The mission of BSDHT is to represent the interests of members and to provide a consultative body for public and private organisations on all matters relating to dental hygiene and therapy. We aim to work with other professional and regulatory groups to provide the highest level of information to our members as well as to the general public.

The Society seeks to increase the range of benefits offered to members and to support this with a clear business and financial strategy. The Society will continue to work to increase membership for the benefit of the profession.

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A workforce must work!

It was recently announced that there is going to be a reduction in the number of dental students being trained in the UK. In Wales it has been confirmed that as of September 2015 the number of undergraduate students admitted to the BDS programme in the School of Dentistry, Cardiff will be reduced from 80 to 70. This reduction follows the 10% cut in all dental schools in England last year and the overall reduction of 20% for the dental schools in Scotland over the past two years.

The Welsh Government has indicated that the reduction in dental students will be accompanied by a dramatic increase in the number of dental hygienists and dental hygiene therapists being trained. The indication is that there will be similar changes in training the dental workforce in the other devolved countries.

However, this shift does raise important questions. Will this new workforce find employment? Furthermore, is the mindset of the profession ready to accept these clinicians and allow us to work to our full scope of practice?

In this political climate our dentist colleagues appear to be struggling financially under the current dental contract. We hear, anecdotally, that they are often reluctant to refer patients to us because it makes no financial sense to them. Young associates, despite having experienced integrated training, have substantial student loans to repay. Working within the NHS system there are many Principle dentists, even those with power and influence in dental politics, who do not employ the skills of their dental hygienist and therapist colleagues. The fall out results in difficulties and hardships for many of our members, where contracts are not being renewed or are essentially being rewritten, but not to our benefit.

Five years ago the Steele Report suggested that we needed a flexible dental workforce to deliver NHS care to an ever ageing population. This would obviously require the employment of the various skills of all team members, for the benefit of the patient.

A paper published in this issue by Harris, Eaton, Ross and Arevalo highlights the fact that dental hygienists and those dually qualified in hygiene and therapy should have the competency to carry out 22 clinical assessment skills. However, the analyses of their results suggest that many of us are not working to our full scope of practice, for a number of reasons. One of the limiting factors is the nature of our employment, where a number of constraints - appointment times, lack of nursing assistance, lack of referrals, dentists’ attitudes - prevent us from so doing. Many of those BSDHT members dually qualified in hygiene and therapy report that they are not using their therapy skills at all.

The training programmes in the dental schools in UK are formally inspected every five years by the GDC to ensure that on successfully passing the final exam these individuals are suitable for registration - safety and competence are not issues. One of things the GDC looks for is evidence of integrated teaching with the undergraduate BDS programme - common sense, surely. An example of where this can easily be achieved is in the subject of professionalism.

But it is not just integrated training that the new generation of students share. What may surprise many is that in some centres dually qualified hygienist therapists are providing the teaching of simple restorative techniques to the undergraduate BDS students.

The importance of integration is ably demonstrated by the sharing of patients between final year undergraduate dental students and final year hygiene and therapy students - the so called ‘Dental Family’. The new generation of dental professionals has learned how to work together, utilising their skills and sharing the workload for the benefit of their patients. Why then does this not translate into practice when they qualify?

So where does this leave us? Is this a seismic shift within the profession about which we should all be concerned? Or will we all learn to adapt and find a new way to work together while still prioritising our patients’ welfare and oral health? I believe the answer is that yes we can but we need a system that enables us all to do just that.

Every member of the team is a dental care professional. We are all on the same team and want to be able to work in gainful employment together - we want no divisions. Now, who is going to convince the Department?

Heather Lewis
Editor, Dental Health
So what is BSDHT doing for you?

It is not always obvious what is being done unless you read everything that we send out. Being in practice for years I admit that I have not always read everything that has come my way but, as your President, it is my aim to keep you informed as much as possible through this column.

Prior to being involved with the Executive Team, what interested me personally was how BSDHT would benefit my working life. Working in practice allows you to see things from a different perspective, be it NHS or private, and the areas that make your working life difficult can impact on many others in the same way. However, communication works best when it is a two-way process: we rely on hearing from you to ensure that the direction we push for will benefit your working life.

Employment

One of the most widely used benefits of membership is our enquiry line. Here we can note trends. One of the most common problems over the last few years is the number of our members who are having contracts and terms of employment changed, or having new contracts forced upon them. I say ‘forced’ as many are left feeling that they have no choice but to accept them, or be replaced. This is not always legal and you do have rights regardless of whether you are employed or self-employed. Previously one huge problem in pursuing our rights has been the possible expense involved. Nobody wants to have that added stress or financial impact!

We have listened to your issues on this and since January of this year we now provide every full member of BSDHT with employment insurance which has the capacity to pay legal expenses up to £100k. Do not be misled by the title, it is for the self-employed too. This insurance will provide specialist advice and help with regards to your working circumstances to ensure they are fair.

This company has also developed some advice sheets and contract templates for terms of service and employment. We will have these available on our website for member only downloads. We strongly advise that all working relationships are put down in writing but even if you have worked on trust previously you can still have rights within a verbal agreement or reasonable expectations because of an existing working pattern. It has been highlighted that even knowing that you have employment insurance can result in a fairer process.

So the bottom line is that if you find yourself in a situation where you feel your hands are tied because:

a. You have no contract;
b. You signed one but you did not realise its impact on your working life (ie not being able to take holidays when you want) until now;
c. If you do not sign a change of contract you will lose your job

visit our website, click on membership and the legal advice helpline number for all the information you need.

Childhood caries

Some of you may have read the press release I issued in relation to the decay experience of children in the UK. We realise that there has been a slight reduction in decay rates over the years but the fact is that tooth decay affects too many children. It is a preventable disease.

The National Dental Epidemiology Programme England highlighted that 1 in 4 children under the age of five years has experienced caries, and of those very few were visiting the dental surgery, therefore not getting the appropriate oral health messages. We need to get that message out there. BSDHT feels strongly that we could help raise awareness of the importance of oral hygiene in children to try and prevent dental disease and in doing so promote our profession to the general public.

PR

One of BSDHT’s main aims has been to promote the role of our profession to the general public. Reaching patients with the oral health message is relatively easy when they are our captive audience but reaching those who do not attend dental surgeries is much more difficult. If we could advertise our remit to the general public we could address the non-attenders so that we could not only raise the profile of our profession but also raise awareness of the ability to access us without the need for a referral from a dentist.

Together with our PR team we have developed a programme to:

a. Raise awareness of our profession to the general public;
b. Highlight the importance of prevention;
c. Tackle the unnecessary tooth decay experience in children throughout the UK;
d. Make an impact!

Most of us will at one time or another have been persuaded (arm twisted!) to give an oral health talk to our children’s schools and this is an ideal way to get the oral health message out there. BSDHT plan to attend as many schools as possible. To this end we will provide a lesson plan, powerpoint or interactive white board lesson and activity sheets for all ages from early learning years to key stage 2. We aim for it to take place during National
Smile Month with UK wide media. (Yes, you will get your photo taken for the papers.)

The success of this venture will lie with you so if you are interested in helping or volunteering your time we can help find a school in your area. We have access to a list of schools who have requested help. If you already have a school (or a child in school) then we can help with a draft letter of introduction for you with information for the school on how our plan fits into the curriculum.

All we need are volunteers to take part so if you are interested please contact us at enquiries@bsdht.org.uk or visit our website. You can read about my visit on page 9.

European Dental Hygiene Federation (EDHF)

I am delighted to let you know that following unanimous backing from the Executive and Council we have applied for and been accepted as a member of the European Dental Hygiene Federation. As you may remember this is an area I highlighted in November. Having our profession recognised in Europe is fundamental to being involved in legislation which will affect our working life. This association encompasses Dental Hygienists throughout Europe. The remit of this profession includes many of the skills we associate with therapy so although we are the only professional body representing Hygiene and therapy officially at the EDHF many of our skills overlap and this is an area Europe is compiling information on.

Team Training Day

I would like to thank the team for all their help in organising and running the team training Day in January. It is a lot of work, especially straight after an executive and full council meeting. Thank you too to all the regional group teams that attended. The general consensus was that it was a very informative meeting with lots of ideas and enthusiasm for the regional groups, thoughts for the future and tips on how to build a spaghetti tower. Don’t ask!

Working Group

Sarah Lawson, executive member, has been charged with setting up a working group to investigate access to dental treatment for the elderly and residentially cared for. She has requested volunteers who have a special interest in this area to contact her through enquiries@bsdht.org.uk

The aim of this group is to increase awareness of the importance of oral health care in the elderly and other cared for populations. One area the group has been working on is the compilation of an information leaflet to be downloaded from our website and used by the profession, patients, and carers.

On the issue of limited prescribing rights we will have had a meeting with the department of Health by the time you read this and we are still having ongoing input to the GDC’s Fitness to Practice changes.

Michaela ONeill
President

DID YOU KNOW

You can now follow the BSDHT on Facebook and Twitter?

COPY DATES FOR DENTAL HEALTH

1ST APRIL FOR THE MAY ISSUE

The Editor would appreciate items sent ahead of these dates when possible.

Send your contributions to: The Editor, Heather Lewis, 19 Cwrt-y-Vil Road, Penarth, Cardiff CF64 3HN or Email: editor@bsdht.org.uk
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CHILDREN at St Joseph’s Primary School received a visit from President Michaela ONeill to help them take steps to eliminate tooth decay.

Early last month, Michaela stopped by the school in Country Antrim to give children the knowledge and skills to help maintain good oral health – lessons they can take through into adulthood.

Children took part in brushing demonstrations, fun activities and were all given guidance and tuition on how to brush their teeth correctly. They were also given toothbrushes, toothpaste and a reward chart to take home with them which were kindly donated by Procter & Gamble (Oral B).

Michaela said: “Having the chance to teach young children about the importance of their oral health and show them about basic oral hygiene is an excellent opportunity to give them the skills they need to take care of their teeth throughout the rest of their life.

“The afternoon was really fun and exciting. It was great to see the children engage with the activities and show enthusiasm to learn about their teeth. Hopefully they will take away some of the things we did and incorporate them into their daily oral health routines.”

According to findings from the last survey of Children’s Dental Health, children in Northern Ireland have been shown to have some of the poorest levels of oral health compared to other regions of the United Kingdom.

“With regards to primary teeth, Northern Ireland had the highest proportion of five-year olds and eight-year-olds with obvious decay experience, decay into dentine and fillings in primary teeth, compared to England and Wales. It is stating the obvious but something needs to be done about these figures, and the British Society of Dental Hygiene and Therapy will be doing all they can to tackle this ultimately preventable problem.

“On behalf of the society we are concerned by the level of tooth decay in children across the UK and we would like to raise awareness of how to prevent this disease. As part of the schools Early Years curriculum, our members will volunteer their time to help teach correct methods of oral hygiene suitable for each child.

“The basic messages of good oral hygiene are simple, but so many children, especially those in more deprived areas of the UK, don’t even get these. It is a challenge but one I and we as a society are looking forward to.”

Frances McKinley, Principal of St Joseph’s Primary School said: “At Saint Joseph’s we are committed to promoting healthy lifestyles among our children. Attention to oral health and the promotion of healthy habits in terms of oral hygiene and healthy eating are an important aspect of this. The British Society of Dental Hygiene and Therapy have been working with our foundation stage teachers in trying to achieve this.”
Perfectly angled, alternating-length power brush bristles deliver 22% greater plaque removal and 35% less gingival bleeding.†

*vs. a standard manual toothbrush and Sonicare® DiamondClean®.
†vs. Sonicare DiamondClean after 6 weeks of use.

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**Surprise Surprise Indeed!**

Rendered speechless and near to tears, I tried to speak to everyone present at my 80th birthday party. Some had travelled quite some distance, and my thanks to all who were there and to those who sent messages, flowers and gifts. Hopefully I managed to contact the latter group, but please forgive me if I have missed anyone who deserves my thanks.

I also enjoyed “The Class of 77” in the January issue of Dental Health. Well remembered! Especially Pat Norman’s ode to “The Little Bugs,” which was her answer to a microbiology question!

Elaine Tilling and Judy Caesley certainly did pull the wool over my eyes, quite literally, as I was transported to Waddesdon with a tea towel tied over my eyes. My thanks again to all concerned in making my 80th birthday a day to remember.

*Freda Rimini.*  
email: f.rimini@btinternet.com

**South West Peninsula Regional Group**

We have a fantastic programme for our March meeting, which again is at the Exeter Golf and Country Club.

My apologies for not having the details sooner but we have been waiting for final confirmation from our speakers. We are fortunate to be able to persuade Prof Liz Kay and Dentsply who delivered superb presentations at the BSDHT Conference in Liverpool, to speak to us down here in the South West. Sonia Jones is the SW Postgraduate Dental Deaney DCP Advisor and her lecture promises to keep your eyes open! Claire Higgins treats people who are coping with cancer of the head and neck, and wants to link up our skills to provide care for these patients in our practices.

I know you all love hands on workshops, and I have more planned for the Autumn meeting on Saturday the 10th October at the China Fleet Club in Saltash – make sure you have the date in your diary as I’m sure the places available for the day will fill quickly. I will be able to give you the details at the March meeting.

Your committee met with all the other Regional Group committee members for a training day last month in Birmingham, and we’ve all returned with new ideas for our regional groups. I’d like to take this opportunity to welcome Lynn Chalinder onto our committee in the role of Treasurer, and to thank Maureen Gingell for her many years of hard work, on behalf of us all. She has (and continues to be) a great inspiration and supporter for our group.

Please do not hesitate to contact any of us if you have ideas for speakers, or subjects that you think we should cover, I will do my utmost to meet the needs of you, the members. I’m aware that many of you may choose to do some of your CPD online, but I hope you will agree that the excellent speakers, as well as the chance to network with other colleagues, is well worth coming in person to keep our group moving forward. Please put the info up on your noticeboards at work as all in the dental team are invited – members or not!

*I look forward to seeing you all soon.*  
*Penny Williams,*  
Email: williampenny.s@gmail.com

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The BSDHT app is available to download free from i-tunes. Visit the app store and click on ‘BSDHT’ to download the app.

There are currently 8 modules available: News; About BSDHT; My CPD; My PDP; Facebook; Twitter; BSDHT Website; Contact us.

*Your Society is one step ahead of the rest!*
On the first day of the conference, the posters were presented to the judges and remained on display for the duration of the programme. Subjects ranged widely, from the effectivity of psychological interventions to improve oral hygiene to the success of final year dental outreach teaching, use of tooth picks when provided in the hospitality industry to developing integrated clinicians for the future, and optimal periodontal recall intervals to the health risks of water pipe smoking.

Student focus included, medieval and post medieval archeological dental data, breast milk and early childhood caries and the strangulating effects of Ludwig’s Angina.

Each year BSDHT appoints three judges to the competition and in 2014 Deborah Lyle, Paul Brocklehurst and Mike Lewis generously gave their time and expert attention in the process. Mike Lewis is Dean of Cardiff School of Dentistry and Professor of Oral Medicine and is the current President of the British Society for Oral and Dental Research (BSODR), Deborah Lyle is Director of Professional and Clinical Affairs at Waterpik Inc. and Paul Brocklehurst is Senior Clinical Lecturer at Manchester Dental School, NIHR Clinician Scientist and Honorary Consultant in Dental Public Health.

The 2014 winners:

First prize - Petros Mylonas, David Attrill and Damien Walmsley, Birmingham Dental School, Denture Hygiene: Evaluating Quality and Management at the Birmingham Dental Hospital.


Student prize – Catherine Waldron and Bairbre Pygott-Glynn, Dublin Dental University Hospital, Current and Future Work Practices of Irish Dental Hygienists.

Once again generous sponsorship came from Waterpik Inc., who provided prize monies, of £300, £250 and £250 respectively. Additionally the winner was presented with an engraved glass vase, first and second winners received a top of the range Waterpik product and Deppeler provided the student finalist with a set of engraved hand instruments.

Abstracts were published in the Annual Clinical Journal in November and publication of complete articles in Dental Health is planned throughout 2015.

The Poster Competition provides a platform for dental professionals to present their research in a welcoming and supportive environment. It is aimed at those for whom this is their first foray into research, as well as those in academia. As such it is a fantastic opportunity to showcase this to peers, colleagues and eminent professionals and achieve publication.

We are committed to making this as accessible as possible and so the process is simple and guided by BSDHT. Competition guidelines and instructions in designing a poster are available on the Poster Competition page of the website and published in Dental Health periodically. Therefore, if you have a burgeoning idea, including grass roots research such as audit, or indeed if you are a student required to undertake a research or project module, get in touch and get involved!

BSDHT are also in the exciting and essential process of establishing a Research Group and we take this opportunity to share our mission statement:

To encourage members to become key players in the conduct and dissemination of clinical research that impacts directly on the oral and general health of patients, the public and populations.

If you would like more information or would like to be a part of this, please do not hesitate to get in touch at enquiries@bsdht.org.uk and place FAO Emma Pacey in the subject line.

research@bsdht.org.uk.

ERRATUM

Dental Health January 2015: The Editor would like to apologise for failing to state that Bairbre Pigott Glynn is a student and that Cara Green’s photograph was incorrectly used.
Dr. Leatherman Award
Do you have a nominee?

The late Dr Gerald Leatherman played a very important part in promoting the role of the dental hygienist as one of the pioneers of preventive dentistry in the UK. Described as 'The Father of World Dentistry' by Dame Margaret Seward he dedicated his professional life to raising the profile of both the dental hygienist and dental health promotion. He was actively involved with the British Dental Hygienists’ Association (now BSDHT) from the start and played a leading role in the establishment of the first dental hygiene training school in England. Following his retirement from the office of President of the BDHA in 1957 he was appointed Honorary Vice President until his death in 1991.

The Dr. Leatherman award is held in the highest regard by this profession. It is the only award nominated and agreed upon by your peers. It reflects true dedication, professionalism and determination for the greater good of all the profession. Nominees do not have to be high profile, in fact past winners have ranged from those who worked tirelessly behind the scenes to those who laid the foundations for the society we know today.

If you know of a worthy candidate please contact enquiries@bsdht.org.uk for terms and conditions and a nomination form. Please note we do not accept self-nominations; you must be nominated by your colleagues. All completed forms must be with us by June 30th 2015. The successful applicant will be notified in October.

CONGRATULATIONS!

Charley Graham was the lucky recipient of the BSDHT Student Graduation Prize at the Eastman Dental Institute in December 2014.

Charley is pictured here receiving her prize of a certificate for the ‘Education Award’ from the Director of the Dental Hygiene and Therapy course, Elizabeth Watts. The prize of engraved dental instruments was kindly sponsored by Swallow Dental Supplies.

Charley now joins the society as a member of our BSDHT Southern regional group.
**OBITUARY**

**JOLINE MILLER**  
1972-2014

Sadly in October 2014, one of our colleagues and dear friend passed away.

Joline Miller, known to many as Jo, aged 42, was a beautiful person inside and out, and will be sadly missed by those who knew and loved her.

Joline trained at Kings College London, in class GKT 2, graduating in July 2003.

Jo was a very funny, caring, creative, likeable person that got on with everyone. Especially those at GKT 2. She was loved by her patients for her caring ways and her good sense of humour.

Once graduated from Kings, Jo moved back to Cornwall and then finally settled in Torquay, meeting the love of her life Michael Brimacombe.

During her years as a dental hygienist, Jo volunteered and joined Dentaid in Takeo, Cambodia. She later returned to the hospital environment, working at Torquay Hospital, where she loved every minute.

Joline was a very special person and the very best friend anyone could wish for. She was a fiance, a sister, a daughter and was loved by everyone.

Jo, you will be sadly missed but forever in our hearts. Rest peacefully.

A huge celebration was held in November in Torquay to celebrate the life of Joline. Jo’s family has requested that any donations would be gratefully received at The Rowcroft Hospice - fundraising@rowcroft-hospice.org.uk. (Quote Joline Miller)

*Kelly Taylor*

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**NEW MEMBERS REQUIRED FOR PUBLICATIONS TEAM**

The Publications Team is responsible for the production of BSDHT publications. We are a small team of passionate volunteers who work hard to provide quality journals and a newsletter for the benefit of members: we currently produce 14 publications annually.

We now have vacancies for up to three enthusiastic members who think that they could help us develop Dental Health, The Annual Clinical Journal, DHContact and the Conference Issue.

If you are interested please contact the Editor: email editor@bsdht.org.uk

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**VISIT THE BSDHT ONLINE**

See below for details of how to log on to the members’ area

Logging on to the members’ area, you will see the box below on the screen

Complete the boxes using the following information:

User name: your full name, no abbreviations, no spaces, all in lower case eg. dianamarysmith. Password: your BSDHT membership number.

If you need clarification of the details we have on file – first name, middle name (if provided) and membership number – please contact BSDHT on 01788 575050.

Let us know what you think about the new site by clicking the ‘contact us’ button in the top right hand corner.
The last few decades have seen a remarkable rise in our utilisation of new technology which has transformed both our personal and professional lives. Web users now typically own three different screens and 90% of people move between devices such as PCs, tablets, notebook computers, TV and of course the smartphone to achieve their browsing needs. Indeed, such is the technological advancement of the smartphone, that it is now providing routine access to information in ways that were not previously possible including patient education.¹

A smartphone is essentially a mobile telephone with additional computing abilities.² Not only does it allow internet access but also the sending and receipt of e-mails. As with a traditional mobile ‘phone a smartphone will have a number of programmes already loaded, but the facility to download additional pieces of software significantly increases the functionality and personalisation of this equipment.³

An example of this is the ‘app’, which is typically ‘a small specialised programme downloaded on to a mobile device’.⁴ Apps may be accessed using a smartphone that connects, via an internet portal, to a ‘library’ of apps. Thus the user can browse the collection and search for specific apps that meet their needs. Once downloaded and installed onto a smartphone, an app transforms the device into everything from an atlas to a Zumba class and allows it to receive up-to-the-minute news, weather and social media updates.

The rapid growth in apps has resulted in many businesses developing them to promote their products, including major retailers, banks and travel websites. It is now possible for customers to do their weekly shop, check their bank balance and book a holiday – all from their Smartphone.³ Indeed, they say ‘if you can think of it, there’s an app for it’.

Due to the popularity of smartphone use, a number of dental apps are now available, not just for clinicians but also for patients who are using them to access a wide range of information.⁶

There follows just a few of the many choices of apps available. Whilst most are free (unless otherwise specified) it is advisable to clarify cost, availability on android, iPhone, iPad, iPod Touch as well as iOS requirements prior to download.

Professional Apps

**BSDHT**

The BSDHT App was launched at the OHC in November 2013 with the help of an educational grant from Oral-B. Designed by Andrew Gould in conjunction with Dental Channel the app features links to the society’s twitter and Facebook pages, a CPD log and a professional development log; all essential since the GDC is proposing statutory new rules for CPD including ‘embedding planning and reflection into CPD requirements’.⁷ Now also available on Android.

More information can be found on the BSDHT website at wwwbsdht.org.uk

**CPD Pro app**

This app was designed to help you to manage all aspects of your CPD on your iPhone. Whenever you have completed a CPD activity, use it to log your record. It takes just 30 seconds and you can even upload photographs of certificates. Everything is stored securely online and your hours are synced automatically to your eGDC account.

The app also has a large library of high-quality, verified CPD including Audio podcasts which makes it easy for you to catch up during quiet moments in the surgery.

**Medscape**

This app includes information on medication, over the counter remedies, herbal medicaments, drug interactions, diseases, conditions, procedures and protocols, along with expert panel tips.

**DDS GP**

The focus of DDS GP is on patient education and demonstration. The app allows dental professionals to illustrate the effects of dental conditions such as periodontal disease and decay. The tool features over 200 demonstrations and allows you to draw directly on the screen with your fingers, save the edited drawings, add images to a photo library, and even create, send, and print individual treatment plans for your patients.

The app is constantly being updated and improved through ongoing modifications.

£299.99

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Andrew Gould

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£299.99
iRomexis

iRomexis is a comprehensive 2-D and 3-D mobile image viewer application for the iPad. It can display all images created by Planmeca X-ray units, including ProMax 3-D and ProFace 3-D photos. The resolution is excellent, and images can easily be used for patient education and communication as well as for consultation with colleagues. Patient images can be organised and categorised and since it is compatible with Romexis desktop software, they can be shared with mobile devices anywhere. Along with host of other functions there are also options to adjust image contrast, brightness and zoom, making it very versatile.

Lumo Back

As dental professionals, we all know that correct posture can relieve pain, improve health, and encourage mobility. Lumo Back is a posture and movement feedback system that gently vibrates when you slouch from your lower back and provides feedback on your posture as you sit and stand. The Lumo avatar in the app mirrors your daily activities and monitors your progress and posture score over days, weeks and months. If Lumo’s green, you’re doing well! The sensor and app can be used to:

- Track your posture and reduce slouching over time.
- Assess the number of times you sit and stand up each day.
- Monitor your sleep positions (crucial if you have back or shoulder pain, since the position you sleep in at night can make a big difference to how you feel in the morning).

Buy the sensor waistband for £129.95 from storeapple.com/uk, and then download the app.

Perio Voice

PerioVoice makes periodontal charting simple. By using highly accurate voice recognition technology it allows you to chart by yourself without assistance; perfect if you are working without a nurse. It uses ‘Output’, a picture file that can be emailed, printed, and integrated into any dental software.

£4.99

Dental Assist

This App assists with taking and recording patient medical histories in the surgery.

Dental update

The Dental Update app allows readers to access their peer reviewed content and collect verifiable CPD £115.00 print & online.

Oral-B dental education app

This is an animation based app that enables dental professionals to educate their patients about dental anatomy and oral conditions. It contains detailed explanations of the structure of the mouth including the differences between deciduous and adult teeth. The animations are narrated and include subtitles to make the patient experience more memorable.

Common oral conditions are also featured including caries, periodontal disease, dentinal hypersensitivity, erosion and halitosis as well as the implications of plaque, calculus and staining. The causes and progression of dental disease are explained along with the need for improved oral hygiene. Information about Implant Dentistry and various Dental Specialties is also available. A back button allows users to navigate back to the previous menu without having to return home.

BPE App

The aim of this mobile app from GSK (GlaxoSmithKline) is to support dental professionals with the use of the Basic Periodontal Examination (BPE). The app provides information on:

- Background to the BPE codes
- Description and image of each BPE code
- Summary of recommended treatment.

Compatible with iPhones and iPads, the app can be downloaded from the App store by searching BPE app.

TASK

Sometimes you just want an app to do one thing well. Task stands out from hundreds of other ‘to-do’ apps for its minimalist look and simple operation: tap anywhere on the screen and start typing to create a task; then assign a date and time by pulling down on the screen. Flag up a to-do as important and it will appear in bold in the list of tasks on the app’s home page. Once completed, the tasks can be added to an accomplished tick list.

0.69p
Apps aimed at adult patients

The NHS has recently introduced an app library. We can help our patients give up cigarettes, drink less and check their exposure to sunlight with these apps, all backed by the relevant healthcare organisations.

NHS Stop Smoking

This app takes a practical approach for smokers by looking at how much money they have saved by quitting. They simply take a last drag and then start the app to activate a timer accurate to the second of how long it has been since they gave up, with the money they have saved mounting up at the same time. Daily tips, links to online help pages and a one-tap NHS smoking helpline should all help quitters stay the course.

Drinkaware

Drinkaware, the alcohol awareness charity has released an app that allows users to keep track of their alcohol consumption, calculate units and set goals to help moderate their drinking. Based on calorie consumption it advises users of foods they could be eating in place of alcohol and informs them of how much exercise is required to burn off the calories consumed.

Many of our patients recognise the need to cut back on their alcohol intake but lack the willpower to do so. This app has been designed to help people change their drinking habits by providing support and encouragement in a non-judgemental way and enabling them to enjoy the health benefits of cutting down.

No Clenching

This preventative app helps ‘bruxers’ counteract the problem by sending reminders at predetermined intervals.

Oral-B (the personal brushing assistant)

This Oral-B app helps our patients perfect their brushing technique. It is designed to work with all Oral-B electric toothbrushes but is particularly effective when used with models that have sound frequency and Bluetooth connectivity (excluding the Pulsonic).

Whilst of little benefit to those with a good oral hygiene routine, many patients not only find this useful but also strangely addictive especially since it not only delivers the latest news and weather, their diary for the day, but also a slideshow of beautiful images from National Geographic—all whilst brushing!

Beam Brush

Beam is a digital health platform that uses a connected toothbrush to make tooth brushing an engaging, entertaining, and rewarding experience. £27.99 from Amazon with free app.

FRUIT Ninja

Whilst not strictly dentally related, according to an Australian study, this app which involves ‘slicing’ flying melons with the swipe of a finger may help stroke patients recover and improve dexterity.® After being asked to play the game for an hour a day, five days a week the patients showed a significant improvement in upper limb function which in turn improved their manual dexterity and oral Hygiene.

0.69p

Spectothron

The company behind ‘How white are your teeth?’ have invented a smartphone-based sensor for halitosis detection in conjunction with Orabrush. Free sensors and a download of the app that gives a breath reading on a scale from ‘good’ to ‘gross’ are included with the purchase of each brush. Further information can be found at www2orabrush.com/breathtest/.

Orabrush from £4.13 at Amazon

In Case of Emergency

The ICE initiative was launched in the UK in 2005 by Bob Brotchie, a British paramedic who was concerned by the difficulty in locating family members of accident victims. The ICE concept is simple and we should encourage all our patients (especially those with a compromised medical history) to either download this new app or programme their mobile ‘phone with the acronym ICE (In Case of Emergency) followed by the names and ‘phone numbers of those whom they wish to be contacted in the event of an emergency.

Useful apps for students

There are many apps that are utilised by students to access general information and support their studies. A recent study by Khatoon et al” found that the three most popular apps amongst dental students are:

• Dictionary for Dental Education
• Multiple Choice Questions
• Description and illustrations of tools in dental education

Dental Terminology Dictionary

Dental Terminology is the goal of this App is to bring a user friendly study aid for those affiliated with the dental profession.

Available to download from the apple store for £1.99

Pass It!

The creators of Pass It! the dental hygiene board game have now designed an app. Incorporating more than 1,000 questions, the aim is to prepare any dental hygiene student for exams without the boredom, fatigue or
The only sensitivity toothpaste that delivers...

Instant relief*
Long-lasting relief
Cavity protection

Bring it on!

Now you can treat dentine hypersensitivity without compromise. Colgate® Sensitive Pro-Relief™ toothpaste works instantly for on the spot relief,* delivers long-lasting results for ongoing sensitivity relief and contains 1450ppm fluoride for maintaining healthy teeth.

Three benefits all at once

† Available in the UK and Ireland. *When toothpaste is directly applied to each sensitive tooth for one minute.
information overload usually associated with studying. Just like the board game, the app allows students to break away from multiple choice format and really challenge themselves by answering fill in the blank questions along with true/false and 50/50.

However, it is not just students who can benefit from this app, many qualified dental hygienists have tried it out to test their knowledge and have been ‘surprised at just how much information is left behind’ 19. This app is designed for both iPhone and iPad and each of the 11 subjects included in the board game are available for individual purchase from £0.62-£6.01 per item.

Orthodontics

Our younger patients have grown up in a digital age and the use of such technology in all their treatment but especially orthodontics may help increase motivation and compliance. Orthodontic emergencies may also be reduced and better managed if patients are able to access concise information on appliance care from their handheld devices. Sophisticated alarm reminders include:

Brace accelerator & Rubber-band Reminder

Brace accelerator and Rubber-band Reminder send alerts that remind patients to wear their orthodontic elastics. Both are able to produce graphs to show the user and clinician the level of compliance and allow users to set alarms to change their elastics.

0.63p & £1.29

Align Remind

This advanced calendar app reminds patients to change their aligners.

Children’s Brushing apps

Brush DJ

The free and NHS approved Brush DJ app has reached a milestone with over 1 million ‘nudges’ sent to users to encourage twice daily brushing. The app motivates users to brush for two minutes whilst listening to songs chosen at random from their device or from a playlist of favourite tunes. The app has evolved to include animated videos demonstrating use of a manual toothbrush, floss and interdental brushes. The app is an innovative interpretation of the Delivering Better Oral Health Toolkit document, and is especially appealing to our younger patients.

The top 5 most voted for songs to accompany brushing can be found on the website www.brushdj.com along with printable posters for the waiting room and links to download the app.

Brush with Jackson

Recommended for use under supervision this toothbrush timer app encourages children to brush their teeth alongside Jackson Rabbit. As well as addressing the importance of tooth brushing, Jackson will repeat what is said to him, giggle loudly when his tummy is tickled, squeal when poked in the tummy, wink an eye when touched and twitch his nose when poked. Jackson will also ‘play’ his toothbrush with various instrument sounds designed to amuse and entertain!

Whilst keeping children amused, it encourages hand/eye coordination and develops the healthy habit of keeping teeth clean and shiny like Jackson. He really is so much more than a toothbrush timer!

Available from the app store at £1.49

Nurdles

Getting children of any age to brush their teeth can be a challenge, but not when you’re an Aquafresh Nurdle! The Nurdles demonstrate a fun and appropriate way to brush all surfaces of the teeth. A catchy song is used to get children hopping, whilst a timer counts down for two minutes (the recommended BDHF brushing time). The idea being that they have so much fun, before they know it they are done! Each complete brush earns them Nurdle stars that can be used at the Nurdle Shop, where they can buy cool gear to dress up their very own Nurdle.

Other brushing apps worthy of consideration include:

- Toothbrush Timer (the creators of this app care greatly about dental hygiene and wanted to provide a tool to help everyone learn proper oral care).
- BrushyTime (Quite possibly the Flappy Bird of brushing timers).

Conclusion

Although the use of smartphone applications for clinicians and patients is increasing in popularity it is not without concern, particularly as at present there is no way of regulating the content or validity of the information provided in downloadable programmes. Instead app users must independently verify the data given. As dental professionals this presents few problems. However, our patients are likely to trust apps to find answers to everything from the mundane to the medical and it is therefore highly recommended that we direct them to appropriate and useful applications.

References

Imagine this scenario: a young, recently qualified associate buys a long established dental practice, from a principal perhaps retiring after 40 years of service. Many of these loyal patients are progressing in age, much like the retiring dentist. The new principle quickly realises that he has inherited many patients who appear to be unaware that they have periodontal disease. He is now faced with the unfortunate task of breaking the news to the loyal patients, many of whom have advanced forms of periodontal disease and need extensive treatment that it is likely to cost them substantial amounts of money and commitment. The new principal must also justify all the treatment needed to improve their condition - particularly difficult when the patient was told he had no problems at his last six monthly examination, and reports this has been the case for the last five years.

How can a new clinician approach this problem ethically and diplomatically? How does one go about introducing the concept of interdental brushes, single tufted interspace brushes, or an electric toothbrush? How can he convince the patient that his bleeding gums are not normal, despite the fact that they have been bleeding for as long as he can remember? We are all familiar with this dilemma.

In my experience the systematic approach below allows the team to work through objectives to reach a common goal. The aim is to help the team to become more focused and provide the best possible treatment for their patients.

**The basics**


**Have the right tools**

Clearly marked BPE probes should be included in all examination packs. A Williams probe or modified Williams probe, like Hu-Friedy PCPUNC156, are essential for detailed pocket depth measurement. They should be in good condition and replaced regularly.

**Attend courses as a team**

Attending periodontal courses together as a team is always productive. Working together to manage our periodontal patients will motivate the team. It is always helpful for every member of the team to have knowledge regarding the management of periodontally challenged patients within the practice.

**Create a practice protocol**

After attending a couple of courses as a team and, with a good working knowledge of the basics (BSP guidelines), all clinical staff should have a clear understanding of BPE codes, the required treatment, recall intervals, investigations required including X-rays, and any other detailed assessment required for a specific patient. Create a practice protocol, discuss all the points at staff meetings and agree to adhere by it. Good protocol should cover everything from the management of gingivitis to complex cases, and include details on when to and how to refer a patient to a specialist, as well as appropriate treatment in between.

**Create a periodontal clinical pathway**

This can be a simple flowchart based on the protocol agreed upon. Providing simple steps to follow encourages the whole team towards the same goal. It will also help to reduce any discrepancies between clinicians, helps to establish sound treatment plans and a pathway that everyone can follow.

**Review the protocol**

After 3-4 months of implementing the protocol, review its effectiveness, including anything that may have been missed or overlooked in the original protocol. This allows revision and agreement of standing protocol. In addition, it also allows the team to update each other on new guidelines or treatment variations that might have been published recently.

**Involve reception and nursing staff in the process**

All reception staff should be aware of the usual appointment lengths required for various phases of periodontal treatment, frequency of appointments and also be able to explain treatment stages to the patient by looking at a treatment plan set by the clinician. In addition, dental nurses should be trained and have a good knowledge of periodontal disease and its management.
provide good oral hygiene advice and explain periodontal problems to a patient. This will help to create a better working-learning environment and provide best patient care.

**Design a patient information leaflet**

It is a good idea to give these patients written explanations and tailored advice to back up the information you have given them in the surgery. Explanation of possible treatment options and when or how an external specialist referral would be made should be included in the leaflet along with basic information like best way to look after their oral health at home, based on latest scientific evidence.

**Sell sundries from reception**

A successful practice should cater for all aspects of patient’s needs as much as possible. Stock what you recommend. Selling products at a competitive price will help the patient to start a new oral hygiene routine.

**Summary**

Treating periodontal disease is truly team work where all members have to play their part equally. It starts with an accurate diagnosis and explanation to the patient of their disease, its severity and treatment needs. The patient then will have to work with a dental hygienist to improve their oral hygiene, reduce and eliminate modifiable risk factors and maintain good oral hygiene at home. As the clinician, we have the responsibility to provide the best possible treatment - motivating the patient and completing non-surgical periodontal therapy. Non-clinical members of the team are a vital part of the process as they are the point of contact between you and the patient. Having a system that everyone understands and can follow will go a long way to achieving the best possible results and best practice.

**About author:** Deepak Simkhada is dually qualified in dental hygiene and therapy from the University of Dundee. He has worked in NHS, Private and Mixed Practices, predominantly in and around London and also worked briefly in the restorative department in Aberdeen Dental Hospital. Currently he practices in and around west Sussex. Deepak has a special interest in treating periodontal disease in house. He is also actively involved in providing CPD courses. His next course is taking place on 17th of Jan 2015 in Earl’s Court in London.

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A survey of Dental Hygienists in the United Kingdom in 2011. Part 2 - Assessment skills training and utilisation

Marina Harris, Kenneth A. Eaton, Margaret K. Ross, Carolina Arevalo

Abstract

Aims: The aims of this part of the survey were to establish which assessment skills Dental Hygienists (DHs) and Dental Hygienist/Therapists (DH/Ts) in the United Kingdom (UK) in 2011 had been trained in and which they were using.

Methods: A 10% sample of all those registered with the General Dental Council (GDC) as DHs or DH/Ts in April 2011 were sent a pre-pilotted questionnaire, explanatory letter and stamped addressed envelope. The questionnaire contained a total of 100 questions, 22 of which related to clinical assessment skills usage. Respondents were asked to stipulate if they were single qualified DH or dual qualified DH/T to determine if there were any significant differences in the skills usage between the two groups. Three mailings were distributed between May and July 2011. The resulting data were entered into an Excel spreadsheet. Where appropriate differences between the responses from DHs and DH/Ts were statistically tested with the Chi² test.

Results: After three mailings, 371 of the 561 in the sample (66.1%) had responded, of whom 288 were DHs, 79 were DH/Ts and four did not specify whether they were DHs or DH/Ts. Over 90% of respondents reported that they had been trained in and used common assessment skills such as taking medical and dental histories. Fewer than 13% reported that they had been trained in and used the skills of taking saliva samples and swabs. It is beyond the scope of this abstract to list the results for each of the 22 assessment skills. In summary:

- Some skills had a high level of training and a high frequency of use.
- Some skills had a high level of training and a low frequency of use.
- Some skills had a low level of training and a low frequency of use.
- Some respondents had never been taught skills that other respondents have.
- As a group, DH/Ts report more training in certain skills and higher frequency of use of these skills than DHs.

Conclusions: The results of this study provided an insight into the level of training of, and frequency of use of clinical assessment skills of DHs and DH/Ts in the UK in the summer of 2011. The study showed that generally DH and DH/Ts reported a high level of assessment skills training although not all respondents reported to have been taught each skill and that there was a variance in the frequency of use of different assessment skills, with some respondents reporting to have never used the skill. There was a significant difference between DHs and DH/Ts in the training of and frequency of use of some skills.

Key Words: Dental Hygienists, Dental Hygienist/Therapists, Clinical Assessment Skills

Introduction

A detailed survey of Dental Hygienists (DHs) in the United Kingdom (UK) was carried out in the summer of 2011 as a result of collaboration between the British Society of Dental Hygiene and Therapy (BSDHT) and the Faculty of General Dental Practice (UK) (FGDP UK). A previous study which investigated international profiles of Dental Hygienists (DHs) found that their training and practice have evolved consistently at a global level and that the profession was more similar than dissimilar with a world-wide consistency in the scope of their practice. In the field of education, this study suggested that DH education continues to evolve with many of the training programmes expanding their curriculum to Bachelor degree level and some to Masters Level in countries such as Finland, Italy and the USA. In countries such as the Netherlands, entrance to the dental hygiene profession is only through completion of a four year degree programme which includes a research element, whilst here in the United Kingdom (UK) there remain different levels of DH training with fewer schools still offering the Diploma in Dental Hygiene or the Diploma in Dental Hygiene and Therapy whilst others have expanded the curriculum to offer a three or four year Bachelor degree programme. Within the UK, whichever level of training a DH or Dental Hygienist/Therapist (DH/T) has undertaken, the delivery of the curriculum has to be inspected and quality assured by the General Dental Council (GDC) to ensure that the training provided satisfies the learning outcomes laid down by the GDC and that the clinical components of current DH or DH/T training will be the same regardless if the programme is a diploma or a degree. The GDC has recently updated its published guidance on the wide scope of DH/T practice at completion of undergraduate training and additional skills that can be acquired with post qualification training. On completion of undergraduate training the DH is competent in a number of areas of assessment, operative procedures and preventive skills which can be developed further through Continual Professional Development (CPD) programmes.

In June 2009, with the publication of the review into NHS dental services in England (the Steele Report) Professor Jimmy Steele suggested how a high-quality and flexible dental workforce could help deliver NHS dental care for the future. A literature review into dental workforce planning has suggested that if patient centred care is to be provided, the dentist needs to recognise the skills of the dental team and not be constrained by current business models or tradition. It further suggests that the GDC should ensure that education of dentists is carried out in a team-based approach. However, irrespective of these plans for the future, there are questions with regard to the knowledge and skills that DH and DH/T who have been trained and qualified over the last 50 years, possess, whether they are using them and if not, why not.
Aims

Against this background, the aims of this part of the survey were to establish which assessment skills DHs and DH/Ts in the United Kingdom in 2011 had been trained in and which they were using.

Methods

This survey was conducted using a self-reported questionnaire. The questionnaire had been piloted amongst a random sample of 20 dental hygienists in Edinburgh and Portsmouth. After piloting some of the original questions were revised. The questionnaire consisted of 100 questions with sections on: practice profile, assessment skills, prevention skills, operative skills, the demography of the respondents and their continuing professional education. This paper reports on the responses to the questions on Assessment skills (Figure 1). The full, 100 question, questionnaire can be viewed at: wwwbsdht.org.uk

For each skill, the relevant question asked for the following information:

- **Been taught**: Yes/No
- **Currently use**: Yes/No
- **Frequency of use**: Daily/Weekly/Monthly/Annually/Never

The Sample

At the beginning of May 2011, when the questionnaire was mailed out, 5,900 were registered with the General Dental Council (GDC) as DHs. Of these a number were also registered as dentists or dental technicians. They were excluded from the survey as it was felt that they might well be working as dentists or dental technicians and not as DHs. Of the remaining 5,610 registrants, 1,330 were registered both as dental hygienist and as dental therapists.

Statistical advice was that a 10% sample of all those registered as a DH or DH/T would be sufficient to achieve an error rate of 5% at 90% confidence level, if there was at least a 60% response rate. The GDC provided an electronic version of the register for Dental Care Professionals, from which the DH/T would be sufficient to achieve an error rate of 5% at 90% confidence level. A 10% sample of all those registered as a DH or DH/T was taken for this survey.

The Questions on Assessment Skills usage

Respondents were asked to specify whether they were DH or DH/T.

- **Recording medical history**
- **Recording dental history**
- **Recording social history**
- **Recording BPE**
- **Recording plaque scores**
- **Recording pocket depths**
- **Recording attachment loss**
- **Recording gingival recession**

The protocol for the survey, questionnaire and covering letter were sent to the South East Scotland Research Ethics Committee, who considered that as the survey was an opinion survey seeking the respondents’ views on service delivery, it did not need NHS ethical review under the terms of the Governance arrangements for research Ethics Committees in the United Kingdom. As no NHS funds, patients or facilities were involved, it was unnecessary to seek NHS RD approval for the survey.

Data Analysis

Data was entered into an Excel spread sheet. Five percent of data entries were checked for accuracy in order to assess a percentage error for data entry. Where relevant, differences in the responses from DH and DH/T were statistically tested using the Chi test.

Results

As previously reported, after three mailings, 371 of the 561 in the sample (66.1%) had responded, of whom 288 were DHs, 79 were DH/Ts and four did not specify whether they were DHs or DH/Ts.

Throughout the results presented in this paper, when percentages are given they are based on 371 and not the number who responded to each question.

The error rate for data entry in the random 5% sample of completed questionnaires that were checked was less than 1%. Twelve respondents reported that they were taking a career break and five that they had retired from work as a DH.

Recording Medical, Dental and Social History

A total of 340 respondents reported that they had been taught recording of medical history and 354 stated that they currently used this skill with 335 carrying this out on a daily basis, 21 on a weekly basis, 1 on a monthly basis and 3 on an annual basis. Amongst the DHs, 14 of the respondents reported to not been taught to record a medical history whereas all of the DH/T respondents reported they had been taught. (Table 1).

Recording Dental History

Some 319 respondents reported that they had been taught recording dental history of whom 297 respondents stated they currently used this skill with 237 carrying it out on a daily basis, 47 on a weekly basis, 20 on a monthly basis and 4 on an annual basis. There was a statistically significant difference between DH and DH/T in that 34 of the 288 DH respondents stated that they had not been taught to record a dental history compared to all of the 79 DH/Ts having been taught (p<0.05) and that 54 of the 288 DH respondents stated that they did not currently use this skill compared to 5 of the 79 DH/Ts (p<0.05) (Table 2).

Recording Social History

273 respondents reported that they had been taught recording social history of whom 274 respondents reported that they currently used this skill with 202 carrying it out on a daily basis, 54 on a weekly basis, 19 on a monthly basis and 9 on an annual basis. There was a statistically significant difference between DH and DH/T in that 75 of the DH respondents stated that they had not been taught this skill compared to 1 of the DH/T (p<0.001) and that 70 of the DH respondents reported to not currently use this skill compared with 5 of the DH/T (p<0.05) (Table 3).
In answer to the first of these three questions, 336 respondents reported that they had been taught recording BPE, of whom 333 respondents stated that they currently used this skill with 262 on a daily basis, 54 on a weekly basis, and 21 on a monthly basis. Amongst the DH respondents 17 reported that they were not taught to record a BPE compared with 1 of the DH/Ts and 24 of the DH respondents reported that they do not currently use this skill compared with 2 of the DH/Ts (p=0.1393 and p=0.1154 respectively)(Table 4).

Table 1. Recording Medical History

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<tr>
<th>Registration</th>
<th>Been Taught</th>
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<th>Frequency of Use</th>
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<tr>
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<td>Yes</td>
<td>No</td>
<td>DNR</td>
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<td>Dental Hygienist</td>
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<td>Total</td>
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Table 2. Recording Dental History

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Table 3. Recording Social History

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<td>Total</td>
<td>273</td>
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Table 4. Recording/Charting BPE

<table>
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Recording BPE, Plaque Scores and Gingival Inflammation

In answer to the first of these three questions, 336 respondents reported that they had been taught recording BPE, of whom 333 respondents stated that they currently used this skill with 262 on a daily basis, 54 on a weekly basis, and 21 on a monthly basis. Amongst the DH respondents 17 reported that they were not taught to record a BPE compared with 1 of the DH/Ts and 24 of the DH respondents reported that they do not currently use this skill compared with 2 of the DH/Ts (p=0.1393 and p=0.1154 respectively)(Table 4).
The same number of respondents (336) reported that they had been taught to record plaque scores of whom 240 respondents stated that they currently used this skill with 100 on a daily basis, 74 on a weekly basis, 22 on a monthly basis and 22 on an annual basis. Some 90 of the respondents reported that they never use this skill. There was a statistically significant difference between DH and DH/Ts in that 19 of the DH respondents stated they were not taught recording plaque scores compared to all of the DH/Ts being taught and that 99 of the DH respondents reported that they did not currently use this skill compared to 15 of the DH/Ts (p<0.05 and p<0.05 respectively) (Table 5).

Some 348 of the respondents reported that they had been taught how to record gingival inflammation of whom 335 stated that they currently used this skill with 289 carried out on a daily basis, 38 on a weekly basis, 9 on a monthly basis and 4 on an annual basis (Table 6).

**Table 5. Recording/Charting Plaque Scores**

<table>
<thead>
<tr>
<th>Registration</th>
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<th>Currently Use</th>
<th>Frequency of Use</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>DNR</td>
<td>Yes</td>
</tr>
<tr>
<td>Dental Hygienist</td>
<td>253</td>
<td>19</td>
<td>16</td>
<td>177</td>
</tr>
<tr>
<td>Dental Hygienist/Therapist</td>
<td>79</td>
<td>0</td>
<td>0</td>
<td>62</td>
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<tr>
<td>Did Not Specify</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>336</td>
<td>90.6%</td>
<td>19</td>
<td>5.1%</td>
</tr>
</tbody>
</table>

**Table 6. Recording/Charting Gingival Inflammation**

<table>
<thead>
<tr>
<th>Registration</th>
<th>Been Taught</th>
<th>Currently Use</th>
<th>Frequency of Use</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>DNR</td>
<td>Yes</td>
</tr>
<tr>
<td>Dental Hygienist</td>
<td>268</td>
<td>5</td>
<td>15</td>
<td>259</td>
</tr>
<tr>
<td>Dental Hygienist/Therapist</td>
<td>77</td>
<td>2</td>
<td>0</td>
<td>74</td>
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<tr>
<td>Did Not Specify</td>
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<tr>
<td>Total</td>
<td>348</td>
<td>93.8%</td>
<td>8</td>
<td>2.2%</td>
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</tbody>
</table>

**Table 7. Recording/Charting Probing Pocket Depth**

<table>
<thead>
<tr>
<th>Registration</th>
<th>Been Taught</th>
<th>Currently Use</th>
<th>Frequency of Use</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>DNR</td>
<td>Yes</td>
</tr>
<tr>
<td>Dental Hygienist</td>
<td>270</td>
<td>4</td>
<td>14</td>
<td>272</td>
</tr>
<tr>
<td>Dental Hygienist/Therapist</td>
<td>79</td>
<td>0</td>
<td>0</td>
<td>77</td>
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<td>0</td>
<td>0</td>
<td>4</td>
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<tr>
<td>Total</td>
<td>353</td>
<td>95.1%</td>
<td>4</td>
<td>1.1%</td>
</tr>
</tbody>
</table>

The same number of respondents (336) reported that they had been taught to record plaque scores of whom 240 respondents stated that they currently used this skill with 100 on a daily basis, 74 on a weekly basis, 22 on a monthly basis and 22 on an annual basis. Some 90 of the respondents reported that they never use this skill. There was a statistically significant difference between DH and DH/Ts in that 19 of the DH respondents stated they were not taught recording plaque scores compared to all of the DH/Ts being taught and that 99 of the DH respondents reported that they did not currently use this skill compared to 15 of the DH/Ts (p<0.05 and p<0.05 respectively) (Table 5).

Some 348 of the respondents reported that they had been taught how to record gingival inflammation of whom 335 stated that they currently used this skill with 289 carried out on a daily basis, 38 on a weekly basis, 9 on a monthly basis and 4 on an annual basis (Table 6).

**Recording Pocket Depth, Attachment Loss, Gingival Recession, Furcation Involvement and Tooth Mobility**

With regard to measuring pocket depths, 333 respondents reported that they had been taught how to record pocket depths of whom 333 stated that they currently used this skill with 266 on a daily basis, 63 on a weekly basis, 27 on a monthly basis and 4 on an annual basis (Table 7).

As for attachment loss, 317 respondents reported that they had been taught how to record attachment loss of whom 274 respondents stated that they currently used this skill with 160 on a daily basis, 71 on a weekly basis, 39 on a monthly basis and 13 on...
an annual basis. Sixty four of the respondents reported to never use this skill. There was a statistically significant difference (p<0.05) between DH and DH/Ts in that 37 of the DH stated that they had not being taught this skill compared to just 1 of the DH/Ts. Although not statistically significant, 72 of the DH respondents said that they did not currently use this skill compared to 12 of the DH/Ts (p<0.05 and p=0.0651 respectively) (Table 8).

For gingival recession, 333 respondents reported that they had been taught how to chart gingival recession of whom 316 respondents stated that they currently used this skill with 196 on a daily basis, 87 on a weekly basis, 31 on a monthly basis and 10 on a yearly basis. There was a statistically significant difference (p<0.01) between DH and DH/Ts in that 23 of the DH respondents stated they were not taught how to record gingival recession whereas all 79DH/Ts reported that they had been trained in this skill) (Table 9).

**Recording Tooth Mobility**

For tooth mobility, 338 respondents reported that they had been taught how to record tooth mobility of whom 344 respondents stating that they currently used this skill with 235 on a daily basis, 75 on a weekly basis, 34 on a monthly basis and 6 on an annual basis. There was a statistically significant difference p<0.05 in that 18 of the DH respondents stated they had not been taught this skill compared to all of the DH/Ts being taught and that 13 DH respondents reported that they do not currently use this skill compared to 1 DH/T (p=0.0405 and p=0.2896 respectively) (Table 10).
CLINICAL

Recording/Charting Furcation Involvement

With regard to furcations, 335 respondents reported that they had been taught how to chart furcation involvement of whom 330 respondents stated that they currently use this skill with 209 on a daily basis, 79 on a weekly basis, 38 on a monthly basis and 11 on an annual basis. Although not statistically significant, 20 of the DH respondents reported that they had not been taught this skill compared to just 1 of the DH/Ts (p=0.0841 and p=0.7293 respectively) (Table 11).

<table>
<thead>
<tr>
<th>Registration</th>
<th>Been Taught</th>
<th>Currently Use</th>
<th>Frequency of Use</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>DNR</td>
<td>Yes</td>
</tr>
<tr>
<td>Dental Hygienist</td>
<td>254</td>
<td>20</td>
<td>14</td>
<td>253</td>
</tr>
<tr>
<td>Dental Hygienist/Therapist</td>
<td>78</td>
<td>1</td>
<td>0</td>
<td>74</td>
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<tr>
<td>Did Not Specify</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>335</td>
<td>22</td>
<td>14</td>
<td>330</td>
</tr>
</tbody>
</table>

Screening the Oral Mucosa, Recording Tooth Surface Loss, Assessing the Temporo-mandibular Joint and Assessing Regional Lymph Nodes

As for screening the oral mucosa, 301 of the respondents reported that they had been taught how to screen the oral mucosa. However, 307 respondents stated that they currently used this skill with 270 on a daily basis, 25 on a weekly basis, 10 on a monthly basis and 4 on an annual basis. 39 of the respondents stated that they never use this skill. There was a statistically significant difference (p<0.05) between DHs and DH/Ts in that 49 of the DH respondents stated they had not been taught how to screen the oral mucosa compared to 2 of the DH/Ts and that 45 of the DH respondents stated that they did not currently use this skill compared to 4 of the DH/Ts (p<0.0001 and p<0.05 respectively) (Table 12).

<table>
<thead>
<tr>
<th>Registration</th>
<th>Been Taught</th>
<th>Currently Use</th>
<th>Frequency of Use</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>DNR</td>
<td>Yes</td>
</tr>
<tr>
<td>Dental Hygienist</td>
<td>221</td>
<td>49</td>
<td>18</td>
<td>230</td>
</tr>
<tr>
<td>Dental Hygienist/Therapist</td>
<td>77</td>
<td>2</td>
<td>0</td>
<td>75</td>
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<tr>
<td>Did Not Specify</td>
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<td>1</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>301</td>
<td>52</td>
<td>18</td>
<td>307</td>
</tr>
</tbody>
</table>

Recording Tooth Surface Loss (Erosion, Abrasion, Attrition, Abfraction)

For tooth surface loss, 288 of the respondents reported that they have been taught how to record tooth surface loss of whom 273 currently used this skill with 39 on a daily basis, 22 on a weekly basis, 22 on a monthly basis and 13 on an annual basis. 195 of the respondents stated that they never use this skill. There was a statistically significant difference (p<0.05) between DHs and DH/Ts in that 60 of the DH respondents stated they had not been taught how to record tooth surface loss compared to 2 of the DH/Ts and that 69 of the DH respondents report to not currently use this skill compared to 10 of the DH/Ts (p<0.0001 and p<0.05 respectively) (Table 13).

<table>
<thead>
<tr>
<th>Registration</th>
<th>Been Taught</th>
<th>Currently Use</th>
<th>Frequency of Use</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>DNR</td>
<td>Yes</td>
</tr>
<tr>
<td>Dental Hygienist</td>
<td>209</td>
<td>60</td>
<td>19</td>
<td>202</td>
</tr>
<tr>
<td>Dental Hygienist/Therapist</td>
<td>77</td>
<td>2</td>
<td>0</td>
<td>68</td>
</tr>
<tr>
<td>Did Not Specify</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>288</td>
<td>64</td>
<td>19</td>
<td>273</td>
</tr>
</tbody>
</table>

| Table 11. Recording/Charting Furcation Involvement  
DNR = Did Not Respond |
| Table 12. Screening the Oral Mucosa  
DNR = Did Not Respond |
| Table 13. Recording Tooth Surface Loss (Erosion, Abrasion, Attrition, Abfraction)  
DNR = Did Not Respond |

Recording/Charting Furcation Involvement

With regard to furcations, 335 respondents reported that they had been taught how to chart furcation involvement of whom 330 respondents stated that they currently use this skill with 209 on a daily basis, 79 on a weekly basis, 38 on a monthly basis and 11 on an annual basis. Although not statistically significant, 20 of the DH respondents reported that they had not been taught this skill compared to just 1 of the DH/Ts and 330 respondents stated that they currently use this skill with 209 on a daily basis, 79 on a weekly basis, 38 on a monthly basis and 11 on an annual basis. Although not statistically significant, 20 of the DH respondents reported that they had not been taught this skill compared to just 1 of the DH/Ts (p=0.0841 and p=0.7293 respectively) (Table 11).

Screening the Oral Mucosa, Recording Tooth Surface Loss, Assessing the Temporo-mandibular Joint and Assessing Regional Lymph Nodes

As for screening the oral mucosa, 301 of the respondents reported that they had been taught how to screen the oral mucosa. However, 307 respondents stated that they currently used this skill with 270 on a daily basis, 25 on a weekly basis, 10 on a monthly basis and 4 on an annual basis. 39 of the respondents stated that they never use this skill. There was a statistically significant difference (p<0.05) between DHs and DH/Ts in that 49 of the DH respondents stated they had not been taught how to screen the oral mucosa compared to 2 of the DH/Ts and that 45 of the DH respondents stated that they did not currently use this skill compared to 4 of the DH/Ts (p<0.0001 and p<0.05 respectively) (Table 12).

For tooth surface loss, 288 of the respondents reported that they have been taught how to record tooth surface loss of whom 273 currently used this skill with 39 on a daily basis, 22 on a weekly basis, 22 on a monthly basis and 13 on an annual basis. 195 of the respondents stated that they never use this skill. There was a statistically significant difference (p<0.05) between DHs and DH/Ts in that 60 of the DH respondents stated they had not been taught how to record tooth surface loss compared to 2 of the DH/Ts and that 69 of the DH respondents report to not currently use this skill compared to 10 of the DH/Ts (p<0.0001 and p<0.05 respectively) (Table 13).

As far as assessing the Temporal Mandibular Joint (TMJ) was concerned, 146 of the respondents reported that they have been taught how to assess the TMJ of whom 88 currently used this skill with 39 on a daily basis, 22 on a weekly basis, 22 on a monthly basis and 13 on an annual basis. 195 of the respondents reported that they never use this skill. There was a statistically significant difference (p<0.05) between DHs and DH/Ts in that 187 of the DH respondents stated they had not been taught how to assess the TMJ compared to 2 of the DH/Ts and that 220 of the DH respondents reported that they did currently use this skill compared to 42 of the DH/Ts (p<0.0001 for both tests) (Table 14).

With regard to lymph nodes, 160 respondents reported that they had been taught how to assess regional lymph nodes of whom 93

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27
respondents reported currently using this skill with 38 on a daily basis, 25 on a weekly basis, 22 on a monthly basis and 17 on an annual basis. Some 188 of respondents stated that they never use this skill. There was a statistically significant difference between DHs and DH/Ts (p<0.05) in that 173 DH respondents stated that they had not been taught how to assess regional lymph nodes compared to 18 DH/Ts and that 212 DH respondents reported to not currently using this skill compared with 42 of the DH/Ts (p<0.0001 for both tests) (Table 15).

Taking Radiographs, Assessing and Reporting on Radiographs and Clinical Photography

As far as taking radiographs were concerned, 222 of the respondents reported that they had been taught how to take radiographs of whom 109 respondents stated that they currently used this skill with 26 on a daily basis, 31 on a weekly basis, 33 on a monthly basis and 17 on an annual basis. Some 192 respondents reported to never use this skill. There was a statistically significant difference between DHs and DH/Ts (p<0.05) in that 128 of the DH respondents stated they had not been taught how to take radiographs compared to all of the DH/T being taught and that 215 of the DH respondents reported to not currently use this skill compared with 29 of the DH/Ts (p<0.0001 for both tests) (Table 16).

When the assessment and reporting on radiographs was considered, 276 of respondents reported that they have been taught how to assess and report on radiographs of whom 220 currently used this skill with 109 on a daily basis, 68 on a weekly basis, 34 on a monthly basis and 14 on an annual basis. 90 of the respondents stated that they never

---

**Table 14. Assessing the Temporo-Mandibular Joint**

<table>
<thead>
<tr>
<th>Registration</th>
<th>Been Taught</th>
<th>Currently Use</th>
<th>Frequency of Use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>DNR</td>
</tr>
<tr>
<td>Dental Hygienist</td>
<td>88</td>
<td>187</td>
<td>17</td>
</tr>
<tr>
<td>Dental Hygienist/Therapist</td>
<td>56</td>
<td>23</td>
<td>0</td>
</tr>
<tr>
<td>Did Not Specify</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>146</td>
<td>212</td>
<td>13</td>
</tr>
</tbody>
</table>

**Table 15. Assessing Regional Lymph Nodes**

<table>
<thead>
<tr>
<th>Registration</th>
<th>Been Taught</th>
<th>Currently Use</th>
<th>Frequency of Use</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>DNR</td>
</tr>
<tr>
<td>Dental Hygienist</td>
<td>98</td>
<td>173</td>
<td>17</td>
</tr>
<tr>
<td>Dental Hygienist/Therapist</td>
<td>61</td>
<td>18</td>
<td>0</td>
</tr>
<tr>
<td>Did Not Specify</td>
<td>1</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>160</td>
<td>194</td>
<td>17</td>
</tr>
</tbody>
</table>

**Table 16. Taking Radiographs**

<table>
<thead>
<tr>
<th>Registration</th>
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<th>Currently Use</th>
<th>Frequency of Use</th>
</tr>
</thead>
<tbody>
<tr>
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<td>143</td>
<td>128</td>
<td>17</td>
</tr>
<tr>
<td>Dental Hygienist/Therapist</td>
<td>79</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Did Not Specify</td>
<td>0</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>222</td>
<td>132</td>
<td>17</td>
</tr>
</tbody>
</table>

**Table 14. Assessing the Temporo-Mandibular Joint**

DNR = Did Not Respond

**Table 15. Assessing Regional Lymph Nodes**

DNR = Did Not Respond

**Table 16. Taking Radiographs**

DNR = Did Not Respond
use this skill. There was a statistically significant difference between DHs and DH/Ts in that 72 of the DH respondents reported that they had not been taught how to assess and report on radiographs compared to 3 of the DH/Ts. There was no statistical significance in the reported use of this skill between those DH would have been taught these skills and the DH/Ts (p<0.0001 and p=0.3561 respectively) (Table 17).

With regard to clinical photography, 96 of the respondents reported that they had been taught clinical photography of whom 66 currently used this skill with 12 on a daily basis, 19 on a weekly basis, 23 on a monthly basis and 14 on an annual basis. Some 218 of the respondents stated that they never use this skill. There was a statistically significant difference (p<0.05) between DHs and DH/Ts in that 220 of the DH respondents reported that they had not been taught clinical photography compared to 36 of the DH/Ts and that 228 of the DH respondents stated they do not currently use this skill compared to 49 of the DH/Ts (p<0.0001 and p<0.001 respectively) (Table 18).

Periodontal and Caries Risk Assessment

As far as assessment of periodontal risk was concerned, 245 of the respondents reported that they had been taught how to carry out a periodontal risk assessment of whom 226 respondents stated that they currently used this skill with 141 on a daily basis, 47 on a weekly basis, 32 on a monthly basis and 9 on an annual basis. Some 92 of the respondents reported to never use this skill. There was a statistically significant difference (p<0.01) in that 95 of the DH respondents stated that they had not been taught how to carry out a periodontal risk assessment compared to 11 of the DH/Ts and that 104 of the DH respondents reported to not currently using this skill compared to 18 of the DH/Ts but this was not a statistically significant difference (p<0.001 and p=0.0614 respectively) (Table 19).

Caries Risk Assessment

For caries risk assessment, 221 respondents reported that they have been taught how to carry out a caries risk assessment of whom 189 currently used this skill with 101 on a daily basis, 43 on a weekly basis, 38 on a monthly basis and 9 on an annual basis. 120 respondents stated that they never use this skill. There was a statistically significant difference between DHs and DH/Ts in that 124 of the DH respondents report to have not been taught how to carry out a caries risk assessment compared with 7 of the DH/Ts and that 143 of the DH respondents who stated that they do not currently use this skill compared to 18 of the DH/Ts (p<0.0001 for both tests) (Table 20).

Taking Saliva Samples and Swabs

With regard to taking saliva samples and swabs, 48 of the respondents reported to had been taught how to take saliva samples of whom 14
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› Includes interactive images to bring BPE to life

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Table 20. Caries Risk Assessment  

<table>
<thead>
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<th>Registration</th>
<th>Been Taught</th>
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<th>Frequency of Use</th>
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<tr>
<td>Dental Hygienist</td>
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<td>126</td>
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<tr>
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<td>7</td>
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<td>61</td>
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<tr>
<td>Did Not Specify</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>221</td>
<td>133</td>
<td>17</td>
<td>189</td>
</tr>
</tbody>
</table>

Table 21. Taking Saliva Samples  

<table>
<thead>
<tr>
<th>Registration</th>
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<th>Currently Use</th>
<th>Frequency of Use</th>
<th>Total</th>
</tr>
</thead>
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<td></td>
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<td>No</td>
<td>DNR</td>
<td>Yes</td>
</tr>
<tr>
<td>Dental Hygienist</td>
<td>30</td>
<td>244</td>
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<td>13</td>
</tr>
<tr>
<td>Dental Hygienist/Therapist</td>
<td>18</td>
<td>61</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Did Not Specify</td>
<td>0</td>
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<tr>
<td>Total</td>
<td>48</td>
<td>309</td>
<td>14</td>
<td>14</td>
</tr>
</tbody>
</table>

Table 22. Taking Swabs  

<table>
<thead>
<tr>
<th>Registration</th>
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<th>Currently Use</th>
<th>Frequency of Use</th>
<th>Total</th>
</tr>
</thead>
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<td>Yes</td>
<td>No</td>
<td>DNR</td>
<td>Yes</td>
</tr>
<tr>
<td>Dental Hygienist</td>
<td>17</td>
<td>255</td>
<td>16</td>
<td>3</td>
</tr>
<tr>
<td>Dental Hygienist/Therapist</td>
<td>7</td>
<td>72</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Did Not Specify</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
<td>331</td>
<td>16</td>
<td>5</td>
</tr>
</tbody>
</table>

respondents stated that they currently used the skill with 2 on a weekly basis, 4 on a monthly basis and 4 on an annual basis. 263 respondents reported never using this skill. There was a statistically significant difference between the DHs and the DH/Ts (p<0.05) in that 244 DH respondents reported that they had not been taught how to take saliva samples compared to 61 DH/Ts, however there was no statistically significant difference between dental hygienists and dental hygienist/therapists regarding the current use of this skill (p=0.3121 respectively) (Table 21).

Finally, 24 of the respondents reported that they had been taught how to take swabs of whom 5 currently used this skill with 2 on a weekly basis, 1 on a monthly basis and 1 on an annual basis. 269 respondents stated that they never used this skill (p=0.5781 and p=0.6360 respectively) (Table 22).

Discussion

As it is virtually impossible to obtain a 100% response from a questionnaire survey, there are always some doubts about the validity of results obtained from postal questionnaire surveys. It could be argued that encouraging those who attended CPD meetings to respond to the questionnaire may have biased the results. However, the 66.1% response rate can be viewed as satisfactory. It should be remembered that although the overall response rate was 66.1%, the response rate and useable responses to individual questions were slightly lower. However, as there were at least 333 useable responses (out of a possible 371) to each question the potential error should be small when the data are considered at a national level.

A review of the literature revealed previous investigations into the working patterns and job satisfaction of DHs, both within the UK and globally, and concluded that DHs expressed a high level of job satisfaction with the main reason for taking a career break to bring up a family 11,12 Although the current survey did not investigate job satisfaction of DHs and DH/Ts there may be a correlation between the extent of skill usage in the working environment and job satisfaction: DHs have been in existence for over 100 years in the USA, over 75 years in Europe and 68 years in the United Kingdom 13 and are recognised by the public as well as the profession as being very much part of the dental team.

DHs and DH/Ts should have the competency to carry out 22 clinical assessment skills. However, the analyses of the results of this survey have suggested that:

- Some skills have a high level of training and a high frequency of use.
- Some skills have a high level of training and a low frequency of use.
- Some skills have a low level of training and a low frequency of use.
• Some respondents had never been taught skills that other respondents have.

• As a group, DH/Ts report more training in certain skills and higher frequency of use of these skills than DHs.

This later finding may be because many DH/Ts have been trained in the last ten years and have undergone a longer training than those trained only as DHs.

DH education and training is currently funded by the NHS in order to produce a dental workforce that will provide oral health care for the nation. The education for DHs has evolved to accommodate the greater scope of practice that is expected that a DH will carry out once qualified or after further training. Many of the skills that a DH is trained to do are utilised to a fuller or lesser extent, but results of this survey suggests that some skills are rarely used and some skills are never used. The low frequency of use of some skills will have a greater effect on patient care and safety than others. For example a low frequency of use of the skills of taking radiographs and screening the oral mucosa have a far greater effect will have a lesser impact than low frequency use of skills such as taking saliva samples and swabs.

The survey provided an opportunity for respondents to write ‘free comments’ on what they considered were the reasons for not utilising certain skills. There were many comments relating to the need for a prescription from the dentist. One comment in particular stated that “DH training covers a lot of aspects, but a lot of dentists do not prescribe them, leaving the hygienist less confident when these skills are not used regularly.” Other comments referred to lack of time for appointments, particularly with regards to treating periodontal disease with the lack of nurse support a common theme as to why skills were not used. Reference was made to the lack of understanding by the dentist in prescribing short appointments where the DH had to treat the patient for periodontal disease, decontaminate the room and write up notes. A recent report into the merits of DH and DH/Ts having nurse support showed that this had a positive impact on the working day and enhanced the quality of service provided to the patient. 

It would be fair to say that assessment skills such as recording of periodontal indices and tooth surface loss are extremely difficult to carry out single-handed, particularly when considering the issues of cross infection and the logistics of recording such information. However screening the oral mucosa is a skill that can be achieved single-handedly and good practice is for it to be carried out on every occasion that a patient is being treated. A study of DHs in Texas looked at factors that influenced their performance of oral mucosa screening and found that there was a significant correlation between the level of knowledge of oral cancer and performance of oral mucosa screening and that the more experienced DHs were more likely to perform oral mucosa screening than the less experienced.

Today in the United Kingdom, virtually all DHs also train as dental therapists and complete a three year degree programme. However, until the 1990s the DH programme lasted for one year, during which trainees did not have the opportunity to acquire a number of skills that are now taught. The respondents answers and the two recommendations that follow reflect this. The first recommendation is for service providers and dental workforce planners to encourage continued use of the assessment skills that DHs and DH/Ts are carrying out frequently but to address the reasons why some skills that DH and DH/Ts have been taught are unused.

The second is for those involved to develop an action plan to address:

a) the deficiencies in past training of some respondents and

b) issues raised from respondents free comments relating to restrictions in practice.

Further papers will report on the use by DH and DH/Ts of operative and preventive skills.

Conclusions

Within the constraints of the study design and group studied, the results of this study provide an insight into the level of training of, and frequency of use of clinical assessments skills of DHs and DH/Ts in the UK in the summer of 2011. The study shows that generally DH and DH/Ts report a high level of assessment skills training although not all respondents reported that they had been taught each skill and that there was a variance in the frequency of use of different assessment skills, with some respondents reporting to never have used the skill.

Acknowledgements

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Conflict of Interests

As far as the authors are aware, there are no conflicts of interest.

About the authors:

Marina Harris RDH, BSc, LLM, FHEA. is currently a PhD student, University of Portsmouth Dental Academy. Marina co-planned the study co-ordinated the piloting of the questionnaire, wrote the first draft of this paper and checked the final version.

Kenneth A Eaton BDS, MSc, PhD, MGDS RCS(Eng), FFDP(UK), FFPH, FHEA, FICD. DHC is Visiting Professor, University College London Eastman and King’s College London Dental Institutes, Honorary Professor University of Kent. Ken conceived the survey, obtained funding, edited the paper and checked the final version.

Margaret K Ross MPH, DipDH, DipDHE /RSH, FAETC is Senior Lecturer, Programme Director, Edinburgh Postgraduate Dental Institute. Margaret co-planned the study, sought advice from the South East Scotland Research Ethics Committee, contributed to drafts of this paper and checked the final version.

Carolina Arevalo B Eng, PhD is Research Consultant, Centre for Flexible Learning, Kings College London. Carolina produced the tables of results and the figures, performed all the statistical analyses, contributed to drafts of this paper and checked the final version.

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References


**HUMAN PAPILLOMAVIRUS - CURRENT RESEARCH AND EVIDENCE RELATING TO ORAL CANCER**

**HARRIET ARMSTRONG RDH**

**KEY LEARNING POINTS**

1. HPV is a significant risk factor in the carcinogenesis of head and neck Squamous Cell Carcinoma (SCC).
2. Examination of the oro-pharynx is imperative during soft tissue screening.
3. HPV infection is becoming more significant as the epidemiology of oral cancer changes due to the changing demographics of patients. Vaccination and education are vital towards its prevention.

Squamous cell carcinoma (SCC) accounts for about 90% of cancers of the head and neck. According to research carried out in 2008 this is currently the sixth most common form of malignancy presenting in cancer patients worldwide. Roughly 630,000 new cases of head and neck cancer are diagnosed each year globally, with South-East Asian countries having the highest rate of oral cancers.

It is widely accepted that tobacco and alcohol consumption are the most common risk factors for head and neck cancers; approximately 40% of cancers of the oral cavity are caused by smoking worldwide. Other factors include genetic history of oral cancers, chronic states of immunodeficiency, poor oral hygiene and viral aetiology such as human papilloma virus (HPV). In more recent years a causal link between HPV and head and neck squamous cell carcinoma (HNSCC) and HPV has been thoroughly investigated; new research is abundant showing HPV to be a significant risk factor in the carcinogenesis of HNSCC.

In the UK, oral cancer rates have steadily risen since 1975. Between 1989 and 2006, incidences of oropharyngeal cancer in the UK rose by 51%, particularly in the individuals under the age of 50. Between 15-20% of oral squamous cell carcinomas (OSCC) occur in people without predisposing factors, such as tobacco and alcohol use and genetic history; therefore other risk factors such as HPV must be responsible for some of these malignancies.

In fact, recent studies have shown that overall, a high risk of HPV prevalence in oral and oropharyngeal cancers was 20-26%. HPV infection has long been known to be the cause of >99% cervical cancers. The association between HPV and HNSCC is a relatively recent one. The prevalence of HPV in cancers of the oropharynx, specifically the tonsils, was found to be ~36% (some research finding up to 70% in this region). To date, approximately 150 genotypes of HPV have been detected in humans, consisting of low-risk and high-risk genotypes. The majority of HPV are low risk but at least 15 types have so far been found to have oncogenic potential. Most low risk HPV infections will be asymptomatic and cleared quickly by the immune system, some will cause proliferation of warts in the epithelium.

**Virology**

HPV has circular double stranded genomes coding for eight proteins. The two most highly oncogenic types are HPV-16 and HPV-18, with HPV-16 being by far the most high risk of the two with regards to cervical and oral cancers; of malignancies found to be HPV positive >95% of HNSCC were of the HPV-16 strain. HNSCC is the manifestation of uncontrolled cell proliferation. Oncogenes are defined as, “A gene that normally directs cell growth. If altered, an oncogene can allow the uncontrolled growth of cancer. Alterations can be inherited or caused by an environmental exposure to carcinogens.” HPV works by causing mutations in the cell’s DNA, causing an increased expression of these oncogenes in the form of oncoproteins.

Two oncoproteins of the high risk HPV’s (16 and 18) are called E6 and E7. These promote tumour proliferation by inactivating a gene (p53). P53 causes apoptosis (cell suicide) in damaged cells. Hence, when oncoproteins inactivate p53, cell proliferation is uncontrolled. It is by this mechanism that HPV causes tumourigenesis.

HPV infects epithelial cells. The virus can only enter the basal squamous epithelium as this is the only epithelial layer capable of cell proliferation. Once the HPV is inside the cell the viral DNA is exposed and transported to the nucleus, where it initiates a gene expression directly linked with the life cycle of the cell. Normally the infected cell will replicate itself a few times and produce very few oncogenes (such as E6), which encourages further accelerated cell division. When the cells receive normal signals from the body to differentiate, the HPV differentiates and causes increased cell replication with each differentiation, causing cells to pile up onto each other and form a wart. At this point it does not metastasise and only affects a localised area of epithelium. In low-risk HPV the E7 oncoprotein does not interact efficiently with the p53 gene, also in high-risk HPV the life cycle is slightly different so it can remain undetected in basal cells for years; this then becomes a longstanding infection.

Normal HPV infections do not result in malignancy, but because of an anomaly that occurs with longstanding HPV infection; for example in immunosuppressed or genetically vulnerable patients. A patient with a sound immune response can clear even high-risk HPV infections after a few years. Viral genome integration into the human genome can occur after extended exposure to the virus. This kills the virus itself but the host DNA now encorporates viral genes- often the E6 and E7 genes. These genes cause unregulated proliferation of cells. Often immunosurveillance will prompt destruction of the mutated cell; hence immunocompromised patients are more at risk from mutated cells as well as the initial HPV infection.

Cells particularly affected by the invasion of HPV causing oncoprotein expression are the reticulated epithelium lining tonsillar crypts. This could be due to the invaginated nature of tonsillar tissue surface, possibly lowering the mechanical clearance the virus has to undergo.
before reaching the basal layer; tonsillar tissue is comprised of epithelial monolayer, as opposed to stratified squamous epithelium, which can only be infected through the basal layer.23 This would account for the higher rate of HPV positive malignancies in the oropharynx compared with the rest of the head and neck.10,16,24

HPV is allowed to proliferate due to its ability to keep a low profile from the immune system. HPV infection does not cause cytolysis therefore not attracting the attention of the immune response. HPV uses cells already destined for cell death for replication - there is no inflammation. Very low numbers of protein are expressed and there is no viraemia (it does not enter the bloodstream). The interferon response (a mechanism by which host cells express proteins in response to the presence of a pathogen) is suppressed by the oncoproteins E6 and E7 produced by high risk HPV types. This further allows viral replication keeping immune evasion.25

Epidemiology and transmission

There is significant evidence to suggest that oral HPV is sexually transmitted. Its prevalence generally increases with the number of sexual partners an individual has, particularly relating to oral sex. However in 8-40% of HPV positive carcinomas the patient reported never having had oral sex. Sexual behaviour is an important risk factor in HPV positive HNSCC but having a low number of sexual partners or oral sex encounters does not eliminate the risk of contracting HPV.26 The likelihood of an HNSCC being HPV positive increased in patients reporting >6 sexual partners or with a history of oral-genital sex. In one study a significant linear trend was found between the number of sexual partners in the past ten years and oral HPV incidence.27

HPV is widespread within the population - it is thought that nearly every sexually active male and female will contract one type of HPV in their lifetime, however most do not manifest and cause no problems. In 2006 a DNA test study showed that 50-80% of sexually active young men and women were infected with some type of HPV.24

Once infected with any type of HPV, infection is usually controlled by healthy cell mediated and humoral immune responses to non structural proteins encoded by the virus; the usual antibody production prevents subsequent infection by the same HPV type. Generally, 90% of HPV infections are cleared by the body within two years of infection.21

Figure 1 - Viral genome integration of HPV

Figure 2 - Diagram of HPV infection progression
Cytotoxic T cells and natural killer cells are particularly important in the suppression of HPV infection.3

Malignancies

A large percentage of HPV-positive lesions arise in the oropharynx, in particular the palatine tonsils - one study of 98 HNSCC showed that 58% of palatine tonsillar tumours were HPV positive.21 For this reason examination of the oropharynx is imperative in the screening process. Lesions can appear the same colour as the surrounding tissues or slightly more white, depending on the amount of keratin present. Lesions often appear papillated; they can also be pedunculated, wart like or multiple papillomatous lesions.10,16,23-24 As the clinician it is important to question the patient on discovery of a lesion to help determine whether it could be malignant or not.

Metastasis

It appears that HPV positive malignancies metastasise more locally than HPV- negative carcinomas, although at presentation most HPV positive cases have a more extensive regional lymph node involvement.26-29 The most common site for HPV positive distant metastasis is the lungs.

It is imperative that if any uncertainty arises regarding an oral lesion, the clinician refers the patient to specialist clinics for further investigation. Thorough soft tissue examinations are necessary at every appointment. Prognosis is generally very poor for oral cancers because they are not dealt with early enough in the stage of a malignancy.

After referral

In order to gain a definitive diagnosis, cells from the lesion must be sampled for a histological examination. Exfoliative cytology can be used, although biopsies are most common. A large wedge-shaped cross section of the lesion can be gained, this is currently seen as the most reliable sampling method in terms of dependable diagnosis.30 More recently some dental clinics have been offering an HPV test by exfoliative cytology - the patient swills a mouthwash and exfoliated cells collected in the rinse are tested for HPV in a lab.

Treatment available

Treatment for HPV infections depends upon the extent and severity of the lesion and any malignancy or metastases.31 Common treatment involves surgical excision with varying severities, ranging from primary tumour resection to neck dissection; treatment is appropriate to the size and position of the malignancy. Radiotherapy can be used to treat early stage cancers to avoid surgery, it can also be used as adjuvant therapy after surgery to help prevent recurrence if some malignant tissue may remain, or if the malignancy has metastasised to lymph nodes. In cases of more extensive metastases chemotherapy may also be used to treat the malignancies.32 Cidofovir or Cytosine Arabinoside is a relatively new antiviral-used to treat cytomegalovirus.33 It causes cell death in the same way radiotherapy does in HPV infected cells: it causes apoptosis (cell suicide) of infected cells.34 Cidofovir topical 1% gel has been used to treat a patient with recurrent oral HPV related gingival hyperplasia successfully35 and can be used to treat stubborn cutaneous lesions. However more research needs to be carried out investigating a large cohort of HPV positive patients.

Prognosis

The five year survival rate from oropharyngeal cancer is <50%, this is mainly due to the late discovery of lesions. They are not visible for some time so they present further on in disease progression, often appearing further back in the mouth i.e the oropharynx which makes identification of lesions here more difficult due to restricted visibility.26 However many studies show that survival rates for individuals with HPV positive lesions show improved survival rates.3,25 A meta- analysis carried out in 2012 included forty-two studies that showed that HPV-positive HNSCC patients had a 54% better survival rate than HPV- negative patients.36 Reasons suggested for improved prognosis with HPV include that these lesions may be more sensitive to radiotherapy,38 also HPV negative HNSCCs are generally associated with high tobacco and alcohol use, older age patients, and a more aggressive therapy and surgery regime for treatment10, therefore it is often factors surrounding the malignancy itself that raise the mortality rate in these patients. HPV positive lesions often appear in younger more generally healthy patients; this probably attributes significantly towards the difference in survival rates of HPV positive and negative HNSCCs.

Conclusion

From this study a conclusion can be drawn that HPV infection has an increasingly significant impact on the epidemiology of oral cancer as a whole; the changing demographic of patients and variance in malignant lesions to traditional tobacco and alcohol related malignancies is marking the beginning of a change in patient screening and treatment. As public education about tobacco and alcohol consumption has improved greatly over the years, the potential for oral cancer incidence to decrease will hopefully become apparent in the following years. With the emergence of proportionally increasing HPV positive diagnoses, if vaccination programmes succeed and education is improved, the highest risk factors for oral cancers can be reduced hugely.

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**About the author:** Harriet graduated from Bristol in June 2014 and is currently working in Harley Street and other practices in London. This paper is based on Harriet’s research project for which she was awarded the BSDHT award for excellence in clinical research. 

**Address for correspondence:** hattifiedone@hotmail.co.uk
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24. O’Reke MA, Ellison MV, Murray LJ et al. Human papillomavirus related head and neck cancer survival: a systematic review and meta-analysis. Oral Oncol. 2012;48(12):1191–201. Figure 1-

Figure 2-

Knowledge and perceptions of oral health care among healthcare workers in nursing homes: a review

Amy Stevens

KEY LEARNING POINTS

1. Oral Hygiene knowledge is poor among many carers in nursing homes.
2. Care home administrators need to include oral hygiene into routines.
3. Carers need to be better educated in the importance of preventative dentistry.

Nursing homes are an important part of institutionalised care. As the population of the UK ages and oral healthcare improves, the majority of us can now expect to remain dentate throughout life. The benefits of good oral health include being able to enjoy food and having confidence in appearance, thus improving quality of life. Additionally, recent studies have revealed a correlation between oral bacteria and systemic disease; those particularly at risk are the immunocompromised elderly. There are many diseases which particularly affect the elderly and medications often have oral side effects, including xerostomia and candidiasis. Oral lesions may be noted in up to 40% of older people with the minority having malignancy potential. Geriatric dental care is becoming increasingly important. Biofilm should be removed and good oral hygiene measures set in place to reduce the prevalence of bacteria and risk of systemic complications, a task for which the dental hygienist is ideally placed. It is also within our remit to educate the carers on oral hygiene knowledge. The aim of this paper is to explore why the knowledge and perceptions of oral health care is poor among healthcare workers in nursing homes.

While there is general agreement that oral hygiene (OH) knowledge is poor among many carers in nursing homes, there has been some debate about whether this is due to lack of education or psychological barriers. Frenkel et al in their one randomised control trial (RCT) found that carers who regularly attended the dentist themselves have significantly greater knowledge and attitude scores than non-regular attenders. In a cross sectional study Nitschke et al reinforced these findings and noted that staff were fully aware of the importance of OH, as they regularly attended the dentist themselves, but their patients were not treated with the same care. This quantitative study, which had a large sample size of 320, highlighted that staff are apparently aware of patients’ healthcare needs when they are admitted into long-term care as they have a medical examination but dental examinations are not included. Another group of researchers discovered that a hygiene protocol was set in place for residents but cleaning teeth was not included in that protocol. It would seem therefore, that good OH is not received as important in these care homes studied. However, other work challenges this theory and suggests that staff often have adequate OH knowledge and time but they are reluctant to carry out the procedures.

OH knowledge can be improved by a long-term oral healthcare programme and several studies support this hypothesis. These studies also reveal that the number of elderly patients’ oral health needs being met is low. Nitschke et al discovered one of the main reasons for this was patients’ self-diagnosis of perceived health where they were often quoted as saying, “...no problems, all is fine”. It would appear that older people are often reluctant to demand attention and they are often extremely anxious about treatment.

Frenkel et al discovered psychological barriers to OH included the carers perception of brushing patients’ teeth as infringing on their personal space. In support of this, Forsell et al discovered the majority of nursing staff found oral hygiene procedures unpleasant, the main reason being a perceived unwillingness from residents. However this particular study was carried out at a dementia nursing home where a lack of co-operation from residents may be higher due to their cognitive impairments. Nevertheless, a quantitative paper added to these results and found the main reasons for reluctance in OH care from carers is difficulty accessing the mouth and lack of co-operation from the residents.

Reis et al suggest barriers to OH include excessive workload, lack of support and not enough staff. In their study, a small sample of 10 subjects was included, but despite its qualitative nature this has the advantage of accounting for the complexity of group behaviours and the carers’ experiences. Interestingly, this study also highlighted that an OH scheme is unlikely to be successful without addressing administrative issues. This correlates with a quantitative pilot study that suggested future studies should assess the role of nursing home administrators and that they should improve their OH knowledge in order to provide support, and also provide the opportunity of OH training for carers. There is an inconsistency between this research and that of Martins et al who excluded administrators from the methodology in their cross sectional study because they did not have any contact with the residents, perhaps signifying they were not aware that this may affect the results. A barrier of insufficient time has been recognised by some who again indicates that OH care can be linked to administrators’ unperceived importance of oral health, and not allowing enough time or including these tasks in the hygiene protocols.

Volume 54 No 2 of 6 March 2015
Conclusion

It is accepted that oral hygiene care is often poor in nursing homes but an oral hygiene programme can positively affect a change. Current OH education programmes work but they need to be improved and the administrative structure needs to be changed; identifying a need for further research into OH programmes and applying them to the whole team not just the carers so administrators are better educated.

Thean et al followed up their pilot study and suggested an OH exam should be carried out on admission into nursing homes with referrals for treatment, annual screening and greater attention to daily OH. Nitschke et al highlight that carers need to be educated in the importance of preventative dentistry. The dental hygienist can have an impact on improving this as our focus is prevention. We could also be involved in carrying out the OH examinations and providing easier access to care.

This small sample of some of the available research has clearly identified that OH knowledge and perceptions are poor for several reasons and there are a number of barriers that need addressing; many of which are psychological, indicating that carers need to be educated in motivational and cognitive behavioural therapy of patients, especially as elderly people have a high prevalence of cognitive impairment which can be challenging. However, as is often the case, further research is needed to address obstacles in intraoral personal care.

About the author:
Amy qualified with a distinction from the University of Essex in 2013. Amy’s working week is split between private practice and a specialist orthodontist practice in London. Her main interests are systemic health and nutrition and their links with periodontal disease and after gaining a passion for research she is keen to develop her knowledge and research further.

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References

A 32 year old female attended complaining of bleeding gums and food trapping.

On extra oral examination it was noted that the sclera of her eyes had a blue tinge. Intra oral examination also showed that the teeth had a gray to yellow hue.

The radiographs showed evidence of moderate to severe bone loss around a good number of her teeth. It was also noted that many teeth showed pulpal obliteration.

A diagnosis of generalised moderate to severe chronic periodontitis was made and treated.

What other diagnosis can be made from the extra oral, intra oral and radiographic examination?

This quiz was kindly written by Mr Amit Patel, a member of the Editorial Board.

**CLINICAL QUIZ**

**ANSWERS TO JANUARY QUIZ:**

1. Diabetes mellitus
2. Diet, oral hypoglycaemic drugs and insulin
3. Dry mouth, severe periodontal disease, poor wound healing, candidal infection, burning mouth syndrome.

The winner is Diane Lockhart.

Send your answers to the Editor by 30th April. The first correct answer out of the bag wins a top of the range Triumph Oral B Toothbrush (retailing at £150) courtesy of Braun Oral B.
Dental Health is pleased to include a Continuing Professional Development (CPD) Programme for its members who are required to show evidence of CPD hours spent.

The Programme is formulated in accordance with the guidance of the UK General Dental Council’s regulations which now require all registered UK hygienists and therapists to undertake CPD and provide evidence of the equivalent of 10 hours per annum of verifiable CPD. The questions in this issue will provide 1 verifiable hour for those entering the CPD programme.

**Aims and outcomes**

The aim of the March 2015 Dental Health Continuing Professional Development Programme is to provide the opportunity for dental hygienists and dental hygiene therapists to learn about aspects of the following two subjects: A survey of dental hygienists in the United Kingdom in 2011. Part 2 - Assessment skills training and utilisation; Human Papilloma Virus - current research and evidence relating to oral cancer in order to progress their knowledge and expand their professional range in relation to their personal development and to their patients.

The anticipated outcomes are that dental care professionals will be better informed about methods, techniques and procedures of these subjects and that they might apply their learning to their practices and the care of their patients.

Members wishing to enter the Programme need to log on to wwwbsdht.org.uk and select CPD. Register if you have not yet done so, or Login if you have already Registered, and go to the Take CPD section. Certificates can be printed for the Programme in each issue, or stored in a personal ‘Global’ account and printed at any time. There is no charge for this service. Alternatively, members may complete the answer sheet overleaf (or a photocopy). Return it with a cheque for £11.75 (£10 + VAT) made payable to BSDHT; to: BSDHT, Smile House, 2 East Union Street, Rugby, Warwickshire, UK CV22 6AJ. Responses must be received before 30th April 2015 as the answers will be given in the May 2015 issue (Volume 54 No 5). Members from whom fully completed forms and appropriate cheques are received will receive a certificate for 1 hour of verifiable CPD with the answers to the questions.

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**CPD QUESTIONS FOR PAPER 1: A SURVEY OF DENTAL HYGIENISTS IN THE UNITED KINGDOM IN 2011. PART 2 - ASSESSMENT SKILLS TRAINING AND UTILISATION PP23-33**

1. What is the name of the 2009 review into NHS Dental Services in England?
   A. The Steele Report
   B. The Nuffield Report
   C. The Metal Report
   D. The Review Report

2. Which two components of training do the GDC inspect to ensure parity of qualification between the Diploma and the Degree qualifications?
   A. Cost and teaching standards
   B. Length of training and academic components
   C. Learning outcomes and clinical components
   D. Clinical skills and reflective practice

3. The results of two surveys on job satisfaction carried out in 1988 and 2001 reported which of the following to be the most likely reason for a career break for DH and dually qualified DHT’s?
   A. Lack of job satisfaction
   B. Poor remuneration
   C. Starting a family/family commitments
   D. Lack of referrals

4. What did the Texan research, outlined in this paper into ‘factors affecting oral cancer screening by DH/ DHTs identify as having a correlation with frequency of undertaking screening in practice?’
   A. The presence of a nurse assistant
   B. The provision of funding for the screening
   C. The level of knowledge of oral cancer
   D. The presence of a prescribing dentist

5. What were the two key aims of this piece of research?
   A. To establish how many DH were using their full skill set and how often
   B. To estimate how many dually qualified DH/T’s used their DH skills and the frequency of use
   C. To survey which assessment skills had been taught in training and which of those skills were being put to use
   D. To survey the number of assessment skills being used by both groups

6. Which statistical test was used to assess the differences in responses from the two cohorts surveyed?
   A. Chi test
   B. Thai test
   C. T Test
   D. Regression Test

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**CPD QUESTIONS FOR PAPER 2: HUMAN PAPILLOMA VIRUS - CURRENT RESEARCH AND EVIDENCE RELATING TO ORAL CANCER PP34-37**

1. Which of the following is NOT thought to be a risk factor for HNSCCC?
   A. Poor OH
   B. HPV
   C. Smoking and drinking
   D. Poor diet

2. What is the most likely route of transmission for HPV?
   A. Oral-genital sex
   B. Droplet infection
   C. Skin to skin contact
   D. None of the above

3. Which of these strains of HPV are thought to be more likely to cause HNSCCC?
   A. 16
   B. 18
   C. All types have been found to have oncogenic potential
   D. There has not been enough research to date

4. What is the most common site in the oral cavity to be affected by the invasion of HPV?
   A. Lateral borders of the tongue
   B. Palatine tonsils
   C. Floor of the mouth
   D. Soft palate

5. Which of these is seen as the most reliable definitive diagnosis of HPV invasion?
   A. Asking a second opinion from a colleague
   B. Personal clinical experience and knowledge
   C. Biopsy
   D. Exfoliative cytology

6. Which of the following will NOT control the incidence of HPV related HNSCCC?
   A. Education
   B. Vaccination
   C. Practising safe sex
   D. Reducing smoking and alcohol habits
DENTAL HEALTH
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Or complete online FOR FREE at wwwbsdhtorguk

Answer sheets must be received no later than 30th April 2015. Answer sheets received after this date will be discarded as the answers will be published in the May issue of Dental Health.

Feedback
We wish to monitor the quality and value to readers of the BSDHT CPD Programme so as to be able to continually improve it. Please use this space to provide any feedback that you would like us to consider.


1. C Systemic antibiotics are selectively recommended for aggressive periodontitis
2. B Local delivery chemicals are ideally used for localised non-responsive sites
3. C Third generation mouth-rinses have poor substantivity and only reduce plaque by 35%
4. B Bisbiguanides are classed as the gold standard in mouth-rinses, despite their adverse effects
5. D Delmopinol has a unique ability to inhibit the formation of plaque biofilm whilst having little effect on bacteria
6. A Side effects of essential oils are: a burning sensation and a bitter taste

Paper 2: Dental effects of prolonged thumb sucking pp34-35.

1. D 75%
2. C 7 years
3. B Proclination of mandibular molars
4. C 61%
5. D Pressuring young children to stop
6. D 6-9 months
### BSDHT REGIONAL GROUP SPRING MEETING DATES

<table>
<thead>
<tr>
<th>Regional Group</th>
<th>Date</th>
<th>Venue</th>
<th>Contact the Secretary</th>
<th>Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern</td>
<td>Saturday 7th March</td>
<td>Menzies Hotel, Cambridge CB23 8EU</td>
<td>Juliette Reeves</td>
<td><a href="mailto:gir50@talktalk.net">gir50@talktalk.net</a></td>
</tr>
<tr>
<td>Jersey</td>
<td>Saturday 13th June</td>
<td>Radisson Hotel, St. Helier, Jersey</td>
<td>Katie Park</td>
<td><a href="mailto:katieparky@yahoo.co.uk">katieparky@yahoo.co.uk</a></td>
</tr>
<tr>
<td>London</td>
<td>Saturday 28th March</td>
<td>Holiday Inn, Coram St, Bloomsbury, London</td>
<td>Mala Kanan</td>
<td><a href="mailto:londonbsdht@gmail.com">londonbsdht@gmail.com</a></td>
</tr>
<tr>
<td>Midlands</td>
<td>Saturday 21st March</td>
<td>The Holiday Inn, Solihull B91 3QD</td>
<td>Joanna Ericson</td>
<td><a href="mailto:joanna.ericson@hotmail.co.uk">joanna.ericson@hotmail.co.uk</a></td>
</tr>
<tr>
<td>North East</td>
<td>Saturday 28th March</td>
<td>Holiday Inn, Wakefield Road Garforth, Leeds LS25 1LH</td>
<td>Tracey Chambers</td>
<td><a href="mailto:nergsecretary@gmail.com">nergsecretary@gmail.com</a></td>
</tr>
<tr>
<td>Northern Ireland</td>
<td>Saturday 21st March</td>
<td>Radisson Hotel, Ormeau Road, Belfast</td>
<td>Trudi Fawcett</td>
<td><a href="mailto:secretarybsdhtni@gmail.com">secretarybsdhtni@gmail.com</a></td>
</tr>
<tr>
<td>North West</td>
<td>Saturday 14th March</td>
<td>Mandec, Manchester M15 6FH</td>
<td>Karen McBarron</td>
<td><a href="mailto:karen.nwbsdht@gmail.com">karen.nwbsdht@gmail.com</a></td>
</tr>
<tr>
<td>Scotland</td>
<td>Saturday 14th March</td>
<td>Radisson Blu, Argyle Street Glasgow</td>
<td>Jane MacConnell</td>
<td><a href="mailto:bsdhtscottishsecretary@gmail.com">bsdhtscottishsecretary@gmail.com</a></td>
</tr>
<tr>
<td>South East</td>
<td>Saturday 28th March</td>
<td>David Saloman's Centre, Tunbridge Wells</td>
<td>Janet Scott</td>
<td><a href="mailto:janet.scott@sky.com">janet.scott@sky.com</a></td>
</tr>
<tr>
<td>Southern</td>
<td>Saturday 7th March</td>
<td>Holiday Inn, Winchester</td>
<td>Donna Brien</td>
<td><a href="mailto:secsouthern@gmail.com">secsouthern@gmail.com</a></td>
</tr>
<tr>
<td>S West &amp; South Wales</td>
<td>Saturday 14th March</td>
<td>Hilton Hotel, Newport, Wales</td>
<td>Joanne Wilkinson</td>
<td><a href="mailto:bsdht.swsw@gmail.com">bsdht.swsw@gmail.com</a></td>
</tr>
<tr>
<td>South West Peninsula</td>
<td>Saturday 21st March</td>
<td>Exeter Golf and Country Club</td>
<td>Sandra Tredwin</td>
<td><a href="mailto:s.tredwin@btinternet.com">s.tredwin@btinternet.com</a></td>
</tr>
<tr>
<td>Thames Valley</td>
<td>Saturday 28th February</td>
<td>Barcelo Oxford Hotel, Godstow Road, OX2 8AL</td>
<td>Karrie Archer</td>
<td><a href="mailto:karrie.archer@btopenworld.com">karrie.archer@btopenworld.com</a></td>
</tr>
</tbody>
</table>

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**BSDHT LONDON REGIONAL GROUP AUTUMN MEETING & AGM**

**DATE:** Wednesday 9th September From 5.30 to 9 pm  
**VENUE:** Holiday Inn, Coram Street, Bloomsbury, London

**SPRING MEETING 2016**

**DATE:** Saturday 12th March 2016 TBC

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**BSDHT NORTH WEST REGION SPRING ORAL HEALTH CONFERENCE**

**DATE:** Saturday 14th March 2015  
**VENUE:** MANDEC, University Dental Hospital, Higher Cambridge Street, Manchester, M15 6FH.

4.5 hours CPD
9.00: Registration, Refreshments and Trade Exhibition
9.30: Welcome – Sally Simpson, Chair NWRG BSDHT
9.40: Wears the problem? – Dr. Stephen Barber
10.40: BSDHT Council Report - Helen Minnery, President Elect BSDHT
11.00: Refreshment Break and Trade Exhibition
11.30: Minimal Intervention and Team Working – Dr. Bhupinder Dawett
12.30: Lunch and Trade Exhibition
13.45: Welcome – Sally Simpson, Chair NWRG BSDHT
13.50: Effective Local Anaesthesia. The secret to pain-free, stress-free dentistry – Dr. Donald Sloss – kindly sponsored by Septodont
15.00: Comfort Break (No refreshments)
15.10: Gerodontology in the 21st Century – Dr. Carly Taylor
16.10: Q&A, Raffle & Meeting Close

BSDHT SCOTTISH GROUP
SPRING SCIENTIFIC MEETING

DATE: Saturday 14th March, 2015
VENUE: Radisson Blu, (beside Central Station) 301 Argyle Street, Glasgow G2 8DL

08.15: Trade Exhibition, Registration, & Raffle tickets for Ben Walton Trust for sale
09.15: Welcome
09.30: Accountancy and tax for the self-employed hygienist/therapist - Gillespie & Anderson 1hr CPD
10.30: Trade Exhibition, coffee/tea, catch up with friends & colleagues
   Remarks, trade supporting us keeps our delegate costs down, please show them your support.
11.30: “Do you mind if they vape? Well do we?“ - Elaine Tilling
   Update on government guidelines of harm reduction in smoking cessation and an overview of the impact of e-cigarette and vaping culture

Split into 2 groups for:
12.15: Workshop - Screening & being seen to Screen - Elaine Tilling
   Hygiene Patient Payment Plan a new approach - Dengplan presentation
13.15: Lunch
14.15: Updates with news from BSDHT H.Q - Regional Group Rep. Sarah Walker
14.30: Your place in the IR(ME)R team, now and in the future - Barbara Lamb
15.30: Coffee/tea comfort break, raffle prize winners announced
15.45: Troubleshooting technique and digital imaging - Barbara Lamb 1 hr core CPD
16.45: Closing remarks
   5 hrs, verified CPD : Non-verifiable CPD Trade Show 2hours

If you are new to these meetings, or coming on your own, why not email Suebagnall@aol.com

CONTACT: Lawrence Hayley, BSDHT
SPEAKER: Lawrence Hayley

RETURN TO PRACTICE FOR DENTAL HYGIENISTS (3 DAY COURSE)

DATE: 11th - 13 June 2015
VENUE: Leeds
TIME: 9:30am – 4:30pm
COST: £60
SPEAKER: Hayley Lawrence
CONTACT: lawrencehayley@hotmail.co.uk

ADVANCED MANAGEMENT OF PERIODONTAL DISEASE - 6 DAY COURSE

DATES: 27th May , 10th June, 22nd & 29th July , 26th Aug, 30th Sept
TIME: 9:30 – 4:30
COST: £275 for all six days
LOCATION: LonDEC
SPEAKERS: Dr. Peter Galgut and Hayley Lawrence
CONTACT: lawrencehayley@hotmail.co.uk

The aim of these seminars is to summarise current thinking in periodontology, give and demonstrate practical aspects of the management of periodontal diseases in clinical practice, and to explore clinical management of periodontally related problems.

TOPICS INCLUDE:
1. Aetiology of periodontal disease
2. Identifying intra-oral pathology
3. Mechanical non-surgical periodontal therapy and pharmacological adjuncts to mechanical cleansing
4. Probing techniques and forces
5. Effective treatment planning & time management
6. Reading & interpreting radiographs
7. Topical and local anaesthetic review
8. Hand vs. ultrasonic instrumentation
9. Correct operator positioning to avoid back and neck problems
10. Patient management: dealing with problem patients
11. Knowing your limitations: avoiding medico-legal Issues
12. An overview of modern instruments for more effective non-surgical therapy
13. Working as a team and making it work & referring for specialist help
14. Identifying and treating peri-implantitis

SAFEGUARDING CHILDREN LEVEL 1 AND LEVEL 2

DATE: Saturday 17th October 2015
VENUE: Birmingham (Becketts Farm Conference Centre, Wythall, Birmingham B47 6AJ)
SPEAKER: Dr Sue Ward
CONTACT: Suebagnant@aad.com

3 Hours verifiable CPD
The Eastern Regional Group
Spring Scientific Meeting 2015

Recognising Oral Cancer
Implant Maintenance & Soft Tissue Management
Periodontal Treatment in Specialist Practice
Antimicrobial Update

Saturday 7th March 2015
Menzies Hotel,
Bar Hill, Cambridge CB23 8EU

Midlands Regional Group
Spring Oral Health Conference
Saturday 21st March 2015

Holiday Inn Solihull
61 Homer Road, Solihull, West Midlands B91 3BD

Agenda
08.00 - 08.40 Registration, trade exhibition and coffee
08.40 Registration closes

09.00 - 10.00
Caroles Risk Testing
Melanie Joyce
Kindly sponsored by

10.00 - 10.15
Coffee and Trade Exhibition

10.15 - 11.45
Snowchurch in Dentistry
Chloe 3
Kindly sponsored by

11.45 - 12.45

13.00 - 14.00
Lunch

14.00 - 15.00
Grey Areas – A Practical Guide to Clinical Radiology
Louis Madsen
Kindly sponsored by

15.00 - 15.15
Coffee

15.15 - 16.35
The Ian Watton Trust – Action Against Oral Cancer in the Young
Emma McCormack

16.15 Raffle and Results of the “Take Off” Competition and Close

B S D H T
BRITISH SOCIETY OF DENTAL HYGIENE & THERAPY
South West and South Wales Regional Group
Spring Scientific Conference
Saturday 14th March 2015
**SPECIAL DISCOUNTED BOOKING FOR MEMBERS**

Hilton Hotel, Chepstow Road, Langstone, Newport NP10 2LX.

8.00hrs - 09.15hrs Registration, Coffee and Trade Exhibition
09.15hrs - 09.45hrs Regional Council Representative Update
09.45hrs - 10.45hrs "Row Hygiene programmes build practice - Part I"
Ms Sheila Scott, Business Consultant
10.45hrs - 11.45hrs Coffee, catch up with colleagues and visit the trade sponsors/stands
11.45hrs - 12.00hrs "Row Hygiene programmes build practice - Part II"
Ms Sheila Scott, Business Consultant
12.00hrs - 12.30hrs Discussion regarding Survey Method and Feedback suggestions
Sarah Hill - Chair FWSW
12.30hrs - 14.00hrs Lunch and Trade
14.00hrs - 15.00hrs "Dentist Access Expiry, Examination & Treatment planning"
Isabelle Cunningham, BDS, FRDS RCS (MS) (Medical Education)
Clinical Lecturer, Dental School Cardiff
15.00hrs - 15.15hrs Coffee and comfort break
15.15hrs - 16.15hrs Questions and Close

We wish to thank the following sponsors for their support: TêPe, Oral B, GSK, NSK, CTS, Reepoo, Llewellyn-Wyman, Smilow, Denstply, Ostendent, Periocheck, & Centoc Healthcare.

Take Junction 29 of the M4 and at the roundabout take the exit on the A46, which is signed for Langstone. The hotel is located 200 yards on the left.

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Periodontal Disease
How do you measure success?

Dentomycin offers:

- **42%** reduction in pocket depth after 12 weeks\(^1\)
- **broader spectrum** of antibacterial action\(^2\) with greater all round activity than metronidazole or tetracycline
- **conditioning of the root surface**\(^3\)
- **improved healing** through inhibition of degradative collagenases\(^4\)
- **enhanced connective tissue attachment**\(^5\)
- **effective treatment** of chronic periodontitis which has been associated with cardiovascular diseases\(^6-9\)

Taking care of oral health

Johnson & Johnson, the makers of the LISTERINE® Advanced Defence range, are delighted to sponsor Professor Nicola West speaking at this year’s Dentistry Show.

LISTERINE® Advanced Defence Gum Treatment is a twice-daily mouthwash clinically proven to treat gum disease as an adjunct to mechanical cleaning and to offer an alternative to chlorhexidine based remedies.

It is formulated with LAE (Ethyl Lauroyl Arginate) technology that forms a physical coating on the pellicle to prevent bacteria attaching, and so interrupts biofilm formation. When used after brushing, it treats gum disease as shown by the reduction of bleeding by 50.9% (p<0.001) in only 4 weeks.

Designed to help you treat and/or prevent specific oral care conditions, this range also includes LISTERINE® Advanced Defence Sensitive and LISTERINE® Advanced Defence Cavity Guard.

Expert care when you’re not there!

For information on the LISTERINE® Advanced Defence range, please visit stand D72 to speak to a member of the LISTERINE® Professional team.

Track Calculus Not Calories!

Oral-B’s new SmartSeries electric toothbrush can help patients to take ownership of their own oral health. This ingenious device allows dental professionals to programme patients’ brushing routines onto their mobile to ensure they follow professional guidance between appointments. Control is firmly passed to the patient, but under the guidance of dental professionals. Brushing duration, mode and problem zones can all be highlighted and the information easily retrieved with the patient’s consent. It’s almost like having ‘Big Brother’ in the bathroom!

Whilst it is not possible to reverse the past and although surgical intervention cannot be ruled out in the future, if patients can learn to take care of their oral health, more serious intervention can be put off indefinitely. Oral-B’s SmartSeries electric toothbrush can provide patients with a heightened level of motivation to look after their oral health, which has to be good news for everyone.

Stain-Resistant

‘Whiter teeth’ is probably the most common request made by patients. The polymer included within Oral-B Pro-Expert toothpaste, called sodium hexametaphosphate, is proven to help give that all important winning smile by reducing extrinsic staining.

Due to its strong affinity for the calcium hydroxyapatite contained in tooth enamel, sodium hexametaphosphate significantly influences the binding properties of the chromogens responsible for stains. By disrupting the pellicle it is able to remove extrinsic staining and its ability to retain on tooth surfaces prevents new extrinsic stains forming, providing up to 96% reduction in staining within 2 weeks vs. baseline.

Users of Pro-Expert will also benefit from the oral health advantages imparted by the synergistic partnership of sodium hexametaphosphate and stabilised stannous fluoride. By inhibiting plaque growth and adhesion, as well as promoting remineralisation, the advanced fluoride agent ensures that teeth not only look good but are also healthy and functional too. Stabilised stannous fluoride and sodium hexametaphosphate; a match made in heaven!
INTRODUCING A BREAKTHROUGH IN EVERYDAY CAVERY PROTECTION
PROVEN BY 8 YEARS OF CLINICAL RESEARCH INVOLVING 14,000 PEOPLE

Sugar Acid Neutraliser™ Technology
powered by Arginine

Fluoride

Unique mode of action to complement the power of fluoride
• 4 x greater remineralisation
• Directly fights sugar acids in plaque – the #1 cause of cavities
• Up to 20% fewer new cavities in 2 years

Fluoride

“versus a regular fluoride toothpaste with 1450 ppm fluoride.

References

www.colgateprofessional.co.uk
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Trade Liaison: Teena Eaton
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Treasurer: Renata Sakinyte
Email: raksakinyte@yahoo.co.uk
Trade Liaison: Sheila Fox
Email: sheilabarbarafax123@gmail.com
HAMPShIRE

Andover. Hygienist/Therapist required to join our busy, friendly seven surgery practice for a flexible two to five days a week. Dedicated hygienist surgery provided. Please send CV to: W Fellum House Dental Health Centre, 2 Winchester Road, Andover, Hants, SP10 2EG or manager@wellumhouse.co.uk.

Havant. Therapist / Hygienist required to join long established progressive private general practice. One session per week (Wednesday 12 - 8pm) of mixed hygiene and therapy is available for enthusiastic clinician to provide care for well motivated patients. To apply, or if you would like more information or an informal visit to the practice, please contact Christine Allberry on 02392486315 or email chris@eastendlodge.co.uk.

Southampton. Dental Hygienist required for small private practice – Fridays and one Saturday per month. Dedicated surgery and excellent backup. Start date flexible. Apply with CV (anj70@live.com).

SUFFOLK

Saxmundham. Hygienist required Mondays and Wednesdays in a well established computerised practice. Nurse provided. Apply to saxdental@googlemail.com

OXFORDSHIRE (WEST)

Charlbury. Hygienist required for 1 or 2 sessions a week on Wednesday afternoon/evenings and Friday mornings in a predominantly private practice. Full support given. Will consider candidates for both or either days. Visit: www.charlburydental.co.uk or email kam.patel@charlburydental.co.uk.

MIDLANDS

Birmingham area. Dental Therapist required 1 to 2 days per week with opportunity to increase. Direct Access, full scope of work. Nurse provided, full support given. Please email CV with photo ID to info@scottarmsdentalpractice.com.

ESSEX

Saffron Walden. Hygienist required three/four days per week for Denplan/Private practice in a delightful market town. Nursing assistance and decom room. Friendly team and friendly patients. Please send CV to: newroad_dental@btconnect.com

RECRUITMENT

GUIDELINES FOR AUTHORS

Log on to the BSDHT website for full guidelines on how to publish your work in the journal. Alternatively contact the Editor. Email: editorofdh@ntlworld.com

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IDH are a hugely successful dental group with over 600 UK practices, which means we can offer a broad variety of working arrangements in a wide range of practices.

Our extensive network of practices enables us to offer a choice of different working hours from weekends and evenings to part time or full time across different local practices. We are passionate about helping our NHS and private patients to look after their dental hygiene and carry out procedures such as oral assessments, sealing and polishing, taking dental radiographs and impressions, and replacing crowns and fillings to ensure they maintain a healthy mouth.

We actively market our hygiene and therapy services in all practices, have a ready-made referral network to keep you busy and provide competitive rates of pay. We’ll support you throughout your career, so you can focus on providing quality treatments and advice.

To find out more, please visit www.idhcareers.co.uk or call our Resourcing Team on 01204 799 699.
The most recent in the professional range from LISTERINE® – a twice-daily mouthwash clinically proven to treat gum disease as an adjunct to mechanical cleaning.

Advanced Defence Gum Treatment is an alternative to chlorhexidine-based remedies. It’s formulated with unique LAE (Ethyl Lauroyl Arginate) technology that forms a physical coating on the pellicle to prevent bacteria attaching, and so interrupts biofilm formation.

When used after brushing it treats gum disease by reducing bleeding; 50.9% (p<0.001) in only 4 weeks.¹

In addition, Advanced Defence Gum Treatment is designed to not cause staining.²

To find out more visit www.listerineprofessional.co.uk

References:
1. Bleeding Index Reduction DOF 1 – 2013 (LAEBBA0001), 50.9% reduction in whole-mouth mean Bleeding Index at 4 weeks.
2. DOF 2 – 2013 (UNKPLT0006).
UK/LI/14-3436