experience will undoubtedly benefit all dental tribune readers.



## DENTAL TRIBUNE

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# Saudi Arabia to set up world's largest women-only varsity

**JEDDAH:** The Riyadh Women's University, which is designed to become the world's largest institution of higher learning exclusively for women, will have 13 colleges, including those for medicine, dentistry, nursing, naturopathy and pharmacology and a 700-bed hospital. The project will be completed by 2010.



Custodian of the Two Holy Mosques King Abdullah is briefed by Finance Minister Ibrahim Al-Assaf as he views a model of the Princess Noura bint Abdulrahman University project in Riyadh on Wednesday. (SPA)

Custodian of the Two Holy Mosques King Abdullah will lay the foundation stone today for the university's new campus.

"After we received instructions from higher authorities to establish a full-fledged university, we have consulted international engineering houses for the purpose of designing a world-class campus that can accommodate 40,000 students," said Finance Minister Ibrahim Al-Assaf. "It will be the largest specialized campus for women in the world," he added.

"King Abdullah has shown special interest in the project and has been following up every development related to this university," the minister said. "The buildings of the campus will be completed within the next two years," he said.

He said the university would play a big role in promoting women's education in the Kingdom. "The project also aims at improving the condition of Saudi women and enabling them to participate in the country's development process efficiently."

Princess Al-Jowhara bint Fahd, president of the university, praised King Abdullah and Crown Prince Sultan for their tremendous support to Riyadh Women's University, which she said will usher in a new era in higher education for women in Saudi Arabia. "We want to make it a leading international institution," she said.

She disclosed plans about tie-ups with prominent universities inside and outside the Kingdom to promote research. The Women's University, along with its affiliated colleges, has so far enrolled 17,000 students, she added.

Al-Jowhara spoke about the university's plan to focus on educational programs that are essential to meet the Kingdom's job

market requirements. "We have devised its educational programs after consulting different ministries, including the ministries of labor, commerce and industry, and economy and planning," she said.

Speaking about the new campus, Al-Jowhara said it would be spread over an area of eight million square meters along Airport Road in northern Riyadh. The new campus will double the university's capacity. King Abdullah

has instructed the university's officials to do their best to improve the condition of women.

"The new colleges will accommodate 1,500 students this year," the princess said, adding

that existing colleges would be restructured in line with job market needs. The university and its affiliated colleges have given admission to 61 percent of secondary school graduates in the Riyadh province. [\[1\]](#)

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# Egyptian Governor Honours Kuwaiti Educational Official

**MENYA:** Egypt's Menya Governor Ahmed Diaa Eddin on lauded the Undersecretary of the Kuwaiti Ministry of Higher Education Dr. Rasha Hamoud Al-Sabah for efforts to beef up bilateral ties in various domains, especially education.

The senior Kuwaiti official was honoured by the governor in a ceremony thrown on the sidelines of the first international conference "Dialogue among Civilizations - Channels of Communication among Nations", hosted by Menya University.

Speaking to KUNA following the ceremony, she hailed Kuwaiti-Egyptian relations as "firm and deeply rooted" in political, economic, cultural, media,

and educational domains. She stressed Kuwait's important involvement in diverse cultural, social, and educational conferences and forums held outside Kuwait, especially Egypt.

The activities of the inter-civilization gathering aim to show the praiseworthy cultural image of Kuwait, she said.

Asked about an exhibition organized on the sidelines of the conference, she said the Kuwaiti pavilion attracted the attention of people and students in Menya Governorate, hailing the Kuwaiti Cabinet Women's Committee for providing the pavilion with all necessary requirements and material.

The Kuwaiti pavilion contains handicraft articles and traditional artefacts bearing on Kuwait's ancient tradition, she said, adding that a Kuwait TV Troupe concert was performed during the event.

Hailing Menya University as a landmark of education in Upper Egypt, the Kuwaiti educational official hoped that academic, educational, and cultural cooperation with this Egyptian university would be further reinforced.

She also wished that the conference would come up with recommendations that could lead to a further promotion and development of dialogue among civilizations. [D](#)



His Highness Sheikh Dr. Sultan Bin Mohammed Al Qassimi, Member of Supreme Council, Ruler of Sharjah visiting the booth stand of Tigers Medical Equipment LLC-Voco GmbH, during the 2nd Sharjah University Dental Conference, and the 14th Emirates Medical Association International Dental Conference.

## 3,000 Dentists Serve 140 Million Citizens

**Only 3,000 dentists are serving about 140 million Nigerians, Chairman, Lagos State Branch of the Nigerian Dental Association (NDA), Dr. Donna Umesikoleoso, has lamented.**

Disclosing this in a chat with Good Health Weekly shortly after the opening ceremony of NDA's 2008 Annual General meeting & Continuing Education seminar on "Current Trends in Aesthetic Dentistry" Umesikoleoso called on government to establish more dental clinics in all the 779 local governments across the Federation.

She said acute shortage of dental clinics in the country had not only denied young dentists the opportunity to have their houseman ship done and get registered as qualified dentist but contributed to the poor dental health in Nigeria.

She further called for the urgent implementation of the national oral policy in order to tackle the problem as well as put in place some aspect of oral health that would cater for the citizens oral health free of charge.

"We need to see the National Oral policy being implemented fully in order to address the public health aspect of oral health. We need to take oral health close to the people at the grass roots."

The State Chairman who however, admitted that despite numerous challenges, oral health is gradually coming up in Nigeria and emphasized the need for government pay appropriate

attention to dental clinics in various part of the country.

In some States only one dentist is serving the whole state. "It is sad that we have more dental patients than the dentists. Dentists are determined to reduce a lot of tooth loss among Nigerians because when you have good oral health, you have good nutrition and good health in general."

Umesikoleoso said the seminar was to share the wealth of experience and update the knowledge of members on what dentists outside Nigeria are doing.

She further appealed to Lagos State government to ensure that the dentists in the state are involved in the on going health reforms in the state.

Delivering her lecture Dr. Norvishie Arkutu of the University of Hospital North Staffordshire, recommended three minutes brushing of teeth, two times daily with tooth paste containing fluoride.

Arkutu who traced most tooth decays to frequency of eating of sweet things advised that people should reduce their intake of sugary things.

She warned that it is not the quantity that you eat decays your teeth but the frequency. Stressing the need for people to be conscious of their oral health, Arkutu said bad oral health also affects the heart.

This is because the bacteria that could cause gum disease can also travel and affect the heart." [D](#)

## Henry Schein sees weak economy helping acquisitions

**Medical-products supplier Henry Schein Inc. expects to make an acquisition over the next couple of quarters, as weak economic conditions make potential targets relatively cheaper.**

The company plans to spend \$200 million on acquisitions annually, and is actively looking at a group of takeover candidates, Chief Financial Officer Steven Paladino said in a interview with Reuters.

"I would be disappointed if we did not announce any kind of acquisition activity over the next couple of quarters," Paladino said.

Henry Schein, which bought UK-based Minerva Dental Ltd for an undisclosed amount in April, has spent about \$25 million on acquisitions in the last nine months, Paladino said.

"We have \$280 million of cash on the balance sheet at the end of the third quarter, and we have debt capacity," he said.

The company had posted a better-than-expected quarterly profit, but forecast weak 2009 earnings and said it would cut about 300 jobs to reduce costs.

RLPC-Duke Street completes 217m Euro buyout of Biomnis

Mid-market private equity group Duke Street said that it has completed the acquisition of French medical diagnostics firm



Biomnis for 217 million euros (\$271.5 million).

The deal is one of the only European leveraged buyouts to be completed since the collapse of Lehman Brothers in mid-September all-but closed the European leveraged loan market and cut private equity firms off from financing.

The deal is being financed with senior debt provided by Fortis and a mezzanine facility that is being arranged by AXA Mezzanine.

The acquisition of Biomnis adds to Duke Street's existing healthcare portfolio, which includes dentistry group Oasis Healthcare, regional psychiatric hospitals operator Affinity Healthcare and Paris-based hospital operator Groupe Proclif.

Biomnis Chief Executive Jean-Louis Oger will take up the role of non-executive chairman while Duke Street operating partners Charles Woler and Thierry Pater-

not will join the board as non-executive directors. Pierre-Yves Guivarch will join from Generale de Sante, a large healthcare provider in France, to assume the role of CEO.

Biomnis, formerly known as Laboratoire Marcel Merieux, specialises in diagnostic services and pathological analysis in the fields of molecular diagnostics, tissue, fertility treatment and specialised biochemistry. [D](#)

## Ex-dental chief Trevor Mann struck off for fraud

**The former chairman of the British Dental Association was struck off for fraudulently claiming £51,000 in expenses from his organisation. Trevor Mann, of Cheam, South Lon-**

**don, attempted to evade investigation by offering to repay the money.**

The General Dental Council was told that Mr Mann, a nonpractising dentist, wrongly claimed ex-

penses for meetings of the association from October 2005 to July last year. He claimed that he worked at a surgery in Byfleet, Surrey, earning £42,748 a year, but an investigation found no trace of the practice. [D](#)

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## Global market exceeds US\$21 billion by 2015

**SAN JOSE, USA:** The global market for dental supplies is projected to exceed US\$21.8 billion by 2015, a new report by *Global Industry Analysts*, USA, says. The demand for dental products and services remains healthy due to growing incidence of cosmetic treatment, new products that reduce patient discomfort, increased health consciousness, and a growing number of dental implants. However, growth in the conventional supplies category may be tempered due to emerging procedures and technologies that require fewer supplies and materials.

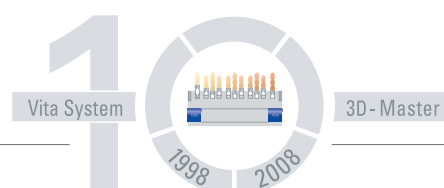
According to the report, dental care markets in Asia vary widely across different countries. Rapid improvement in living standards has induced greater realisation about the quality of medical and dental services in countries such as India and China. Consequently, these countries are exhibiting a soaring demand for modern and sophisticated technology and equipment in the dental market.

The United States, Japan, and Europe collectively dominate the worldwide dental supplies market, with over 80 per cent share of sales in 2008. 

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# An Update on Oral Cancer

Sunitha Carnelio, Gabriel Rodrigues & Sohil Ahmed Khan, UK (DTAP 06 07)

The article has been accredited by Health Authority - Abu Dhabi as having educational content and is acceptable for up to 2 (Category 1) credit hours. Credit may be claimed for one year from the date of subscription (20 CME hours per year).

The term “oral cancer” encompasses all malignancies that originate in the oral tissues. Squamous cell carcinoma of the oral mucosa and lips, however, comprise 90–95 percent of all oral malignancies.

Oral cancers are one of the most common cancers, constituting almost 50 percent of all cancers diagnosed in males with an overall incidence of 3.8–11 per 100,000 population. The disease usually presents in advanced stages.

It is surprising that a site, which is most accessible for daily self-examination, can become a leading cause of cancer death. Oral cancer is a preventable disease that can be greatly controlled by tobacco cessation and health education.

## Incidence

In developed countries oral cancer is less common, but it is the eighth most common form of cancer overall. However, the ranking varies a great deal among countries.

## “Squamous cell carcinoma comprises 90–95 percent of all oral malignancies.”

Estimates show that in 1980, more than 32,000 new cases of oral cancer were diagnosed throughout the European community. The prevalence of lip cancer appears to be decreasing, but the prevalence of intra-oral cancer appears to be rising in many countries, especially in younger people. This is especially true in Central and Eastern Europe. In the South America, the incidence rates vary from 4.4 (Cali, Colombia) to 15.4 in Canada. In Asia, it ranges from 1.6 (Japan) to 15.5 (India). In Australia and New Zealand, it varies from 2.6 (New Zealand—Maori) to 7.5 in South Australia.

The prevalence of tongue cancer is consistently found to be higher (by approximately 50%) in blacks compared with whites within the same regions of the US. The prevalence of oral cancer is also generally higher in ethnic minorities in other developed countries. Males are affected more frequently than females, although the ratio is equalizing and is predominantly found in middle-aged and older persons. The sex differences in some population groups could be a direct consequence of the sex distribution of tobacco habits.

For instance, in an epidemiological study in India, it was found that the M:F ratio of oral cancer patients was proportional to the prevalence of tobacco habits among men and

women in the general population, and in a study of 498 oral cancers among South African blacks, a high M:F ratio (7:1) related to the differences in tobacco usage between the sexes was observed.

## Etiology

The literature on the etiology of oral cancer is voluminous, but few firm conclusions can be drawn, except for the role of some forms of tobacco usage. The evidence for this and other possible etiological agents—namely, alcohol, syphilis, orodental factors, dietary deficiencies, chronic candidiasis, viruses and sunlight—is reviewed below, in brief.

Tobacco and alcohol use are independent risk factors for mouth and tongue cancer. Heavy tobacco smokers have a 20-fold greater risk; heavy alcohol drinkers a 5-fold greater risk and those who do both have a 50-fold greater risk. Betel-quid chewing and oral snuff are important risk factors in people from specific geographic areas (Southeast Asia).

a) *Cigarette smoking*: Compared to persons who do not smoke, the risk of oral cancer in persons who smoke low/medium-tar cigarettes and high-tar cigarettes was 8.5- and 16.4-fold greater, respectively. (Note that cigarettes are classified as low/medium if the tar yield is less than 22 mg and high tar if the tar yield is greater than 22 mg.)

b) *Alcohol*: Alcoholic beverages may contain carcinogens or procarcinogens, including nitrosamine and urethane contaminants and ethanol. Ethanol is metabolized by alcohol dehydrogenase and, to some extent, by cytochrome P450 to acetaldehyde, which may be carcinogenic.

c) *Betel and similar habits*: In 1986, the International Agency for Research on Cancer deemed betel-quid chewing an important risk factor, and the areca (betel) nut habit with or without tobacco use can cause cytogenetic changes in oral epithelium. Various other chewing habits, usually combinations that contain tobacco, are used in different cultures (eg, Qat, Shammah, Toombak). Tobacco chewing in people from parts of Asia appears to predispose to OSCC, particularly when it is started early in life and is used frequently and for pro-

longed periods. Studies from India have confirmed the association between paan tobacco chewing and OSCC, particularly cancer of the buccal and labial mucosa.

d) *Diet*: A significant protective effect of diet against oral cancer has generally been shown in persons who consume beta-carotene rich vegetables and citric fruits.

e) *Oral health*: A case-control study (ie, every oral cancer case prior to surgery and every control at the time of interview had a structured oral examination) from China found that wearing dentures, per se, is not a risk factor, although the risk was increased in men who wore dentures made from metal. Poor dentition, as reflected by missing teeth, emerged as a strong risk factor independent of other established risk factors.

f) *Other factors include*:

1. *Syphilis*: Syphilitic glossitis, when chronic, is implicated in tongue cancer.

2. *Candida*: High proportions of nodular leukoplacias are infected by candida, and nodular leukoplacias show higher rates of epithelial dysplasia and malignant transformation. Further, there is some experimental evidence demonstrating squamous metaplasia and a proliferative tendency of the epithelium of the chick embryo when infected with *Candida albicans*.

3. *Viruses*: Viruses are believed to induce cancers by altering the DNA and the chromosomal structures of the cells, and by inducing proliferative changes of the cells. Herpes simplex virus type 1 (HSV-1), and more recently human immunodeficiency virus (HIV), have been suggested to play a role in the pathogenesis of OSCC.

4. *Sunlight*: UV radiation is believed to be responsible for cancer of the vermilion border of the lip on the basis of observation of lip cancer more

often in fair skinned people who are generally engaged in outdoor occupations.

5. *Genetics*: Modern DNA technology, especially allelic imbalance (loss of heterozygosity) studies, has identified chromosomal changes suggestive of the involvement of tumor suppressor genes (TSGs), particularly in chromosomes 3, 9, 11 and 17.

Functional TSGs seem to assist growth control, while their mutation can unbridle these control mechanisms. The regions most commonly identified thus far have included some on the short arm of chromosome 3, a TSG termed P16 on chromosome 9, and the TSG termed TP53 on chromosome 17, but multiple other genes are being discovered. Carcinogen-metabolizing enzymes are implicated in some patients. Alcohol dehydrogenase oxidizes ethanol to acetaldehyde, which is cytotoxic and results in the production of free radicals and DNA hydroxylated bases; alcohol dehydrogenase type 3 genotypes appear predisposed to OSCC. Cytochrome P450 can activate many environmental procarcinogens.

## Pathology

The most common cancer within the oral cavity is squamous cell carcinoma. Other pathological types—eg, adenocarcinoma, adenoid cystic carcinoma and mucoepidermoid carcinoma—arise from the minor salivary gland. Melanoma, plasmacytoma, soft tissue sarcoma and bone tumors are uncommon neoplasms of the oral cavity.

## Premalignant Lesions

Most of the oral cancers are preceded by premalignant lesions like leukoplakia, erythroplakia, oral submucosal fibrosis (OSMF), lichen planus, which can be detected early and treated. OSMF is a collagen disorder that is characterized by extreme sensitivity to temperature/spices, whitening of mucosa, progressive trismus and bleeding. Usual presentation is marble like blanching of mucosa; submucosal, palpable fibrotic bands; white and raised patches with areas of ulceration or erythema.

It is usually associated with the habit of areca chewing, but in the West 90% of sufferers have association with HPV and 50% with *Candida albicans*. It is commonly seen in the Indian subcontinent, and 50–70% develops cancer in a decade. Erythroplakia is a chronic red mucosal macule, 80% of which may harbour microinvasive carcinoma. Without therapy, 60–90% of erythroplakias may turn into cancer in 5–10 years.

## Warning Signs of Oral Cancer

- A sore in the mouth that does not heal (most common symptom).
- A white or red patch on the gums, tongue, tonsil, or lining of the mouth that will not go away.
- A lump or thickening in the cheek.
- A sore throat or a feeling that something is caught in the throat.
- Difficulty chewing or swallowing.
- Difficulty moving the jaw or tongue.
- Numbness of the tongue or other area of the mouth.
- Swelling of the jaw that causes dentures to fit poorly or become uncomfortable.
- Loosening of the teeth or pain around the teeth or jaw.
- Voice changes.
- A lump or mass in the neck.
- Weight loss.

Early carcinomas may not be painful, however, later they may cause pain and difficulty with speech.

## Principles of Diagnosis

Potentially malignant lesions and OSCC should be detected at an early stage, however, many oral tumors still are seen only when advanced. Diagnosis is often delayed by up to 6 months, even in developed countries, despite exhortations over the past 25 years

to increase the index of suspicion. Early detection and treatment is the short-term goal because this results in considerably better survival rates.

*History*: A detailed history regarding habits, symptoms, oropharyngeal lesions and neck swellings is extremely valuable.

*Clinical examination*: Intra oral (cheeks, lips, alveolus, palate, tongue and movements, retromolar trigone,

## “The prevalence of intra-oral cancer appears to be rising in many countries, especially in younger people.”

tonsil, oropharynx, floor of mouth) and extra oral (skin and lymph nodes in the neck). Approximately 30–80% of patients with oral cancer have metastases in the cervical lymph nodes at presentation.

supplying a radiation dose equivalent to teletherapy, but one that is confined to the lesion and immediate area. Plesiotherapy causes fewer complications, but is suitable only for tumors that are smaller than 2 cm and located in selected sites.

vide thin, reliable flaps suitable for repairing small defects. Distant flaps required to repair larger defects include free flaps, pedicle flaps and hard tissues like prosthesis fitting.

Specific complications from the surgery of OSCC may

image analysis as an adjunct to the oral cavity examination in identifying pre-cancerous and cancerous lesions at early stages, when curative therapies are most effective.

“Oral Test” is a patented 5-minute mouth rinse se-

The head and neck cancer team is comprised of surgeon, radiation oncologist, medical oncologist, social worker, professional counselor, speech and language pathologist, maxillofacial prosthodontist, nurses and a pharmacist. The dismal scenario can be improved by providing basic training and knowledge of speech and swallowing to the treating surgeon, radiotherapist and medical oncologist.

## “Without therapy, 60–90% of erythroplakias may turn into cancer in 5–10 years.”

**Biopsy:** Punch or incisional biopsy depending on the macroscopic appearance of the lesion.

**Fine Needle Aspiration Cytology (FNAC):** Used on neck nodes to confirm metastasis, as nodes can be enlarged if the tumor is infected.

**Other investigations:** Blood, CXR, OPG, CT scan of head and neck area, triple (pan) endoscopy.

**Staging:** TNM staging (American Joint Committee Cancer, 1993)

### Treatment

Surgery, radiotherapy (RT) and chemotherapy are the three modalities of treatment in oral cancers either for cure or palliation. They can be used singly or in combination. A multimodality approach is required in advanced cases. Important factors to consider are quality of life and patient education.

In a study from South East Asia, it was noted that even after 6-months of diagnosis of oral cancer, 47% of participants still smoked and 36% drank alcohol to excess. Only one third of the participants were aware that these habits were important in the development of oral cancer.

The *prognosis* of OSCC is site dependent. For intra-oral carcinoma, the 5-year survival rate may be as low as 30% for posterior lesions presenting late, as they often do. For lip carcinoma, the 5-year survival rate often is more than 70%.

### Radiotherapy

Advantages of RT include the facts that (1) normal anatomy and function are maintained, (2) general anesthesia is not needed, and (3) salvage surgery is available if it fails.

Disadvantages mainly include the facts that (1) adverse effects are common, (2) cure is uncommon, especially for large tumors, and (3) subsequent surgery is more difficult and hazardous and survival is reduced further.

RT can be performed by external beam radiation (teletherapy), which is commonly accompanied by adverse effects, or interstitial therapy (eg, brachytherapy, plesiotherapy). Implants of iridium Ir 192 for a few days are often used,

Of the short-term complications, oral mucositis that invariably follows external beam RT involving the oral tissues can be the most distressing, and may have a significant effect on the quality of life. Occasionally, it is so severe that therapy needs to be curtailed. As many as 40% of patients can be affected. Others are oral infections (Candida) and periodontitis.

Longer-term complications such as dry mouth (xerostomia), loss of taste and osteoradionecrosis (less commonly) also may be distressing. RT also complicates further surgery because, in particular, the endarteritis impoverishes healing. Prevention and treatment of oral complications whenever possible are important and should be performed by an oncologic team, including a dental practitioner and an oral hygienist.

include infection and rupture of the carotid artery, salivary fistulae, and thoracic duct leakage (chylorrhea). Disadvantages primarily are perioperative mortality and morbidity, but modern techniques have significantly decreased these risks as well as the aesthetic and functional defects. When OSCC is fatal, it almost always is either because of failure to control the primary tumor or because of nodal metastases. Death resulting from distant metastasis is unusual.

### Chemotherapy

Several chemotherapy agents—eg, bleomycin, hydroxyurea, methotrexate, cisplatin, 5-fluorouracil—have high activity in squamous cell carcinoma of the head and neck. It is not curative when used alone, but a combination of chemotherapy with RT for advanced tumors has been practiced for many

quence with toluidine blue, used by dentists and physicians to detect early stage, asymptomatic lesions and to define margins of lesions for biopsy and surgery. It has been shown to be 100% sensitive for squamous cell carcinoma, the commonest form of oral cancer.

Recently, it was found that the delivery of two daily treatments, each delivering a relatively small dose (1.15 to 1.25 Gy) allows for some repair of radiation induced damage by the normal tissue. These treatment schemes (called hyperfractionation) allow increasing the total radiation dose to about 80 Gy without increased rate of complications.

Four randomized studies comparing hyperfractionated to standard radiation for advanced head and neck tumors have been conducted and pub-

Most of the tumors present in advanced stages, necessitating extensive surgery and adjuvant RT. Both these therapies lead to massive deterioration in speech and swallowing. Lack of knowledge of various interventions—eg, jaw/tongue exercises, thermal stimulation, augmentation prosthesis, speech exercises—compels a treating consultant to accept these disorders as non-remediable sequels to treatment.

Not only surgery but radiation also affects the physiology of swallowing. Loss of sensation, xerostomia, post RT fibrosis, mucositis and edema are some of the causative factors. All these can be effectively handled by proper pre-treatment counseling and post-treatment rehabilitation.

There is a need to identify speech and swallowing rehabilitation as an essential part of head and neck cancer treatment. An effective treatment does not mean disappearance of a tumor following surgery/RT/chemotherapy, but restoration of altered functions as well.

### Follow-up & Prevention

The oral cavity is easily accessible for visual examination, thus, without the aid of any sophisticated methods, oral cancer can be detected in its early stages. The detection of this disease in its early stages constitutes an important facet of prevention. Oral cancer prevention can be attempted at a primary as well as a secondary level in clinics, at hospitals and in large population groups.

In primary prevention, avoiding exposure to tobacco reduces the risk for cancer development. This can be implemented in the form of a community approach where the risk to the entire community is eliminated without the individual's direct participation. The problem can also be addressed through an individual approach designed to motivate the people with tobacco habits to quit their habits, or discourage people, especially vulnerable adolescents, from acquiring such habits. The implementation of primary prevention requires media such as films, television, radio, newspapers, posters and also intensive personal communication by doctors and social workers.

## “More than 50% of cases in cancer hospitals are head and neck cancers...”

### Surgical Care

The goal of surgery is to remove the primary tumor together with a margin of clinically normal tissue to ensure complete excision of malignant tissue, along with malignant lymph nodes (neck node dissection), when present. Surgery thus provides a one-stage definitive procedure from which the patient normally recovers within 10–14 days.

Although modern reconstructive techniques can produce good orofacial aesthetics and function, neither can be totally ensured. Cancer centers receive many patients with advanced disease, and many operations fail to remove the tumor completely, resulting in a poor outcome and recurrence of the tumor. A detailed histologic examination can then be performed for staging purposes and to help predict prognosis and the need for adjuvant RT. Surgery also provides another option of treatment for RT-resistant tumors.

Reconstruction is tailored to the patient's ability to cope with a long operation and the risk of significant morbidity. For soft tissue reconstruction, tissue often must be brought into the region to close the defect using split skin grafts or flaps. Local flaps (eg, nasolabial flaps) pro-

years. Recently, a better understanding is being gained of the optimal schedule for combined modality treatments and their benefits compared with radiation alone.

Chemotherapy can be delivered before radiation, achieving a high response rate (40 to 90%). A meta-analysis of 11 studies of concurrent radiation and chemotherapy showed that combined treatment has reduced mortality rate by 22%. Reasons for the advantage of simultaneous chemotherapy over up-front chemotherapy or RT alone stems from sensitization of tumor cells to RT by the simultaneous delivery of drugs.

### Current Concepts in the Management of Oral Cancers

Recently a technique (oral CDx study group) has been tried wherein “brush biopsy” specimens were obtained from lesions from all regions of the oral cavity. The brush biopsy resulted in minimal or no bleeding and required no topical or local anesthetic. A computer programmed to read the slide identified the most suspicious cells to be evaluated by a pathologist. The results of multi-center trials have demonstrated the potential value of computer-assisted

lished to date. All the studies reported significantly improved local and regional tumor control, and three of the four reported improved survival using hyperfractionation compared with standard radiation.

More recent studies have shown that it is possible to avoid mutilating surgery using a similar concept in other tumor sites in the head and neck. Efforts at organ preservation concentrate on delivering a short course of chemotherapy (neo-adjuvant chemotherapy) and selecting the patients whose tumors respond to chemotherapy. These selected patients are treated with concurrent RT and chemotherapy, while patients whose tumors do not respond to chemotherapy undergo surgery and post-operative radiation.

### Rehabilitation & Problems

More than 50% of cases in cancer hospitals are head and neck cancers and of these, two-thirds are advanced cases. Patients of oral cancer who could be treated live in misery with a number of functional problems in respiration, speech and swallowing. Though many centers have the infrastructure to effectively treat head and neck cancers, the quality of life (QOL) of patients is poor.



While the advantage of primary prevention lies in tackling the problem at a grass-roots level, it has its limitations. One of them is that it requires long sustained efforts under close monitoring. Second, the achievement of a drop in the incidence rates of oral cancer requires a significant amount of time. These limitations point to the importance of secondary prevention.

This form of prevention consists of early diagnosis

of oral cancer and management of suspected precancerous lesions. The treatment of early cancers will lead to better prognosis, and the management of the precancerous lesions and conditions will prevent their progression to cancer. As the aim of secondary prevention is to improve the prognosis, this approach entails periodic re-examination of high risk group populations. In areas where the incidence of oral cancer is high, secondary prevention

may appear as an immediate necessity. The practical difficulty in implementing this form of prevention, however, is the lack of sufficiently trained professionals and limited resources in developing countries.

Proper education and community-based early detection programmes coupled with proper treatment can be expected to be more efficient than the current treatment programmes alone.

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## MEDIA CME Self-Instruction Program

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# Halloween Candy: It's Not How Much Kids Eat, It's When

#### Prolonged exposure to acid in the mouth is the culprit.

Halloween and its avalanche of candy is coming, making it the worst time of year for children's teeth, right?

Not necessarily, says a dentist who contends that parents can make a big difference by monitoring when their kids eat their sweets.

"Parents need to know that frequency is far more important than amount when it comes to taking in" sugars, said Dr. Mark Helpin, acting chairman of Temple University's Department of Pediatric Dentistry. "It's not how much we eat but how often we eat these kinds of things that will place us at increased risk of dental decay and cavities."

Candy remains a huge part of Halloween for tens of millions of kids and their candy-buying -- or candy-pilfering -- parents. The

National Confectioners Association says 93 percent of children in the United States go trick-or-treating, and the group estimates that Halloween candy sales this year will top \$2.26 billion.

But children -- and adults -- are less at risk of developing tooth decay if they eat sweets -- or even carbohydrate-heavy foods like potato chips and crackers -- at mealtimes, Helpin said.

Cavities are most likely to develop when your mouth is exposed to the acid created by bacteria during eating, Helpin said. "When we eat [at meals], the flow of saliva increases. We're also taking in other liquids that will help wash the mouth out," he said.

But if you snack during the day, the teeth are continuously bathed in acid, he said. "If I have four pieces of candy, and I eat all

four at one time, my mouth will have acid in it for 30 to 60 minutes. If I eat one each hour, my mouth can be exposed to acid for four hours," he added.

The worst time to give kids sweets is right before bedtime, Helpin said. As for mealtimes -- like lunchtime at school -- it's wise for children to swish a liquid in their mouths to wash away acid, he said.

When it comes to Halloween, Helpin recommends that parents not get overly concerned about candy and their kids. "I don't think Halloween week is going to be the make-or-break factor in whether someone will get a number of new cavities," he said.

Helpin recommends that parents have their kids brush their teeth after eating candy. If that's not possible, have them rinse their mouth with water three or four times after eating. This will



help cut down on acidity in the mouth, he said.

There can be special concerns about Halloween treats if your child is among the boys and girls with food allergies.

"Candy products frequently include ingredients like peanuts, tree nuts, milk and egg, some of the most common food allergens in children," Dr. Jacqueline A. Pongracic, an official with the Milwaukee-based American

Academy of Allergy, Asthma & Immunology, said in a news release issued by the organization. "Peanuts and tree nuts are common causes of severe, life-threatening reactions, and children and their parents need to be aware of this and check ingredients for all treats. This can be especially tricky with Halloween candies, which often do not have ingredients listed on their labels." [\[2\]](#)

# Progressive Orthodontics extends live programme to Asia

**ALISO VIEJO, USA:** Owing to popular demand, global orthodontics education provider Progressive Orthodontics has announced the re-opening of its Singapore location in 2009. Singapore's two-year Orthodontics class, run by Dr Oliver Hennemidge and his wife Irene Hennemidge, will begin on 15 January 2009 with the closing date for discounts for early registra-

tion 26 December 2008, company officials told *Dental Tribune*. The programme series will be presented by leading instructors, such as Dr Swaroop from the USA, Dr Hymer from Australia, Dr Hagens from Holland, and Dr Tossolini from Argentina. Students will also receive Progressive Orthodontics' leading orthodontic software, *IPSoft*, which will assist them

in creating optimal treatment plans for patients anywhere in the world. According to the company, the software analyses patients' details prior to diagnosis and treatment, to ensure the highest chance of successful diagnosis. Features include 150 treatment plan templates, which can be adapted to each patient, cephalometric tracing, model measuring, visual treat-

ment objectives, and easy export for case diagnosis to instructors worldwide.

In addition to Singapore, Progressive Orthodontics offers the programme also in Australia and New Zealand. Dentists who cannot attend Progressive Orthodontics' live series in the 21 worldwide locations can still benefit from the comprehensive

Orthodontics programme through online training. With this programme, dentists need only attend seminars three times, making a total of ten days' absence from their practices, while attaining the same level of orthodontic skill from the 5,000 web pages of principles, cases, and videos, as well as hands-on instruction, according to the company. [\[3\]](#)





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# The Impact of Infectious Diseases on the Practice of Dentistry

Raghunath Puttaiah, U.S.A.

The article has been accredited by Health Authority - Abu Dhabi as having educational content and is acceptable for up to 2 (Category 1) credit hours. Credit may be claimed for one year from the date of subscription (20 CME hours per year).

Infectious diseases have an impact at basically three levels in health component of incidence and prevalence in the community. The second level is how compromised patients. Finally, immunocompromised diseases or impact dental healthcare workers. In this article we shall try to address these three aspects in a simple and pragmatic way.

## Common Infectious Disease Impacting the Community

Common conditions are the es, HIV and AIDS, and tuberculosis (TB) including multidrug-resistant TB.<sup>1-4</sup> While Hepatitis B, C, D and G viruses follow a bloodborne and E are transmitted through the fecal-oral route. Contamination of food and water through improper and unhygienic handling and from contaminated water are main sources.

**Hepatitis B viral (HBV) infection** is caused by a DNA virus that is a hepadnavirus. Most patients clinically identified as being infected. About 2-7% of the population in Southern Asia, the Middle East, the Mediterranean, Eastern Europe, Russia and parts of Central and South America are infected with this virus. Certain regions in Alaska and Canada (the and Southeast Asia including prevalence (> 8% of the population). Most of the regions in North America, parts of South America, Australia and Western Europe are considered low in prevalence (< 2% of the population).

**Hepatitis D viruses** are a virus-like particle that is always dependent on the presence of a Hepatitis B (piggy-back virus). It may occur as a co-infection with HBV or after transmission is similar to blood and other body fluid contact.

**Medical History & Impact of Infectious Diseases in the Clinic**

While taking medical history, the clinician should not discriminate against an infectious disease patient with reference to the potential of spreading the disease in the clinic.<sup>5</sup> The reason one should look out for patients with infectious diseases is to protect them from acquiring other infectious disease conditions as they these individuals are usually medically compromised. For some patients may be advisable to defer routine dental care (as in tuberculosis) until the patient is deemed non-infectious.<sup>6</sup> Sometimes it may be necessary to differentiate between patients at risk for infectious diseases, their potential for transmission, clinical features, prognosis and outcomes is essential for a clinician. While speaking to one must maintain a high level of professionalism and confidentiality in acquiring the patient's trust and confidence. If the patient is not comfortable, there is bound to be a barrier in doctor-patient communication such as information being and seeking the end result being an incomplete history, possible misdiagnosis, and inappropriate treatment.

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