BDJ Team
SEPTEMBER 2014

SKIN CANCER

for dental professionals

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Oral cancer: the dental team's responsibility

LONDON | Friday 17 October 2014

The number of cases of oral cancer across the UK continues to increase with latest figures showing that 6,000 new cases a year are diagnosed*

Furthermore a growing number of patients are subsequently accusing their dentist of missing the signs and taking legal action. Early detection is the key and can improve chances of survival from 50 per cent to 90 per cent*. This one day course helps define the dental team's duty of care, offering information and advice on how to manage oral cancer effectively and sensitively.

**Data from British Dental Health Foundation*

By the end of the course you will:

- have learned what the risk factors of oral cancer are and be able to identify patients at increased risk
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- know the criteria for referral following NICE guidelines
- be able to communicate to your patients how oral cancer can be prevented
- understand how the whole dental team can successfully implement a management strategy for oral cancer.

Speakers

Saman Warnakulasuriya OBE
Professor of Oral Medicine,
King's College London Dental Institute

Richard Cook
Senior Lecturer in Oral Medicine,
King's College London Dental Institute

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CORE

September 2014

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Highlights

Regulars

In this issue

CPD: ONE HOUR

FLASH INTERVIEWS *with a DCP near you*

Stephanie Horner

Stephanie is a 43-year-old dental nurse at Creffield Lodge Dental Practice in Colchester. Stephanie is married to Darren, a Data Privacy Advisor.

How long have you worked in dentistry? 25 years

Why did you choose dentistry for your career? As a result of a work experience placement whilst undertaking a BTEC qualification in Health and Community Care.

Do you have any special responsibilities within your dental practice? I'm Decontamination lead.

What do you like best about your job? Having been at this practice for over 12 years I love seeing the familiar faces of my patients and catching up on their news and events as the months go by.

What is the most challenging part of your job? Keeping abreast of the constant changes in dentistry, especially with the introduction of the HTM 01-05 document and the involvement of the Care Quality Commission.

What are your outstanding ambitions? To return to the country of my birth, Singapore, for a visit and to gain my elusive gold club standard for a half marathon.

What do you like to do outside work? I am a member of a local running club, so I partake in many events for them: anything from 5k to full marathons. My favourite distance is a half marathon, 13.1 miles.

Tell us a secret. Oh gosh no, that would be telling!

What do you like about BDJ Team*?* It's the only dental magazine I feel is truly devoted to dental nurses, so the contents are always relevant and interesting.

What three things could you not live without (besides people)? Hair straighteners, champagne and a sports bra!

Claire Rudman

Clare Rudman is a 43-year-old practice manager at The No8 Partnership in Sloane Square, Chelsea, and lives in Hoddesdon in Hertfordshire. Clare is married to Dave, a manager at Thames Water, and has two children: Jake, 22 and Grace, 16.

How long have you worked in dentistry? Ten years

Why did you choose dentistry for your career? My daughter was starting primary school and I was looking for something new and exciting to get into. I saw an advert for a dental receptionist and within weeks knew this was the job for me.

Do you have any special responsibilities within your dental practice? I am Practice Manager so my responsibilities range from organising the Christmas party to preparing for CQC inspections. You never know what the day may bring.

What do you like best about your job? Mentoring my team and seeing them grow in confidence and enthusiasm.

What is the most challenging part of your job? Communicating with my team. I need to use a variety of methods as I have 13 staff and they all work different hours.

What are your outstanding ambitions? Currently: having a huge influence on the success of my practice.

What do you like to do outside work? I love to go out with my friends, going to concerts and festivals.

Tell us a secret. I am a box set addict.

What do you like about BDJ Team*?* The free CPD and informative articles.

What three things could you not live without (besides people)? Jacket potatoes, box sets, Prosecco.

Alison Crump

Alison is a 48-year-old practice manager at Longborough Dental Practice in Dorking, Surrey. Alison is married to James, a headteacher, and has three sons: Jacob, Dylan and Joseph.

How long have you worked in dentistry? On and off since 1984, practice manager since 1996 (following a job in the cosmetics industry as a buyer).

Why did you choose dentistry for your career? It's in my blood: my father was a dentist.

Do you have any special responsibilities within your dental practice? As practice manager my responsibility is to my team and our patients.

What do you like best about your job? I am passionate about high quality customer service, above and beyond the call of duty. I like my team to be well equipped; our nurses are encouraged to take on extra CPD, all have radiography and impression taking certificates. One of our nurses recently completed the DNETC Certificate in Dental Implant Nursing with King's College Hospital.

What is the most challenging part of your job? I love a challenge and inevitably every day will bring a new one; finding the best solution is what I enjoy. The variety of challenges a practice manager has to overcome is part of what makes the job so exciting.

What are your outstanding ambitions? I'd like to spend some time abroad doing voluntary work once my boys have flown the next.

What do you like to do outside work? Cooking with my husband at the weekend really helps me unwind.

Tell us a secret. I am an open book. I don't have secrets!

What do you like about BDJ Team*?* The dental profession are a unique breed, we get excited about teeth: something that not many other people share. *BDJ Team* is one of the places we can share that passion with each other and learn in the process.

What three things could you not live without (besides people)? Sense of humour (essential), passion and lipstick!

Debbie Fenton

Debbie Fenton is a 51-year-old dental nurse at Fylde Dental Clinic in St Annes-on-sea. Debbie is married to Peter, a car mechanic.

How long have you worked in dentistry? 34 years

Why did you choose dentistry for your career? I always liked the dental nurse when I went to the dentist as a child and wanted to do the same job as she was always so nice and kind.

Do you have any special responsibilities within your dental practice? I have responsibility for all the clinical waste management in the practice.

What do you like best about your job? Looking after our older patients.

What is the most challenging part of your job? Dealing with the increasing amount of paperwork.

What are your outstanding ambitions? To write a book.

What do you like to do outside work? Read and bake.

Tell us a secret. I've always wanted a fur coat.

What do you like about BDJ Team*?* The interesting articles you publish.

What three things could you not live without (besides people)? My Louis Vuitton handbag, my Samsung tablet and my car.

Sheree Dunbar

Sheree is a 23-year-old dental nurse who works at Your Perfect Smile Dental Clinic in Grantown on Spey in the Scottish Highlands. Sheree is engaged to Kevin, a welder, and the couple have a four-month-old daughter called Mya Grace.

How long have you worked in dentistry? Two years and nine months. Currently on maternity leave and returning to work early next year.

Why did you choose dentistry for your career? Growing up I always wanted to work in a dental practice; I was back and forth to my local dentist whilst wearing braces and was fascinated by the way they worked.

Do you have any special responsibilities within your dental practice? We all have equal responsibilities within our team.

What do you like best about your job? I love every aspect of my job. The smile on our clients' faces after their treatment is so nice to see.

What is the most challenging part of your job? It's hard to answer that question as no two days in the practice and their challenges are the same. I would say I overcome challenges on a daily basis.

Do you have any outstanding ambitions? I have fulfilled my ambitions to become a dental nurse and become a mother.

What do you like to do outside work? I love spending time with my baby girl and my family and friends.

Tell us a secret. I get emotional far too easily when watching soppy scenes in TV programmes.

What do you like about BDJ Team*?* *BDJ Team* gives us advice and opinions of others within the dental industry.

What three things could you not live without (besides people)? My mobile phone - so many photos on there! Also I could not live without my car - I live in a small village with no shops and food. I could not live without food - I love it!

bdjteam201491

TAX? HELP!

PRIYA KOTECHA[1] PROVIDES A GUIDE FOR DENTAL NURSES, DENTAL THERAPISTS AND DENTAL HYGIENISTS.

TAX IS FUN

Firstly, relax! To quote one of my least favourite adverts: 'Tax doesn't have to be taxing'!

The truth is, tax is actually fun. Or maybe I'm a bit strange for thinking that. Whether you agree with me or not, you should certainly learn a little more on the subject to make sure you are not paying more tax than you should be.

The first step on your path to getting some tax back is figuring out whether you are employed or self-employed. Usually, if you are a dental nurse, you will be employed, but as a dental hygienist or dental therapist you could be either self-employed or employed, depending on the way in which you work.

Does it really make any difference to you or your practice in terms of tax? Yes!

EMPLOYED OR SELF-EMPLOYED

There is a big difference. If you are employed, your practice must deduct tax and employees' national insurance from your pay which means that they must operate a PAYE (Pay-As-You-Earn) system. They also have to pay employers' national insurance on top of this – a whopping 13.8% of your pay! You are also entitled to sick pay, maternity pay etc and employment rights. You can only get tax relief on any expenses that you HAVE to incur on your employment.

If you are self-employed you can get tax relief on anything that is wholly and exclusively for the purposes of your trade.

(*Before I drift off into my happy little world of tax jargon, when I talk about tax relief, I mean that your taxable income is reduced by the amount of tax relievable expenditure you have, so effectively, you pay tax on that much less.*)

So, from a tax point of view, many people prefer to be self-employed BUT it doesn't matter what you and your practice call it or how you choose to pay tax; the question of whether you are employed or self-employed depends on the factual relationship you have. If HMRC feel you are incorrectly calling yourself self-employed, when the reality of your relationship with the practice is that you are employed, then HMRC can tax you and the practice as if you were employed.

DEFINING YOUR RELATIONSHIP

It is important to make sure that you correctly define your relationship in the first place.

EMPLOYED

As a general guide as to whether you are an employee or self-employed, if the answer is 'Yes' to all of the following questions, you are probably an employee:

1. DO YOU HAVE TO DO THE WORK YOURSELF?

It may be that you have a contract that allows you to substitute someone else in your place which would mean you do not have to do the work yourself.

2. CAN SOMEONE TELL YOU AT ANY TIME WHAT TO DO, WHERE TO CARRY OUT THE WORK OR WHEN AND HOW TO DO IT?

Think about whether you choose when to work, or are told by your practice when you must work. Do you have clinical freedom when treating your patient or are you told what you must do?

3. CAN YOU WORK A SET AMOUNT OF HOURS?

Think about whether you can vary your hours.

[1] *Partner and Chartered Accountant, Mac Kotecha & Company. www.specialistdentalaccountants.co.uk*

4. CAN SOMEONE MOVE YOU FROM TASK TO TASK?

5. ARE YOU PAID BY THE HOUR, WEEK, OR MONTH?
Or are you paid based on the number of patients you see and the fee they are charged?

6. CAN YOU GET OVERTIME PAY OR BONUS PAYMENT?

SELF-EMPLOYED
If the answer is 'Yes' to all of the following questions, it will usually mean that the worker is self-employed:

1. CAN YOU HIRE SOMEONE TO DO YOUR WORK OR ENGAGE HELPERS AT YOUR OWN EXPENSE?
Does your contract allow you to 'substitute' someone? Could you employ a nurse or secretary if you felt this would help you?

2. DO YOU RISK YOUR OWN MONEY?
If the number of patients you saw fell, would your income fall also?

3. DO YOU PROVIDE THE MAIN ITEMS OF EQUIPMENT YOU NEED TO DO YOUR JOB, NOT JUST THE SMALL TOOLS THAT MANY EMPLOYEES PROVIDE FOR THEMSELVES?
Or, if you use a dental chair, do you pay a rent for this?

4. DO YOU AGREE TO DO A JOB FOR A FIXED PRICE REGARDLESS OF HOW LONG THE JOB MAY TAKE?
For example, if a routine clean normally takes 45 minutes, but you decided it would take four hours – would it be fair to say you would not be paid extra?

5. CAN YOU DECIDE WHAT WORK TO DO, HOW AND WHEN TO DO THE WORK AND WHERE TO PROVIDE THE SERVICES?

6. DO YOU REGULARLY WORK FOR A NUMBER OF DIFFERENT PEOPLE?
More than one practice perhaps?

7. DO YOU HAVE TO CORRECT UNSATISFACTORY WORK IN YOUR OWN TIME AND AT YOUR OWN EXPENSE?

So, now you will have decided if you are employed or self-employed (or you found my article so boring that you are no longer reading. I hope it is the former).

TAX RETURNS

If your status is employed, you will not normally need to complete a tax return unless HMRC send you one in which case you must complete it (approximately one in three employed people still receive a tax return) or you receive any income which you know you have not paid tax on (like rental income for example) or you are a sucker for punishment and ask for one even if you don't need to. If you are completing a tax return anyway, you can include details of your wholly, exclusively and necessarily incurred business expenditure there. If you do not have to complete a tax return, to get tax relief on your business expenses you will need to write to HMRC or fill in form P87 (you can go back up to four years if you have not claimed relief for past years).

'IF YOU ARE PRESCRIBED TO WEAR A CERTAIN TYPE OF FOOTWEAR IN YOUR PRACTICE, YOU CAN CLAIM £12 A YEAR... IF YOU ARE ENTITLED TO DO IT, WHY NOT?'

EXAMPLES OF QUALIFYING EXPENDITURE ON WHICH YOU SHOULD GET TAX RELIEF

1. ANNUAL RETENTION FEE (ARF)
Without this, you cannot work and so if your employer does not pay this for you (many don't), you will have to and this is tax relievable. There is a list of associations to which subscriptions made are tax deductible. Most of the dental ones can be found here: http://www.hmrc.gov.uk/list3/d.htm.

If your employer pays your annual fee for you, or you pay it and s/he reimburses it to you, remember this must be reported to HMRC on your P11D if you earn in excess of £8,500 per year (this is your employer's responsibility). Alternatively, your employer can get a special dispensation from HMRC by completing a form P11Dx.

2. THE UP-KEEP OF YOUR UNIFORMS
If you must meet the cost of this, you can claim at a fixed rate of £100 per annum. http://www.hmrc.gov.uk/manuals/eimanual/eim66795.htm

3. THE REPAIR AND RENEWAL OF SHOES, TIGHTS AND SOCKS
Under section 336 and 367 of the ITEPA 2003, if you are **prescribed** to wear a certain type of footwear in your practice, you can claim £12 a year for the 'repair and renewal' of said footwear. In addition, if you are required to wear a certain type/style of stocking/tights, you can claim £6 a year. It may not be much – but it is so easy to make a claim and if you are entitled to do it – why not? http://www.hmrc.gov.uk/manuals/eimanual/EIM67200.htm

TAX RELIEF WHEN SELF-EMPLOYED

If self-employed, you can get tax relief on anything that is wholly and exclusively incurred in the course of your trade. This includes but is not limited to:

1. Annual registration fees and professional indemnity
2. Course fees for CPD courses you go on
3. Motor and travelling expenses to the extent that these are business related
4. Laundry expenses
5. Secretarial expenses (if perhaps you need a secretary to assist you – perhaps you work at a number of practices and cannot keep up with the admin yourself)
6. Stationery, computer and telephone expenditure (again to the extent that it is business related).

If you are self-employed you have to complete a tax return so you can just claim your expenses there (or you can get someone like me to help you with this!).

I love Plato just as much as the next person, but I have to defer to him when he says: 'When there is an income tax, the just man will pay more and the unjust less on the same amount of income.' It's all about being clued up and if that means you can pay less tax in a legal way – why not?

bdjteam201492

CPD: ONE HOUR

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Skin cancer for dental professionals

Visiting the dental practice is a valuable opportunity for skin cancer screening, says **Ben J. Steel**.[1]

Skin cancer is the commonest form of cancer in the UK. In 2010, 112,367 skin cancers were registered in the UK out of a total of 424,128 cancers of all types.[1] Three main types are recognised: basal cell carcinoma (BCC) and squamous cell carcinoma (SCC), which collectively comprise non-melanoma skin cancer (NMSC), and malignant melanoma (MM).

[1]*Medical student, Hull York Medical School; general dental practitioner, Hull Royal Infirmary*

Examination of the oral mucosa for signs of oral squamous cell carcinoma and other mucosal conditions is an accepted part of the normal dental check-up, as is an extra-oral examination to check the facial hard and soft tissues, jaw joints and cervicofacial lymph nodes.[2] A brief look at the head and neck skin for suspicious lesions could easily be incorporated into this structure. In the two years leading to September 2012, 29.6 million people in the UK attended a dentist, representing some 52.1% of the adult population.[3] With such a considerable proportion of the population passing through, there exists a valuable opportunity for a form of ad hoc screening for head and neck skin malignancy. Patients with suspicious lesions could be referred to their general medical practitioner (GP) or an oral and maxillofacial surgeon for further management.

This article will present an overview of the three forms of skin cancer most likely to be seen among dental patients in the UK.

BASAL CELL CARCINOMA

Epidemiology

This is the commonest type of skin cancer, and indeed any cancer, in the UK, with at least 48,000 cases registered in England each year between 2004 and 2006.[4] This is believed

to be an underestimate, with the real number of cases likely to be 55,000-60,000 a year.[5] It is becoming more common – increasing by 1.4% and 1.9% for males and females respectively between 1992 and 2003, which was most marked in the 30-39 age group.[6] It is known that having one BCC increases the likelihood of having other lesions, both at the same time and later.[7] There is regional variation – the age-standardised incidence in the south west of England is 121.3 per 100,000 compared to 93.7 across England as a whole.[8] The incidence increases with age, above the age of 55 having a male predominance.

Pathology and risk factors

BCC is a malignant neoplasm of keratinocyte stem cells. It behaves as a slowly growing locally destructive neoplasm, which may over time infiltrate underlying tissues such as bone and cartilage; however, metastasis is extremely rare. If neglected BCCs may reach a substantial size and deaths have been reported, albeit very rarely. The vast majority of cases are sporadic and caused by ultraviolet (UV) radiation, specifically UV-B.9. Both chronic and acute exposure (as sunburn) are implicated, which damage DNA via both direct effects and indirectly via production of oxygen or nitrogen radical species, or induction of inflammation. As well as age and male gender, having fair skin is a risk factor, as is having fair or red hair, or freckles. People of Celtic ancestry are most at risk. Most cases occur on sun-exposed areas such as the face and neck, scalp, forearms, hands, lower legs and feet.[8] Intraoral lesions are vanishingly rare, and when reported often thought to have been misdiagnosed.[10]

Several genetic conditions predispose to BCCs, notably nevoid basal cell carcinoma syndrome (NBCCS), also known as Gorlin-Goltz syndrome. Typical manifestations are multiple, aggressive BCCs occurring from a young age, keratinising odontogenic tumours, skeletal abnormalities and plantar and palmar pits. It is thought around 2% of people with BCCs before the age of 45 have this condition.[11] Other rare conditions include Bazex-Dupré-Christol syndrome and Rombo syndrome.

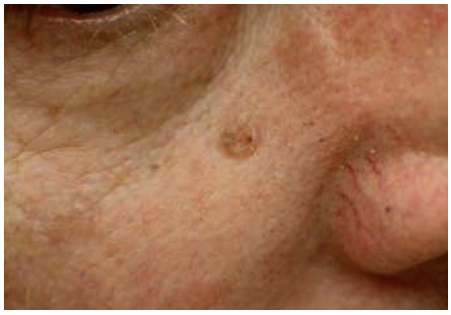

Fig. 1 Noduloulcerative BCC

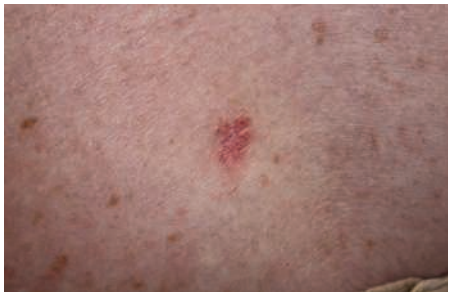

Fig. 2 Superficial BCC

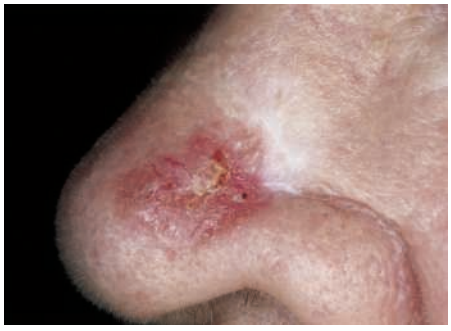

Fig. 3 Infiltrating BCC

Clinical presentation

BCCs typically cause no symptoms and may not be noticed by the patient. Three main variants are recognised: noduloulcerative, superficial and infiltrating.

The noduloulcerative type represents the typical and most common form of BCC. The appearance is initially a firm red or pink painless papule, which slowly enlarges and forms a central area of ulceration surrounded by a raised semi-translucent margin with telangiectasia (visible tiny blood vessels coursing through it) (Fig. 1). At this stage it is also known as a rodent ulcer. The lesion may bleed occasionally but does not heal. A pigmented variant shares the same morphology but is pigmented by melanin deposition – appearing tan, brown, black or bluish. The pigment is usually not distributed evenly, whereas that in a benign melanocytic lesion (mole) would be.

Superficial type lesions are the second most common form, and occur more often on the trunk, appearing as flat or raised, red or pink, scaly eczematous areas, sometimes with ulceration or crusting (Fig. 2). It may be darkly pigmented. The borders are well-demarcated and can be slightly raised or rolled, with a 'threadlike' appearance. They may be mistaken for a patch of eczema or psoriasis and can be multiple.

Infiltrating lesions are insidious lesions and less common than the other forms, tending to be more aggressive. Their appearance mimics scar tissue, being flat skin-coloured, pink or whitish lesions that are firm to palpation. The borders are indistinct and may be slightly elevated (Fig. 3). Their insidious nature means there may be more invasion before they are noted than the other forms.

Investigations and treatment

BCCs with a typical appearance are generally not biopsied and are instead diagnosed clinically. Treatment depends on the location, size and histology of the lesion. Surgical excision is most commonly employed, either with direct edge apposition or local flap closure, typically under local anaesthetic. This may be done by GPs in primary care, or by a range of specialties in hospital. A 4-5 mm surgical margin gives a 95% cure rate,[12] although infiltrating and large BCCs

are thought to require larger margins. For larger lesions, or where surgery is declined or inappropriate, radiotherapy alone can be employed. Mohs micrographic surgery, a technique where tissue samples are viewed microscopically during the operation, can be used to ensure complete excision of recurrent or poorly-defined lesions. A range of other modalities – curettage, electrocautery, cryotherapy, photodynamic therapy or carbon dioxide laser ablation, are sometimes used to destroy low-risk lesions, but are not recommended for high-risk lesions.[13] Imiquimod is an immune response modifier, used topically as a 5% cream applied to the lesion five times a week for six weeks, and appears to be effective in treating small superficial lesions.[14]

A new treatment licensed in the UK in August 2013 is the biological agent Vismodegib. It is only used in locally advanced tumours whose position prevents surgical removal, or if recurrence has occurred after resection and radiotherapy has already been used. Its use is not yet widespread but early results are promising.[15]

Differential diagnosis

- Actinic keratosis – see SCC section
- Seborrhoiec keratosis – common, usually asymptomatic, benign neoplasm, of variable appearance but usually beginning with a sharply defined light brown macule, later growing a velvety, verrucous, or warty surface with keratin plugs and coloured pale brown to black (Fig. 4). Slowly grows over time, does not resolve and does not malignantly transform, although the presence of multiple lesions may make a malignancy difficult to notice. Can also be confused with SCC and MM. No treatment is necessary
- Angiofibroma
- Bowen disease – see SCC section
- Fibrous papule of the face
- Molluscum contagiosum
- Psoriasis
- Melanocytic naevus
- SCC, MM or metastatic malignancy
- Cutaneous T cell lymphoma
- Darier disease
- Eczema
- Keratoacanthoma – see SCC section
- Lichenoid keratosis.

SQUAMOUS CELL CARCINOMA

Epidemiology

This is the second most common skin cancer in the UK and worldwide. Reported age-standardised incidences for cutaneous SCC range from around 16 per 100,000 in London to around 36 per 100,000 in the south west of England, equating to at least 10,000 cases per year in England and Wales (compared to around 5,000 cases of intraoral SSCs).[1] Data suggest an increase in incidence in recent years.[13]

Pathology and risk factors

SCC is a malignant neoplasm of keratinocytes that occurs predominantly in sun-exposed areas of the body, but can occur on any skin or mucosal surface. It is prone to invade locally and metastasise. SCC pathogenesis is a stepwise process, in that a number of sequential mutations of proto-oncogenes and tumour suppressor genes are needed for carcinoma to be induced. The main risk factor for its development is UV radiation. Chronic exposure, including from sunbeds,[16] is mainly implicated,[17] with acute exposure thought to be less important.[18] Human papillomavirus is a suspected risk factor[19] although the evidence is not as strong as for other sites such as the cervix and oropharynx. Increased age, male gender and Caucasian ethnicity are associated with increased risk, as are irradiation and exposure to chemicals such as arsenic and polycyclic aromatic hydrocarbons. A recent meta-analysis[19] found no association with cigarette smoking (unlike for oral mucosal SCC). It is known that transplant recipients and the immunosuppressed (through drugs or disease) are at increased risk; its magnitude increases with the degree and chronicity of the immunosuppression. Genetic conditions such as xeroderma pigmentosum (defective DNA repair mechanisms after UV exposure) and oculocutaneous albinism (reduced or absent skin pigmentation) also carry an increased risk of SCCs.

'SQUAMOUS CELL CARCINOMA IS A MALIGNANT NEOPLASM OF KERATINOCYTES THAT OCCURS PREDOMINANTLY IN SUN-EXPOSED AREAS OF THE BODY, BUT CAN OCCUR ON ANY SKIN OR MUCOSAL SURFACE…'

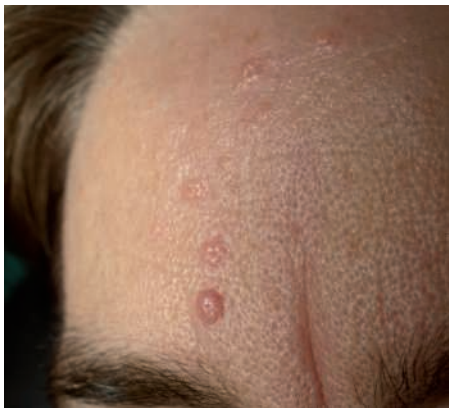

Fig. 4 Seborrhoeic keratosis

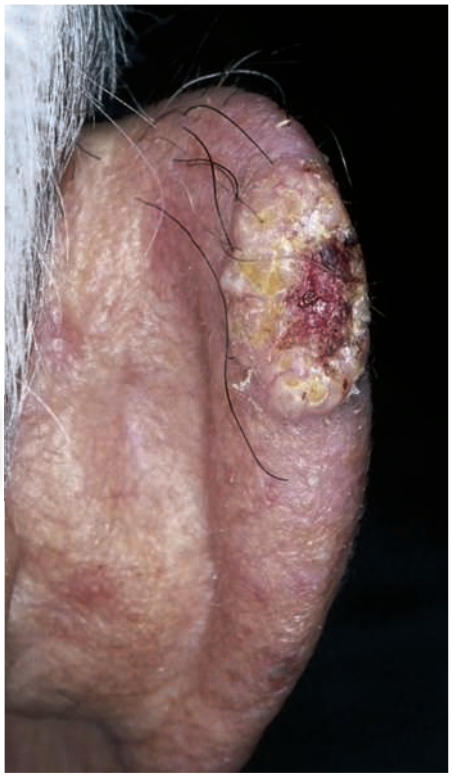

Fig. 5 Ulcerative SCC on the pinna

Clinical presentation

SCCs may present as a new enlarging ulcer, lump or red patch on the skin, changes to a pre-existing lesion or as a sore that does not heal. There is typically no pain although there may be mild tenderness to touch. Rarely, with perineural involvement there may be localised pain, numbness, muscle weakness or twitching. In the head and neck this may manifest as cranial nerve deficits.

The appearance of SSCs is very variable but the classic presentation is a raised indurated ulcer, with rolled margins, sometimes with

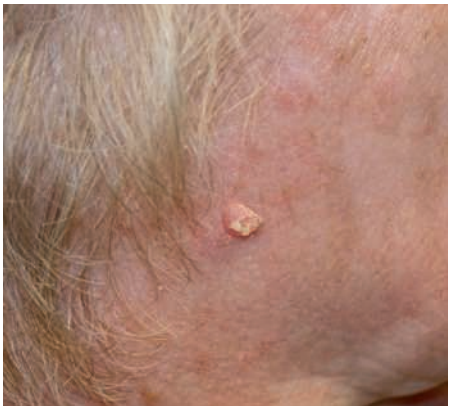
Fig. 6 Cutaneous horn presentation of SCC

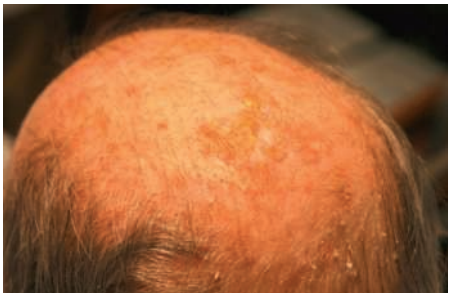
Fig. 7 Actinic keratosis on the scalp

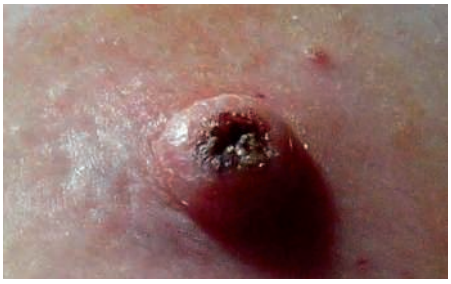
Fig. 8 Keratoacanthoma

an erythematous periphery (Fig. 5). Other surface changes include scaling, crusting and a cutaneous horn (a very thickened raised area of keratin) (Fig. 6). Less commonly it may be a nodule with an intact pinkish surface. The most common sites are the lower lip, ear pinnae, pre-auricular regions, forehead and scalp. There may be palpable lymph nodes, in this context particularly the pre-auricular/parotid and upper cervical nodes. Various histiological subtypes are recognised, but around 60% of invasive skin SCCs appear within a pre-existing actinic keratosis.[20]

Actinic keratosis, also known as solar keratosis, is premalignant for SCC, and is caused by exposure to UV radiation. It is common in adults – 23% of over 60s had at least one lesion in one UK study,[21] although is rare under 40 years. It is asymptomatic but may cause some mild irritation or itching. Clinically it is an irregular scaly keratotic plaque, coloured from pink to white or grey, sometimes with an erythematous background, and is often multiple (Fig. 7). The commonest sites are the face, scalp of bald men, forearm and dorsum of the hand. It is often easier to feel the sandpaper-like surface of these lesions than to see them. Histologically it encompasses a range from cellular atypia at the basal layer only, to carcinoma *in situ,* where there is full thickness atypia and abnormal maturation. The risk of progression to invasive SCC has been variously quoted at between 0.25 and 20% a year.[22] The same process occurring on the lip is known as actinic cheilitis. Changes indicative of malignant transformation within an actinic keratosis include development of areas with sharp circumscription, increase in thickness or the degree of scaling, and formation of an exophytic lesion, indurated (hardness) or, particularly, the development of ulceration.

Investigations and treatment

The diagnosis of SCC is confirmed by biopsy, and the tumour graded and staged based on the size and involvement of underlying structures and lymph nodes, and the presence or absence of distant metastases. Clinically positive lymph nodes are biopsied by fine needle aspiration or excisional node biopsy, and if neoplastic cells are present, regional lymph node dissection undertaken. Assessment for metastasis may be undertaken with computer tomography (CT) or positron emission tomography (PET) scans. SCC occurring within actinic keratosis is generally low risk, with a low risk of metastasis and a favourable prognosis.[20]

Standard treatment is surgical excision, with the margin determined by the risk status of the tumour. Low risk, smaller (less than 2 cm diameter) tumours are excised with a 4 mm margin, and higher risk (tumours wider than 2 cm or at high risk site – ear, scalp, eyelids or nose) with a 6 mm margin.[23] Mohs micrographic surgery, as previously described, leads to less recurrence than following excision alone.[24] Curettage or cautery may be used for small well-differentiated tumours, but guidelines advise cryotherapy be used with caution.[25]

Radiotherapy may be used as a sole treatment for smaller lesions, particularly in areas of cosmetic and functional sensitivity, for example, lower eyelid, medial canthus, lip, although is contraindicated in younger patients as surgical scars usually have a better cosmetic outcome. Post-operative radiotherapy is also used as an adjuvant when the excised specimen shows close margins, perineural invasion or other high-risk histological features.

Chemotherapy is used in selected cases following surgical resection or in unresectable disease, typically with regimens including cisplatin or 5-fluorouracil. Cetuximab is a well-tolerated newer agent licensed in the UK for use in locally invasive SCC of the head and neck in combination with radiotherapy.

Actinic keratoses do not always require treatment – decisions are made based on individual circumstances. Cryotherapy, photodynamic therapy, or topical immunomodulator, diclofenac or keratolytic creams are frequently used modalities.[26]

Differential diagnoses

- Actinic keratosis – see above
- Keratoacanthoma – this has variously been considered as a distinct entity or a well-differentiated form of SCC. It presents on sun exposed skin, typically in elderly persons with fair skin, as a rapidly enlarging crateriform nodule that may reach 2 cm or so in diameter, becoming dome shaped with central ulceration and typically lacking induration or fixation to underlying tissue (Fig. 8). Over subsequent months it generally spontaneously involutes to leave a scar, although aggressive spread and metastasis has occasionally been observed. Microscopically it can be difficult to distinguish from SCC, and definite histological criteria for keratoacanthomas and keratoacanthoma-like SCCs are lacking.[27] Due to diagnostic difficulties these are often excised in the same way as other SCCs
- Bowens disease – an uncommon *in situ* SCC, presenting as an irregular well-demarcated erythematous scaly keratotic plaque on sun-exposed skin, which is generally asymptomatic
- Seborrhoiec keratosis
- Atopic dermatitis
- Atypical fibroxanthoma
- Congenital skin tumours, for example, dermoid/dermolipoma
- Chemical burns
- Contact dermatitis
- Pyoderma gangrenosum
- BCC.

MALIGNANT MELANOMA

Epidemiology

MM is the fifth most common cancer in the UK, with 12,818 cases registered in the UK in 2010, and a UK-wide age-standardised incidence of 17.1 per 100,000.[27] The UK distribution is fairly even although it occurs more in the south west of England. The age distribution is younger than for other skin cancers. Incidence increases steadily with age, with a female predominance below age

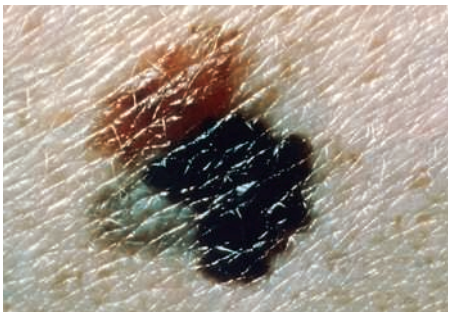

Fig. 9 Superficial spreading MM

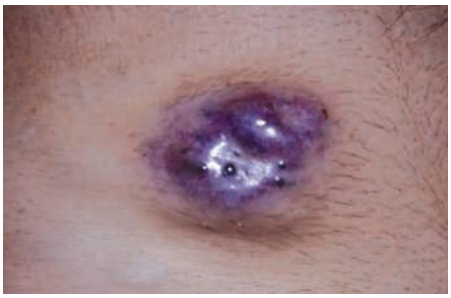

Fig. 10 Nodular MM

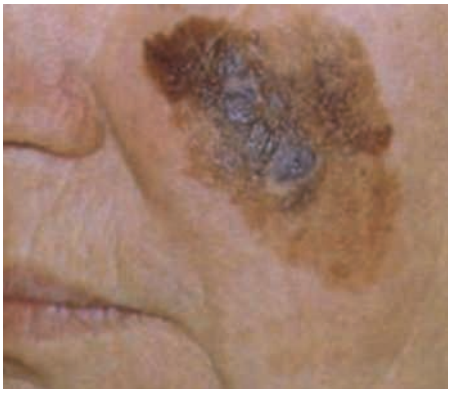

Fig. 11 Lentigo maligna

55 (and a female:male ratio in the age group 20-24 of 10:4) and male predominance above 55. The number of MM cases in the UK increased by 55% between 2000 and 2010. Twenty-two percent of lesions in males occur in the head and neck area, compared to 14% in females.[27]

Pathology and risk factors

MM is a malignant neoplasm of melanocytes that can arise within a pre-existing benign melanotic lesion or *de novo* from apparently normal skin. It tends to invade locally and metastasise, and can occur at any skin site, or the oral, genital, ocular or urinary epithelial surfaces.

UV radiation, especially UV-B, is the main risk factor. Recent studies suggest MM of the head and neck is more strongly related to sunburn, and of the trunk to more chronic sun exposure.[28,29] People with fair skin, blue eyes, fair or red hair and those who burn easily are at increased risk of MM, as are those with freckling and benign naevi, especially those with more than 100 such lesions. Large or giant congenital melanocytic lesions confer a high risk, as does the presence of any atypical or dysplastic naevi, or if MM itself has previously occurred. Immunosuppression - therapeutic for solid organ transplant or pathological in lymphoma and HIV/AIDS - increases the risk, although the effect of antiretroviral treatment is unclear.[30] Family history is also important – those with a first-degree relative with MM are at increased risk,[31] and specific inherited conditions confer an additional risk so as to justify routine screening by a dermatologist from childhood – dysplastic naevus syndrome and xeroderma pigmentosum. Increased overseas holidays, sunbathing, use of sunbeds[32] and outdoor recreational behaviour is thought to be responsible for most of the rise in cases in recent years.[28]

Table 1 The ABCDE rule for clinical features of MM

A	Asymmetry
B	Border irregularity
C	Colour variation across the lesion
D	Diameter of the lesion greater than 6 mm
E	Evolution – rapid changes occurring in the lesion

Clinical presentation

MM typically does not cause any symptoms and may be noticed as a new lesion on the skin or as a change in a pre-existing lesion. Three main morphological and many histological subtypes of MM are seen in the head and neck. The relationship between these morphological and histological variants is not always clear.[21]

The superficial spreading form comprises 70% of skin MMs,[21] and presents as a macular (flat) or slightly raised lesion that can be a variety of colours (brownish, grey, black, blue, whitish or pink). It is typically less than 3 cm in diameter although can grow much larger than this. The presence of induration or surface nodules within these lesions indicates likely deeper invasion (Fig. 9), as does the formation of satellite pigmented areas around the original lesion.

The nodular form comprises around 15% of MMs and is an exophytic nodular lesion, usually deeply pigmented and often asymmetrical, that may be ulcerated (Fig. 10). Occasionally these are so poorly differentiated that pigment is absent, instead appearing pinkish red – an amelanotic melanoma. It tends to grow in a more vertical pattern, in contrast to the horizontal pattern shown by the superficial spreading form.

Lentigo maligna melanoma comprises 5-10% of MMs and develops within a lentigo maligna, which is an *in situ* melanoma occurring on sun-exposed skin. It is most common on sun-exposed skin in the elderly. Clinically, lentigo maligna resembles a superficial spreading melanoma, being a large, flat lesion with irregular borders, and shares the same variety of colours (Fig. 11). It enlarges slowly over many years, with the development of nodularity or induration indicating a change to invasive melanoma. The risk of progression from lentigo maligna to MM is controversial but thought to be 4.7% or less over a lifetime.[33]

A useful rule to judge the likelihood of malignancy in pigmented lesions is the ABCDE rule (Table 1). The presence of one or more of these features may raise suspicion of a malignancy.

Investigations and treatment

Any lesion where MM is suspected is photographed and subjected to excisional biopsy with a 2 mm margin, in order to confirm the diagnosis of MM and provide information about the tumour thickness (termed the Breslow thickness), and other histological parameters of prognostic importance. Incisional or punch biopsies are generally not used. Following definitive diagnosis, wide local excision of the area around the biopsy site is required – the Breslow thickness is used to determine the surgical margin required. With a thickness of 1 mm, a 1 cm margin is used, for 1-2 mm a 1-2 cm, 2-4 mm a 2-3 cm and more than 4 mm a 3 cm margin.[34]

Sentinel node biopsy (SNB) may be

considered where Breslow thickness exceeds 1 mm and no nodes are clinically evident. This involves injection of a radiolabelled substance, and later a blue dye, close to the tumour, and then identification and biopsy of the node(s) showing the greatest uptake. Around 20% of SNBs are positive, and many of these patients may go on to have completion lymphadenectomy. The role of SNB is controversial, as no survival benefit has been demonstrated,[35] and it is not universally employed in the UK. There is no benefit to elective neck dissection in MM.

Clinically-evident nodes are investigated with fine needle aspiration biopsy and treated, if positive, with formal block dissection. When there is no evidence of nodal disease (stages I and II) no further imaging investigations are required, otherwise whole body CT, and sometimes a PET scan, may be used to search for metastases, which, if present, may be treated with surgical excision, or carbon dioxide laser ablation if on the surface. There is some evidence that adjuvant radiotherapy improves local control, although not survival. Conventional chemotherapy generally gives no survival benefit, although a small effect on overall and relapse-free survival has been noted for interferon.

Research into signal transduction pathways involved in MM pathogenesis is leading to new biological therapies targeted to specific identified genetic mutations.[36]

Prognosis

The 5-year-survival for patients with melanomas of Breslow thickness less than 1 mm is 97% (stage IA), falling to 81% with thickness up to 4 mm (stage IIA), 40% with palpable lymph node involvement (stage IIIC), and around 20% with widespread disseminated disease (stage IV).21

Differential diagnoses

- Benign melanocytic naevus – commonly known as a 'mole', either congenital (non-neoplastic malformation) or acquired (benign neoplasm), almost universal among the white population with incidence peaking between age 40-50. There is an increased risk of malignant transformation to MM, especially with the congenital form, although the incidence is not known. They are macular or slightly raised with uniform colour, and lacking any suspicious features of the ABCDE rule (see Table 2)
- Dysplastic/atypical naevus – an acquired naevus that is thinly papular and relatively broad, often with a fried egg appearance (more darkly pigmented centre). The term was coined to reflect a perceived high risk of malignant transformation, however, this is controversial, although it is generally believed the risk is higher than a melanocytic naevus – they may represent premalignant lesions or risk factors for *de novo* lesions or both. Histologically, this lesion is diagnosed if architectural and melanocytic atypia are demonstrated. Dysplastic naevus syndrome is an inherited autosomal dominant condition giving high numbers of benign and dysplastic naevi, with a lifetime risk of MM approaching 100%
- Lentigo maligna – see above
- Seborrhoiec keratosis
- Pigmented actinic keratosis
- Histiocytoid haemangioma
- Epithelioid tumour
- Atypical fibroxanthoma
- SCC
- Metastatic tumour.

'INCREASED OVERSEAS HOLIDAYS, SUNBATHING, USE OF SUNBEDS AND OUTDOOR RECREATIONAL BEHAVIOUR IS THOUGHT TO BE RESPONSIBLE FOR MOST OF THE RISE IN CASES IN RECENT YEARS…'

CLINICAL APPROACH FOR THE DENTAL PRACTITIONER

The suggested role of the dental practitioner is as follows and summarised in Table 2:

1. History and risk factor evaluation
2. Examination – general and focused
3. Counselling on risk factors and self-monitoring
4. Onward referral.

History and risk factor evaluation

It is unlikely a patient would volunteer concerns of a skin lesion to the GDP but if this occurs salient points to question in the history include the duration and evolution of the lesion and any features such as pain, itchiness, numbness or surface bleeding. Similar questions would be used to ask about any lesion found on examination. As part of the history-taking process risk factors should be evaluated, in particular personal and family history of skin cancer, sun exposure though work, recreational activities and sunbed use, both chronic and sunburn, medical/drug history and patient complexion.

Examination

To identify lesions a thorough and systematic examination technique is essential. This includes all head and neck skin, paying particular attention to the lower eyelid, nose, ear pinnae, lips, and in bald people, the scalp. Malignant lesions may be very subtle so diligence is required. Any suspicious lesions identified are examined more closely. Important details to note on inspection include: location, size, shape, border, colour, symmetry and uniformity, surface keratin/ulceration/bleeding, and blood vessel pattern and morphology. Palpation follows, to distinguish soft from firm or indurated lesions. Palpation of the regional lymph nodes may reveal lymphatic metastasis, in particular including the pre- and post-auricular, occipital and upper cervical nodes. Rarely, locally invasive lesions may affect facial or trigeminal nerve function, or cause proptosis, diplopia or ophthalmoplegia, which would necessitate formal cranial nerve testing, and require specialist evaluation.

Dermoscopy is an examination technique for skin lesions using good lighting and magnification, typically around 10x. Various commercially-produced devices are available and are commonly used by GPs to identify benign lesions that do not require urgent referral and identify premalignant lesions and BCCs.

Counselling on risk factors

The main modifiable risk factors for skin cancer are chronic and acute sun exposure. British Association of Dermatologists advice[37] suggests people should stay out of sunlight during the hottest part of the day (midday to 3 pm), avoid using sunbeds and keep babies and children out of strong sun altogether. A hat and UV-impenetrable clothing should be worn in direct sunlight. Suncream should be at least factor 30 to protect against UV-B and have the circle logo and/or four or five UV-A stars to protect against UV-A, and should be applied 30 minutes before exposure.

Table 2 Suggested approach to skin cancer for dental practitioners

History and risk factor evaluation	History of lesion	How long has it been there? How has it changed over that period? Does it cause any symptoms? In particular pain/itching/numbness/bleeding/irritation?
	General history	Any previous skin cancers? Assess degree of sun exposure – Occupation – outdoor-based? Any outdoor recreational activities? Any previous sunburn? Any sunbed use? Any family history of skin cancer?
	Medical history	Any immunosuppressive disorders, for example, heamatological malignancy, HIV, solid organ transplantation etc? Any high-risk syndromes?
	Drug history	Any immunosuppressive medications?
	Family history	Any family history of skin cancer?
Examination	General examination	Fair skin/fair or red hair/blue eyes? Celtic ancestry?
	Head and neck examination	Thorough and systematic examination of head and neck skin, including scalp, lower eyelids, nose, pinnae and lips
	Focused examination of lesion	Note in particular: Location Size Shape Border Colour Symmetry and uniformity Surface keratin/ulceration/bleeding Blood vessel pattern and morphology
Referral	GP or oral and maxillofacial surgeon	
Counselling on risk factors and self-monitoring	Avoid exposure to direct sunlight between 11 am and 3 pm Keep babies and children out of direct sunlight Wear a hat and UVimpenetrable clothing in direct sunlight Use appropriate suncream Avoid use of sunbeds Educate about the appearance of suspicious skin lesions, encourage self-monitoring and early presentation to their GP if they notice anything in the future	

Furthermore the patient can be educated at this point about what constitutes a suspicious skin lesion. By having this awareness they are better placed to monitor their own skin and approach their GP early should they notice any suspicious changes.

Onward referral

The 2006 NICE guidelines state that the diagnosis and treatment of all suspicious pigmented lesions, lesions that may be MM, SCC or high risk BCCs, or any lesion where the diagnosis is unclear, 'should be carried out only be specialists (normally dermatologists)'.[38] Precancerous lesions such as actinic keratosis may be, and usually are, managed in primary care by a GP or GP with a special interest, unless there are particular individual circumstances, such as a difficult lesion location, to warrant hospital referral.

In hospital, care is organised by the skin cancer network: either local hospital or specialist skin cancer multidisciplinary teams (MDT). GPs can refer directly into this service and all skin cancer cases, regardless of which speciality the patient is referred to, feed into this MDT. At the MDT meetings these patients are discussed and the management decided. Dentists can refer either to the GP or directly to the oral and maxillofacial surgery department in secondary care. This would be done as an urgent referral under the two-week rule. The interest of OMF surgeons in head and neck skin cancer management varies but many units are active in this area. The best route of referral will therefore vary depending on local circumstances.

CONCLUSIONS

Skin cancers are common in the UK, and BCC, SCC and MM are the main forms. Most skin cancers will present as a lesion that has features characteristic of that form, and thus if the clinician is aware of these usual presentations and examines for them, they would be well placed to spot them opportunistically. Such ad hoc screening for head and neck skin cancer fits well into the existing convention for the extra-oral examination a dentist would normally perform. Earlier recognition of suspicious lesions, and informing patients about risk factors and self-monitoring, may lead to improved outcomes.

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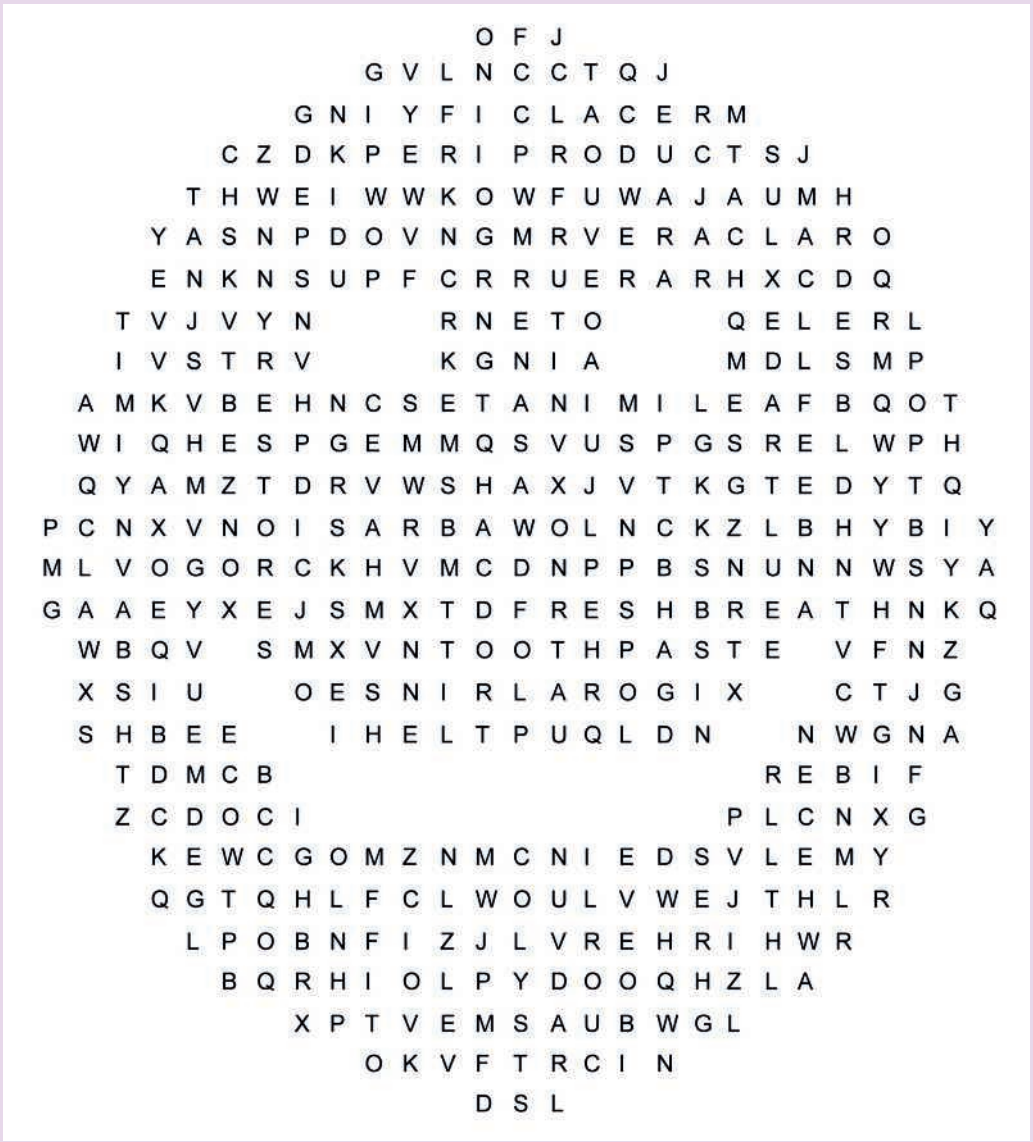

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PARENTS NEED HELP IN WAR ON SUGAR

New research from Colgate shows that parents need additional support to help look after their children's teeth. Almost two thirds of dental professionals (DPs) find themselves repeating the same dietary and oral health advice for caries prevention in children during their appointment most or all of the time. DPs also believe that only 1% of parents always follow the advice given to them about their child's diet.

The survey, commissioned by Colgate as part of the launch for the new Colgate Maximum Cavity Protection plus Sugar Acid Neutraliser toothpaste, gathered insights into the diet and oral health practices of DPs in relation to their own families, and the advice that they give to parents on caries prevention for their children.

A staggering 97% of DPs see at least one child every day in their practice who is suffering from caries due to a high-sugar diet, with more than a quarter (26%) saying that they see at least five children.

All DPs know the effect of a high sugar diet on caries, and 92% of those surveyed mostly or always consider the impact that diet has on their own children's caries when shopping for food. However, three in ten DPs admit to knowing very little about hidden sugars, and 28% completely agree that it is very difficult to avoid buying foods that do not pose an everyday caries risk as even foods labelled as 'healthy' can contain hidden sugars, including bread, yoghurt, breakfast cereal and baked beans.

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The new toothpaste joins Beverly Hills Formula Perfect White and Perfect White Sensitive toothpastes, all designed to give make teeth whiter and brighter in just five minutes.

Beverly Hills Formula Perfect White and Perfect White Sensitive toothpastes are enriched with key ingredients such as advanced hydrated silica which offers high performance whitening enhancement, whilst the stain dissolvent agent pentasodium triphosphate prevents food particles from settling on your teeth.

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DCP COURSE DIRECTORY 2014

THE SOUTH-WEST

Compiled by Kate Quinlan[1]

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Absolute Dental Management Intensive Training days
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Summary: This apprenticeship will give students the opportunity to earn, learn and then apply that learning in a real work environment. The Advanced Apprenticeship meets the requirements for registration with the GDC.
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Telephone: 01752 305300
Email: info@cityplym.ac.uk

Elite Dental Nursing

Dental implant nurse/coordinator training (in your practice)
NEBDN National Diploma in Dental Nursing
Location: Richard Huish College, Taunton, Somerset
Details: http://elitedentalnursing.co.uk/
Telephone: 07706 017629
Email: amy@elitedentalnursing.co.uk

University of Bristol Dental Postgraduate Department

Extended duties training for dental nurses: Impression taking (register your interest)
Plaque and debris scoring/Topical fluoride varnish (see website for dates)
Details: http://www.bristol.ac.uk/dentalpg/dcp/extendeddutiesdentalnurses.html
Local CPD groups list: http://www.bristol.ac.uk/dentalpg/dcp/localcpdgroups.html
Post registration training courses: http://www.bristol.ac.uk/dentalpg/dcp/postcourses.html
List of pre-registration training courses for dental nurses: http://www.bristol.ac.uk/dentalpg/dcp/training.html
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Email: dentalpg-enquiries@bristol.ac.uk

University of Bristol Faculty of Medicine and Dentistry

Diploma in Dental Hygiene
Summary: A full time course enabling you to become a skilled clinician registered with the GDC.
Number of places: 8
Details: http://www.bristol.ac.uk/study/undergraduate/2015/dental-hygiene/dip-dental-hygiene/
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Summary: A part time course providing qualified dental hygienists with the opportunity to train as register as a dental therapist. Apply by 31 October to be considered for entry in April 2015.
Number of places: 6
Details: http://www.bristol.ac.uk/study/undergraduate/2015/dental-therapy/dip-dental-therapy/
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Email: donna.parkin@uhbristol.nhs.uk

UMD Professional

UMD Professional ILM Level 5 Diploma in Leadership and Management
Location and summary: Bristol, starting October 2014. Costs £2,450 payable over 13 months. The same course is starting in September in Birmingham and in October in London.
The UMD Professional ILM Level 7 Award in Strategic Leadership also starts in London in September (£3,000 over ten months); the ILM Level 7 Diploma in Executive Management (£4,800 over 18 months, part-funding available) and the ILM Level 5 Certificate in Leading with Integrity (new course; £1,200 over six months) both start in London in October.
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If you would like your course or education provider to be included in *BDJ Team*, please send the details to bdjteam@nature.com. The October 2014 *BDJ Team* will focus on Scotland.

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[1] *Editor, BDJ Team*

Career motivation, expectations and influences of trainee dental nurses

By **S. Sembawa**,* **K. L. Wanyonyi** and **J. E. Gallagher**

Aim To explore the motivation, career expectations and influences of dental nurses training in educational establishments in South London.

Methods This qualitative research involved focus groups of dental nursing students across training institutions serving hospital and dental services. Students' motivation, career expectations and influence factors on their professional careers were explored. Interviews were recorded and transcribed verbatim. Framework Analysis was used to analyse data in a five-stage approach: familiarisation, developing a thematic framework, indexing, charting and mapping and interpretation.

Results Students were motivated by 'features of the job', 'interest in the dental field', 'professional factors', 'healthcare' and 'lifestyle' factors, together with influence of 'advisors'. Career expectations involved identifying their preferred 'system', 'setting', 'mode' of work and 'role development' within dentistry. Long-term career influences were mostly 'financial', 'professional' and 'personal'.

Conclusion The findings suggest that student dental nurses' motivation, career expectations and influences are similar to those of other members of the dental team. 'Features of the job' play an important role and there is strong interest in professional development within dentistry including dental hygiene and therapy. Remuneration and the opportunity for further training were perceived as predictors of future career retention.

Introduction

Dental nurses are a vital part of the dental team. According to the General Dental Council (GDC), dental nurses are 'registered dental professionals who provide clinical and other support to registrants and patients'.[1]

In past decades, dental nurses in the UK were generally school leavers with no previous work experience who trained within a dental surgery or hospital setting under supervision of the dentist or senior dental nurse;[2] today, dental nurses are required to undertake standardised training and sit a recognised examination.[3] Qualifications currently offered for dental nurses include the National Certificate in Dental Nursing awarded by the National Examining Board for Dental Nurses and the National Vocational Qualification Level 3 in Dental Nursing.[4]

Dental nurses can train in practice and study for a qualification on a part-time course in the evening or day release, or they can take a full-time course in a dental hospital. Apprenticeships for training offered by some NHS Trusts give the benefit of 'earning while learning' and they may be useful for those working and wanting to qualify further.[5]

After qualifying as a dental nurse, the majority work within general dental practice although theoretically there are opportunities to work in a wide range of dental services.[4] Dental nurses also have to register with the GDC after they qualify and are required to undertake continuing professional development (CPD).[6] Proponents of compulsory registration argue that it raises the profile for dental nursing across other health professions. Opponents feel it may have added to existing recruitment and attrition problems.[7]

The 'scope of practice' of dental nurses has evolved with continuous advancements in dentistry and has been formally identified by the GDC.[8] Dental nurses do not diagnose disease or treatment plan. They can develop further skills during their career and undertake procedures under a dentist's prescription. This is known as 'additional skills' for dental nurses.[1,9,10] Dental nurses may also obtain a number of post-qualification certificates, which offer opportunities for career progression,[10] including conscious sedation nursing, dental radiography, special care dental nursing and oral health education; in addition to which, the Adult Teaching Certificate prepares dental nurses to become dental nursing tutors.[10]

Exploring the views of qualified nurses in one dental hospital by Durkan *et al.*[11] revealed that their motivation to pursue a career involved 'The opportunity to progress

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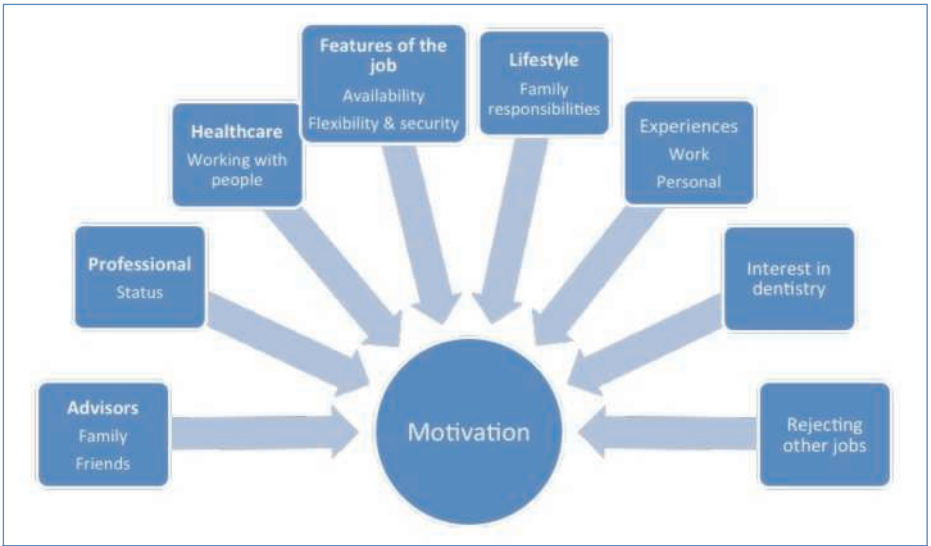

Fig. 1 Motivation of dental nurses in training for a selection of careers in dentistry

in the dental sector' as most important, followed by 'preference for healthcare' and 'job availability'. Personal satisfaction was the most important factor expressed by dental nurses as the reason for their desire to pursue further training, while increased chances of employability was the least important factor. More than half the respondents were having training in further skills; those who were not stated they would like to. Conscious sedation was the most common additional skill obtained, and radiography was the most desired skill to be learned. Extending their scope of practice was perceived as 'adding variety to their role', 'being able to deliver better service' to their teams and patients, 'being more valued by their colleagues', 'career progression', and 'enjoyment of learning', an 'interest in the courses' and 'the potential to teach others'.[11]

Belsi *et al.*[12] also explored the motivation to study dental professions in one London dental institute among dental students, dental hygienists/therapists and dental nurses. All three groups shared similar motivations. 'Features of the job' was the most important including job security, a wide range of careers within dentistry and a recognised job. This was followed by the 'desire to work with people', 'a degree leading to a recognised job', 'a desire to work in healthcare' and 'academic knowledge' respectively. Friends' influence and career advice were reported to be of least importance.

Rationale for the study

Recruitment challenges, together with losing dental nurses to dental hygiene and/or therapy, and from the profession overall, are significant and require investigation.[13] Addressing the motivators for students to choose a programme is considered a useful tool to design effective recruiting strategies and help provide the future workforce with a complete picture of the different professions.[12,14] There has been little research amongst trainee nurses from general dental practice settings who form the majority of trainees. In order to address this gap, there is a need to begin with qualitative research amongst current trainee dental nurses which includes those training from a dental practice setting.

Aim

To explore the motivation, career expectations and influences of dental nurses training in educational establishments in South London.

Methods and methodology

This qualitative study explored the motivation, career expectations and influences of trainee dental nurses in South London. Approval was obtained from King's College London Research Ethics Committee before the commencement of the study (reference number BDM/12/13-56).

The research was conducted by SS as part of an MSc in Dental Public Health in 2013. The research group has undertaken work on various dental team members and their roles, and this study contributes further to this field of research. The main training institutions serving practices in South London were identified via the Internet and tested with dental nurse leaders in London. Contact with all five institutions providing training for dental nurses in hospital or practice was made by letter and email, providing information about the study. After one week, contact was made by phone to follow up on the request.

When an institution agreed to support the study, information sheets were provided for the students in advance. The researcher (SS) met with the dental nursing students during a scheduled session to introduce the research and answer questions. Confidentiality was assured. Students were given the opportunity to consent to the study or withdraw from the focus group that was conducted and moderated by the researcher using a topic guide informed by the literature and past research.[15-17] Students were asked to provide socio-demographic data to enable the researchers to provide an overview of the participants.

Two focus groups were conducted with ten participants in each group. Students were asked a series of open-ended questions to allow them to elaborate on their views without restriction. Focus groups were transcribed verbatim using an approved transcription firm with encrypted services and a confidentiality agreement in place.

Data analysis was approached using Framework Analysis[18] involving five key stages: familiarisation, identification of a provisional thematic framework, indexing, charting and mapping and interpretation. It followed the approach used in parallel studies of dental students and new graduates.[15-17]

In line with Framework Analysis, the first stage of the analysis was *familiarisation*. Transcripts were examined to identify the main themes emerging from focus groups. A *thematic framework* was then developed to identify key issues withdrawn from respondents repeatedly, and those withdrawn from the literature and policy. Data were *indexed* by applying the thematic framework to transcripts. After this, *charting* - which is a two-way process - was carried out involving rearranging the data and extending the thematic framework in light of the application of the data. Finally, *Mapping and interpretation* of the information generated from indexing to define concepts, map the range and nature of phenomena, and find associations between themes is carried out with a view to providing explanations for the findings and generating theory. This process was influenced by the original research aim, as well as the emergent data.[18,19]

Results

Participants

Two educational establishments agreed to participate in the research during the time-frame for this study, providing a total of 20 dental nursing students. All focus group participants were female. Of the 17 who returned demographic information, 41% were aged 20-24 years, 23% 25-29 years and 17% within the age band of 30-34. Almost one

quarter (23%) were over 35 years of age. Fifty-two percent of dental nurses held Diplomas, 35% of the respondents held GCSEs, and 11% held other qualifications. Respondents came from a wide range of ethnic groups; white participants were represented at the highest proportion (52%).

Fieldwork and presentation of findings

Whilst one group of dental nursing students participated actively, the other group, conducted at the end of an evening study session, was more passive. Only two establishments within the geographic limits of our study and the time frame proposed agreed to facilitate their students to participate.

Focus group discussions explored three main topics: motivations to pursue a career in dental nursing, career expectations including the 'mode' and 'nature' of work, and finally perceived influences on their professional careers, each of which will be presented in turn with illustrative quotes in italics. Each quotation is referenced back to the original text including the group, participant and line. Additional demographic details are presented where relevant.

Motivation

Findings included 'features of the job', 'interest in the dental field', 'professional factors', 'healthcare', 'lifestyle' and 'experience' in the dental field and the influence of 'advisors'; the latter comprised family and friends. 'Features of the job' included availability of the job, reliability and flexibility and the financial security. 'Professional' factors included mainly the opportunity for future career progress, as many of the student nurses originally started dental nursing to gain the experience required to get into dental hygiene and therapy course. 'Features of the job' and 'professional factors' were suggested to be the strongest motivators. The above points are shown in Figure 1 and are illustrated by the following quotations:

'My mum was a dental nurse, so I've been seeing the experience through her eyes' 1fg1-3

'I think it's a good career for when you have children. I can have a family and a good job' 4P2-9

'Mine was maybe for the access for dental hygiene therapy, um, because I may want to do that someday. So as dental nursing is a way of getting in and it gives you a better insight to what it's actually like to get to work alongside a therapist' 8fg1-26

'Lifestyle factors' motivated those who have families and need to work part-time.

'I think it's a good career for when you have children. I can have a family and a good job' 4p2-9

'Experience' of working in or around the dental field and 'the ability to work with people in healthcare' were additional motivators. There was evidence of having 'rejected other careers' such as waitressing because of dissatisfaction with them.

'I was working as a waitress for nearly a year, I hated it, I can do it but it's not my dream you know, then I started looking for dental nursing courses' 10P2-34, 35

'After I am a dental nurse and have a spare time and the experience as well, I would like to go a level higher for a hygienist' 1P2-87,88

A few preferred challenges outside of dental nursing because they considered it stressful and boring.

'Actually, dental nursing is not interesting, I don't know why, it is really stressful.' 11P2-54

'MANY TRAINEES EXPRESSED A DESIRE TO BECOME DENTAL HYGIENISTS OR THERAPISTS…'

Career expectations

There was a wide range of career expectations from routine dental nursing, developing extended duties, progressing to a career in dental hygiene/therapy, being uncertain, to changing career completely.

In relation to 'settings' there was interest in working across hospital and general dental practice settings, both NHS and private. There was a strong interest amongst the hospital trainee nurses to pursue a career in the hospital 'setting' in a full time 'mode' within the NHS 'system'. Informants valued the hospital setting because of the better opportunities to progress and the ability to meet different people and undertake a variety of procedures. Figure 2 presents the points above, and they are illustrated by the following quotations:

'I'd like to work full-time in a hospital, um, because I think you see more variety. You see a variety of different people different procedures going on here, compared to being in a practice, and you get to meet a lot more people. Whereas with private practice is just you and the dentist, then the patients come in and out. I'd like to see more variety.' 10FG-178

Those who had families were planning to work part-time within the NHS.

'I could work part-time around the family' 5fg1-19

The other group were less vocal about their career expectations which included general dental practice, being uncertain and wanting to change career completely.

'I think I will be working in NHS because it is a fixed job, full-time' 10p2-108,109

'I'd like to work full time in a private... (practice)' 1p2-86

Many of the trainees expressed a desire to become dental hygienists or therapists as their future 'role' within the dental workforce.

Fig. 2 Career expectations of dental nurses in training

Career influences

The trainee dental nurses perceived future influences to be most importantly 'financial'. They perceived they were underpaid and that better remuneration would keep them in the profession. There was evidence of having selected dental nursing as a stepping stone, demonstrating that opportunity to undertake further courses would encourage them to stay in the career. This falls under the 'Professional' influence as the 'opportunity of career development'

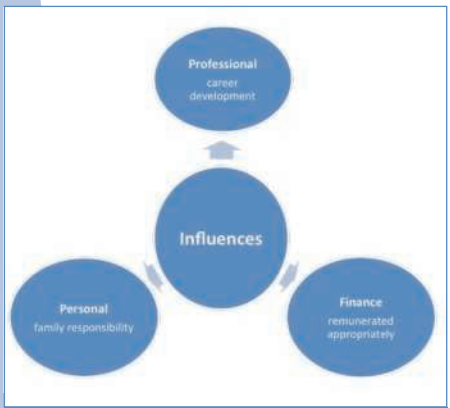

Fig. 3 Career influences perceived by trainee dental nurses

'To some … if you're in practice, you're going to pay for your own courses. But if you're in a hospital, the hospital might pay for you to do it' 3FG1-239

Vision

Being on the course has changed student dental nurses' vision of the career of dental nursing. Most of them said they didn't know how much they could do within dentistry and how much further they can progress. They also felt confident and more important.

'When I first got … went to the course, I still didn't know that there were that many pathways that you can actually go through, that how good dental nursing actually is, and being on the course like widened my eyes' 8FG1-108,110

'INFORMANTS SUGGESTED THAT THEY WOULD TAKE MORE COURSES IF THEY WERE FUNDED, MADE AVAILABLE, FREE OR AFFORDABLE.'

demonstrated by an earlier quote. Family responsibilities were perceived to be a 'Personal' influence. Key influences are presented in Figure 3, and are illustrated by the following quotations.

'Like after 10 years, I might want to be earning more money so I have to think about doing more training, getting additional skills and then may be trying a different job role like moving up from dental nursing to something else, so probably lifestyle factors will influence me, money's involved about what I've to think about' 5FG1-226

'If the money goes up… (stay in career)' 3P2-118

Informants also suggested that they would be encouraged to take more courses and further their careers if courses were funded, made available, free or affordable.

'I think more training, like to make it more available' 8FG1-232,234

'Not everyone can afford the training if you're paying for it by yourself, more accessible' 3FG1-236

Expanding the areas included in the basic training of dental nurses was suggested. There was a sense that dental nurses were undervalued and this was reflected in their prominence and salary.

'Nurses don't get paid as much as they should for what they do' 10FG1-46

'Sometimes, I don't think we're valued enough in this job' 4FG1-152

'I guess it's maybe trying to make a nurse more of a forefront or bring them forward because they are more of a background figure' 7FG1-435

Nonetheless informants suggested that there was a need to increase awareness of careers in dental nursing and ensure there is careers advice in schools.

'Maybe they could promote it more when you're at school and you have careers advice' 5FG1-474

Discussion

Motivation

The findings from our study suggest that trainee dental nurses share similar motivations for a career in dentistry to dentists,[15] and dental students.[17] Both perceived 'features of the job' to be the strongest motivator. Some of the common features were flexibility, availability of the job and security. Academic interest was not a motivator to dental nurses as it was for dentists.[15] Whilst there is evidence that those pursuing a career in dentistry may have rejected medicine as an alternative to dentistry,[15] dental nurses reported having rejected other service roles, outside of healthcare, such as waitressing. The framework for analysis within our study was developed on the basis of previous research by Gallagher *et al.*[15] Dental students preferred 'job security' (57%); 'degree leading to recognised job' (49%); 'independence' (48%); 'regular working hours' (44%); and a desire to work with people (50%). The findings on the motivations of student dental nurses support the results from Belsi *et al.*[12,20] on research also conducted in the London area. It is not surprising that 'features of the job' are common to dentists and dental nurses, given the nature of dentistry and close working between these two groups.

Career expectations

Dental nursing students, like dental students, perceived there were opportunities within the NHS as a system of work because of the better opportunity of future career development.[17] Interestingly, although there was a spread of opinion, student dental nurses appeared to be interested in working full-time, whereas many entering dentistry are attracted by the potential for working less than full-time.[15-17]

The option of leaving dental nursing expressed by some of the nurses was motivated by low salaries and stress arising from the job. Stress is a problem of retention with many jobs.[21] Low remuneration was also a problem among dental nurses in Scotland.[22] Intention to leave dental nursing was also indirectly related to job beliefs; personal accomplishments and work engagement were the two most important factors determining intention to leave dental nursing.[7]

The NHS has introduced some strategies to improve nursing retention[23,24] such as: helping nurses to buy or rent homes, the funding of additional nurse consulting posts, reforming the pay system and improving nurse management. Perhaps such initiatives could be applied to dental nurses to improve their recruitment and retention?

Influences on professional careers

Student dental nurses, like Foundation Dentists (formerly known as vocational dental practitioners - VDPs), were influenced by 'financial', 'professional' and 'personal' factors.[15] The opportunity for future progress was a common 'professional' influence. 'Financial' influences were the most prominent in dental nurses. Together with VDPs and dental students they share

a common vision for the need of better remuneration and funding support for further education courses.[15] Dental nurses expressed a need for more training courses and raised concerns about the fees of these courses.[11] Financial issues were seen to be an obstacle preventing dental nurses from undertaking training courses; this conforms to the results from the study on Scottish dental nurses.[22] Balancing family responsibilities was rated an important influence by dental students and dental nurses.[7,17] Perhaps some of the strategies used for general nurses, outlined above, could be introduced by dental practices to assist with dental nurse retention? Given the options for career progression involving extended skills training and training as hygienists/therapists, there is now a range of possible options open to dental nurses – options that require support from employers.

Vision

The findings suggest that dental nursing students' vision of working life has changed in the short period in which they have been training. They didn't have knowledge of the variety of opportunities offered for career progression. This finding is similar to that of qualified hospital nurses;[11] and for some 'professional status' was important as they wished to progress to train as a dental hygienist/therapist, unlike some Scottish dental nurses who were uncertain over career pathways.[7]

Limitations

The main challenge with the study was recruitment. The sampling frame was geographically defined and the study-period time limited. Given that the staff who run educational programmes in further education colleges are generally part-time, identifying and making contact with them proved a challenge. Furthermore, the study was conducted during the spring term when courses are concluding, and this may have impacted on the invitation to participate in the study. Although this research was conducted in South London, the findings are similar to other studies elsewhere in the UK,[7,22] and given the paucity of literature provide an important base for further research. Future research, informed by this study, should focus on schemes within primary dental care to explore their views in greater detail and include research amongst dental nurses at various stages in their careers.

Conclusion

The findings suggest that student dental nurses' motivation, career expectations and influences are similar to other members of the dental team. 'Features of the job' play an important role and there is strong interest in professional development within dentistry including dental hygiene and therapy. Career intentions covered both NHS and private systems and hospital and practice settings. Remuneration and the opportunity for further training, particularly in dental hygiene/therapy, were perceived as predictors of future career retention.

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bdjteam201499

Stragegies, broken digits and saltwater seminars

Vivienne Wootten[1]

takes a revealing backstage peek at the BDA Conference Team ahead of the British Dental Conference and Exhibition 2015.

When writing this in sunny August, next year's British Dental Conference and Exhibition still seems an age away but given that it's such a huge undertaking, I can assure you that plans are already in place for what promises to be a really great event. The team at the British Dental Association (BDA) work round the clock to ensure that the quality of the speakers, topics, features and social events surpass expectations and try to include a few surprises along the way.

Over the next few months we will be revealing details about the event and how to make the most of your time there but in this edition, we will take a look at the BDA team who pulls it all together.

[1]*Events, British Dental Association*

MEET THE TEAM

Supported by a number of BDA members and other staff members, there is a core team of staff who work on developing the event.

Elise Cole

How many conferences have you worked on at the BDA? I joined as Head of Events in March 2003, so was thrown into the deep end and attended my first conference in April 2003. 2015 will be my thirteenth conference.

Amusing anecdotes from past conferences? In Manchester 2008, we developed a large banner to go right across the front of the Manchester Central Convention Complex building to make a real impact on approaching the venue, only to discover three working days before the banner was due to be rigged that it said '*Stragegies* for success' instead of Strategies! We contacted all of our printers to see if they could rush through reprinting the banner in a couple of days but found this would not be possible. We then approached our exhibition contractor to see if they could do anything with the existing banner to amend it. Luckily they managed to create a patch to go over the typo and in the end we managed to display it on the front of the venue in time. With large events you never know what to expect and every year it is always something that you hadn't thought of that causes a challenge.

What makes our event so special? For us, the organisers, it is such a huge event that takes around 18 months to produce and each year brings with it new approaches and new challenges. It is never the same challenge twice and that is what keeps things interesting. Each year, we try to bring that attitude to the conference programme, the exhibition activities and the social events, always taking a fresh approach to deliver an event based on research with what our audience want to see and hear at the event. We are trying to create an event that has something for all the dental family: our members, all dentists, their dental teams, as well as the companies and suppliers working in the dental market. We are also pleased to work with students and young dentists to help support, shape and introduce them to the richness and breadth of a career in dentistry. With such great support from over 100 speakers from all walks of dentistry, including academia, practising dentists and business professionals, we truly can deliver something for everyone in the three day event.

What are you looking forward to in 2015? In 2015 we are back in Manchester in the MCCC venue that caters brilliantly for

the format of this event. It's a great city with fantastic, reasonably priced hotels and a huge range of restaurants to try out on days when we've not arranged social events for attendees. We are currently midway through producing the programme, but have received some great recommendations from our Programme Planning Committee for topics and potential speakers. There's also lots planned for the exhibition area and we always look forward to working with our exhibitors to offer added value to delegates attending the event with great new products to try and buy. However, mainly I always look forward to how so many small elements we have been working on all year come together to create a giant of an event that runs smoothly on the day, even if behind the scenes we are sometimes paddling a lot faster below the water than many would see front of house.

Rebecca Hancock

I manage the exhibition and exhibitors at the event. So from exhibitors requiring wine on their stand through to designing the Demonstration Theatre, you will find me interfering.

How many conferences have you worked on at the BDA? Six

Amusing anecdotes from past conferences? Heading into the organisers' office to find the rest of the conference team sat down working away wearing masquerade ball masks while the venue manager was trying to have a conversation with them.

What makes our event so special? That you have such a wide variety of the dental industry in one place learning together!

What are you looking forward to in 2015? A packed Exhibition Hall with happy delegates and even happier exhibitors.

Sarah Rockliff

I work closely with the registration company, organise the Presidential Meeting and oversee all the social events.

How many conferences you have worked on at the BDA? 2015 will be my seventh conference.

Amusing anecdotes from past conferences? I think my most famous moment would have to be when I fell down the stairs in Glasgow and ended up in A&E with concussion and then had to spend the Gala dinner absolutely covered in bruises! It wasn't a good look.

What makes our event so special? The community feel of our event. It's not just a place to learn, but also to network and socialise. It brings the whole dental community together for three days.

What are you looking forward to in 2015? I am slightly biased but definitely the Cuban night, and the Honours and Awards dinner which we are hosting at the event in 2015.

Vivienne Wootten

My role is to produce all the marketing materials for the event, co-ordinate all the PR, advertising and other promotional opportunities.

How many conferences have you worked on at BDA? 2015 will be my fifth conference. My first one was Manchester 2011 and every year the three days just keep getting better and better.

Amusing anecdotes from past conferences? We all sound terribly accident prone but breaking my little finger the night before the event opened last year was not my finest hour (don't ask!). But the show must go on and I didn't let it hold me back.

What makes our event so special? I spend most of my time in the exhibition. There is a real buzz in the Exhibition Hall as friends and colleagues meet up and explore the wide range of exhibition stands. Last year we introduced the Members Lounge for BDA Extra and Expert members. This feature was very well received and I look forward to welcoming more members and their colleagues to the lounge next year.

What are you looking forward to in 2015? I've been lucky enough to get to know some really nice delegates that I only ever get to see at the event, so I'm looking forward to our annual catch-up.

Emma Yates

As Conference Manager my year-round focus is everything relating to the Conference side of this event and more.

How many conferences have you worked on at the BDA? Six. Our challenge as a team is to find ways of making Conference different from previous years and of course making it even better than the last one!

Amusing anecdotes from past conferences? Each Conference brings a dose of drama behind the scenes to keep us on our toes. However, rumour has it that one year when the conference was in Bournemouth a delegate went for a swim in his suit after a few drinks too many… we haven't had a beachfront conference since. I think Manchester may be a safer place for the event! A suit covered in seaweed is not a good look for a conference.

What makes our event so special? The varied three-day format of the event allows professionals in the industry to immerse themselves in all things dentistry and really get inspired. The event is definitely much more than a tradeshow and conference; it's a hub for the profession and everyone gets the chance to create their own blend of learning, networking and meetings in the tradeshow – no two experiences will be the same. The show has grown so much over the years with many more elements compared to when it first started. It's a fantastic event to organise and experience – conference week is an intense few days of highs and lows but seeing it coming to life after a long time in the planning makes it all worthwhile.

What are you looking forward to in 2015? The latin/salsa band at the Friday night party!

The British Dental Conference and Exhibition 2015 will take place from 7-9 May 2015 at Manchester Central Convention Complex. ***www.bda.org/conference***

bdjteam2014100

BDJ Team continuing professional development

CPD: ONE HOUR

CPD questions – September 2014

CPD ARTICLE: Skin cancer for dental professionals

1. Which of these is **not** a known risk factor for malignant melanoma?

A. fair skin/fair hair/blue eyes

B. family history of malignant melanoma in a first degree relative

C. actinic keratosis

D. sunbed use

2. Which of these is **incorrect** in relation to the epidemiology of basal cell carcinoma?

A. it is increasing in incidence

B. over age 55 there is a female predominance

C. incidence is greater in the south west than the north of the UK

D. it is the commonest type of cancer in the UK

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3. Which is **correct** regarding the presentation of skin cancers?

A. squamous cell carcinomas are often painful

B. malignant melanomas are always pigmented

C. the infiltrating form of basal cell carcinoma resembles scar tissue

D. skin cancers always occur in sun-exposed areas

4. Regarding treatment of skin cancers:

A. radiotherapy can be used to treat large basal cell carcinomas, or where surgery is less appropriate

B. chemotherapy can be used in selected cases of squamous cell carcinoma

C. the surgical margin required when malignant melanomas are excised depends on the Breslow thickness

D. all of the above

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CORE CPD: ONE HOUR

Topics covered so far

➤ March 2014: **The use of radiographs in clinical dentistry**

➤ April 2014: **Disposing of clinical and dental waste**

➤ May 2014: **Emergency oxygen therapy in the dental practice**

➤ July 2014: **Needlestick and occupational exposure to infections**

➤ August 2014: **Medical emergencies: the drug box, equipment and basic principles**

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	A	B	C	D
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Q2	☐	☐	☐	☐
Q3	☐	☐	☐	☐
Q4	☐	☐	☐	☐

4. Please add any comments or feedback that you might have below or email bdjteam@nature.com.

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