Board Paper Summary

1. **Title of Paper**
Dentistry in NHS Education for Scotland – An Update and Future Direction

2. **Author(s) of Paper**
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3. **Purpose of Paper**
To update Board members of the current and future provision of education and training for dentists and dental care professionals within Scotland, set against the context of Scottish Government policy for dental care in Scotland.

4. **Key Issues**
Scottish Government’s *Dental Action Plan*\(^1\) was published in 2005. With this publication came additional funds with which to deliver the priorities (£15M), which have subsequently been written into the NES Allocation. This paper updates the Board with how the Directorate continues to support those original Action Plan Aims, which in many cases now form part of the core business for the Directorate team.

This paper also highlights the need for NES Dentistry to support emerging new priorities for the education and training of dentists and dental care professionals, such as Care for the Older Adult, links to the Social Care agenda, and support for StRs with the new Intercollegiate Surgical Curriculum Programme, to remain aligned with changing service needs in NHSScotland.

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\(^1\)An Action Plan For Improving Oral Health And Modernising NHS Dental Services In Scotland, Scottish Government, 2005 http://www.scotland.gov.uk/Publications/2005/03/20871/54815
5. Educational Implications

NES Dental Directorate continues to provide and support high quality education for the dental team throughout their progress from undergraduate or pre-registration level, through to Continuing Professional Development and support for Return to Work.

6. Financial Implications

The Dental directorate works within a budget (£45M in 2012/13), which comprises earmarked monies (£3M) and core funds (£42M). Ongoing efficiencies have been made, leading to a managed reduction in the overall budget of £4M, (from £49M in 2009/10). Directorate staffing, too, has been reduced from 137.4(wte) in 2009 to 119(wte, excluding HCS and Optometry). In common with our colleagues across NES, we are working to deliver a better service within a tighter financial climate, and with fewer staff. In order to support these efficiencies, the directorate is implementing a change programme due to effect a different way of structuring the delivery of dental education from 2014, more details of which are set out in section 17. We are also working with Finance to pilot a new way of supporting financial management within the Directorate.

7. Which NES Strategic Objective(s) does this align to?

The delivery of dental education across Scotland underpins all of the NES strategic objectives, but in particular;

*We will deliver consistent evidence-based excellence in education for improved care*
*We will ensure best use of the Additional Costs of Teaching (ACT) funding*
*We will continue to build co-ordinated joint working and engagement with our partners*
*We will provide education in quality improvement for enhanced patient safety and people’s experience of services*
*We will provide integrated education to support models of care which are closer to people in their communities*
*We will support education in partnership that maximises shared knowledge and understanding*
*We will develop a flexible, connected and responsive educational infrastructure which covers people, technology and educational content*

8. Impact on the Quality Ambitions

The education and training that the Directorate provides will have an impact on all the Quality Ambitions.

9. Key Risks and Proposals to Mitigate the Risks

A systematic process of risk assessment and management underpins the delivery of all areas of dental education and training.
10. **Equality and Diversity Impact Assessment**

   NES is required to assess the equality impact of all new or proposed policies, functions and workstreams, and to have due regard to equality considerations when making decisions.

   a) Briefly describe your arrangements for assessing the equality impact of any proposals outlined in this paper.

   b) What potential or actual impact on people from different equality groups or other equality considerations have been identified?

   c) What actions have been taken or proposed to address the issues you identified?

   See guidance note on how to complete this section (available on Intranet, Meetings section). Your paper should include relevant details, including assessment of alternatives if required.

All new areas of Directorate Business are Impact Assessed in line with NES policy.

11. **Communications Plan**

   A Communications Plan has been produced and a copy sent to the Head of Communications for information and retention:

   Yes ☐  No ☒

   A Communications Plan format template is available in the ‘Meetings’ and ‘Communications’ sections of the NES Intranet.

12. **Recommendation(s) for Decision**

    Board members are invited to note progress with the NES Dental educational activities.

    NES
    March 2013
    AF
1. **Title of Paper**

Dentistry in NHS Education for Scotland – An Update and Future Direction

2. **Introduction**

Dentistry is a profession with approximately 3700 dentists and 6600 dental care professionals registered in the NHS in Scotland\(^2\). Dental Care Professionals comprise the following groups:-

- Dental Hygienists
- Dental Therapists
- Dental nurses
- Orthodontic therapists
- Clinical dental technicians
- Dental technicians

NES Dental Directorate provides a broad spectrum of training to dentists and DCPs at all stages of their career. The Directorate team at NES work closely with other stakeholders; the Universities, Royal Colleges, HEIs, the regulatory body, the Deaneries south of the Border, territorial Boards and other Directorates, to ensure that the training and education provided remains fit for purpose. More information on governance and links with key stakeholders is provided in section 4.

This paper aims to set out the main strands of dental education provided or supported by the Directorate.

3. **Policy Context**

The oral health of children and adults in Scotland continues to improve\(^3\), however, the differences in adult oral health between low and high deprivation areas remains a challenge. Registration levels of children and adults continue to increase, with more than 87% of children and 75% of adults registered as at May 2012\(^3\). Improving the oral health of particular groups within the population is a Government priority, and in May 2012, the Scottish Government published their *National oral health improvement strategy for priority groups: frail older people, people with special care needs and those who are homeless*\(^4\).

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\(^3\) Dental Workforce Report September 2012, National Services Scotland, 2012

http://www.scotland.gov.uk/Publications/2012/05/7031
The report recommends that ‘Staff caring for dental priority groups who are vulnerable to poor oral health should have access to training on key oral health messages and should be aware of when dental professional help is required.’ At present, Directorate staff are working with the SDS, Oral Health promotion teams, clinical dental technologists and territorial Boards to develop suitable training to support this strategy. Work is at an early stage, and the NES SDS and Childsmile teams have been key to progressing this priority area of the health and social care agenda.

4. **Working with Key Stakeholders**

The Directorate has strong links with the University Dental Schools, based in Aberdeen, Dundee and Glasgow, and with other HEIs such as The University of Edinburgh, UHI and Glasgow Caledonian University. Collaboration on developments such as the Scottish Dental Education Online (SDEO) project, the management of Dental ACT, support for a new student monitoring system (LIFTUPP), and the support for Undergraduate Outreach and training ensure that communication is frequent, and that new initiatives are planned and carried out in partnership. The Dean meets regularly with the Deans of the Dental Schools and senior staff work together on the financing and management of all of these projects. The Dean also maintains strong links with Scottish Government, and regular meetings take place with the Chief Dental Officer, Miss Taylor.

Communication with the territorial Boards takes place predominantly through regional links with Area Dental Committees, and via the management of Dental ACT, Dental Outreach and trainees, and through meetings with the Clinical Directors. The Directorate also contributes to the NES Strategic Engagement Process.

Regular meetings of Committee of Postgraduate Dental Deans and Directors (COPDEND) take place which promote the flow of information across all the Deaneries in the UK, and the Dean and members of the Directorate team have regular contact with the regulatory body (the General Dental Council. (GDC)), the BDA, MDDUS and the Royal Colleges. Representatives from these groups attend the Directorate’s three Standing Committees as appropriate, and the annual Dental Conference invites key stakeholders from across Scotland and beyond, both to inform them of progress, and to help shape the direction of dental education in the future.

5. **Teach and Treat Clinics**

The Directorate supports the running costs associated with the teaching within a network of outreach ‘teach and treat’ centres for student dentists and therapists. In 17 centres across Scotland, undergraduate students are provided with clinical training outwith the dental school setting, whilst delivering NHS care to patients in a safe and supervised environment, (often in remote and rural areas or in communities with a high need for dental treatment). This collaboration with the Universities, HEIs and NHS Boards, results in approximately 34,000 patient treatments per annum. This service is provided free of charge to the patients.

The impact of outreach is assessed by nationally agreed activity reports as well as student, staff and patient feedback that is undertaken annually. All reports cite very high levels of satisfaction with outreach.
From the academic perspective, students and staff find the experience builds student confidence, improves time management, is good preparation for general practice and allows all round patient care to be provided with more independence than they are given in the Dental Hospitals.

From an NHS service perspective most patients initially attend outreach as they needed an emergency appointment or were not registered with an NHS dentist. Overall feedback demonstrates that patients report high levels of satisfaction with the standard of care they receive, are keen to return for further treatment at the centres and when asked 99% would recommend the student clinic to a friend.

6. **Continuing Professional Development**

The Directorate provides a continuing professional development (CPD) programme for dentists, dental care professionals (DCPs) and practice teams, to support lifelong learning and continued registration with the GDC. During 2013-14, the Directorate undertakes to provide regionally based CPD course programmes, to supply practitioners with up to 200 courses delivered across Scotland and up to 60 dental practice team-development sessions, focused on the identified needs of the practice, and delivered locally or at the workplace. Booking and evaluation of CPD is managed through the NES Portal, which, while devised by the Directorate, has been adopted as the NES wide course booking system. It manages course booking for other Directorates, such as Pharmacy, Medicine and Optometry, and is the vehicle by which the Directorate manages much of its online trainer and trainee recruitment.

7. **Decontamination**

An important aspect of the Directorate’s CPD programme is provision of educational packages to all dental practices in Scotland to train staff in decontamination and infection control. NES National Infection Control and Dental Support team have been delivering in-practice training to all primary care general dental services (GDS) across Scotland since 2008.

The table below shows the latest figures for general practices;

<table>
<thead>
<tr>
<th></th>
<th>Training delivered</th>
<th>Training delivered</th>
<th>Training planned/pending</th>
<th>Dentists attending</th>
<th>DCPs attending</th>
</tr>
</thead>
<tbody>
<tr>
<td>Session 1</td>
<td>1201</td>
<td>140</td>
<td>57</td>
<td>3820</td>
<td>7859</td>
</tr>
<tr>
<td>Session 2</td>
<td></td>
<td></td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>1201</td>
<td>140</td>
<td>57</td>
<td>3820</td>
<td>7859</td>
</tr>
</tbody>
</table>

253 practices have accessed session 1 on 2 occasions.

Demand for training is steady in all regions.

**Audit and In-Practice Training**

Four audits have been developed to cover aspects of infection control (IC) and decontamination. These have now been pre-approved and are available on the NES
Portal. There has been a significant increase in the uptake of the preapproved IC audits as a result of the approach of the end of the current audit cycle for dentists.

Cleanliness Champions
A new version of this programme has now been rolled out and is being promoted via Portal in all regions. In the West all dates are fully subscribed. All undergraduate dental students aim to complete the Cleanliness Champions Programme and feedback on the revised programme has been positive.

Section 63 Courses
The demand for these sessions has increased. Demand is reviewed regularly, and discussed with others involved in providing CPD for the dental team.

Short E-learning infection control programmes to support in-practice training
These programmes are now available to those registered on the Portal. The assessment for this programme is now complete and ready to be published with the modules on Portal.

Decontamination Module for HND in Dental Nursing
In light of the development of an HND in dental Nursing, it became apparent that there was potential to include a module on decontamination as an optional or stand-alone element. In conjunction with lead DCPs at NES and the SQA, this work is being progressed. Work on the content is complete and we have had positive communications with the SQA, although plans for delivery are still to be finalised. This is an ideal opportunity for dental nurses to expand their role in a practice setting as well as attaining post qualification credits.

Combined Practice Inspection
The new inspection requirements became substantive in January 2013. One of the significant changes has been the inclusion of more specific infection and decontamination content, including an observation of process. In an effort to ensure consistency of application across all territorial Health Board areas, our NES team has been providing infection control and decontamination training for all DPAs and Practice Inspectors in Scotland. This has included underpinning knowledge, as well as providing guidance on the observational element, and providing information on further educational support for practices and their teams.

8. Vocational Training

The Directorate is required to fund places for an intake of approximately 173 VDPs in 2013/14 (The output of the Scottish Dental Schools). Dental VT is undertaken in the year following graduation from dental school and obtaining a primary dental degree. VT gives the newly qualified dentists the opportunity to obtain a wide experience of dentistry before considering their future career, further study or specialist training. It comprises 12 months of supervised clinical experience in an approved training practice, supplemented by an educational programme of tutorials and study days. In Scotland, since 2004, attaining ‘Satisfactory Completion’ of VT confers eligibility for a VT Number, and, in turn, an NHS List number, which allows the dentist to become an associate or principal in the GDS, or a practitioner in the SDS. Satisfactory Completion is underpinned by robust
workplace based assessments, and is uniquely enshrined in legislation, unlike in the rest of the UK.

For Hygienist-therapists, a new pilot Vocational Training provides the skills necessary to undertake a career in the GDS, SDS or the Hospital Service (HDS). Fifteen places will be funded through this HTVT pilot scheme in Scotland in 2013.

9. **SDCEP, TRIADS, SDPBRN and IQUAD**

The Scottish Dental Clinical Effectiveness Programme (SDCEP) is an initiative of the National Dental Advisory Committee (NDAC) in partnership with NHS Education for Scotland (NES).

The primary aim of the programme is to support dental teams throughout Scotland by providing guidance developed by the profession for the profession on topics identified as priorities for dentistry in Scotland. For each guidance topic, a development group of dental professionals with particular interest or experience in a given area is convened to develop and write the guidance. This work is supported by the Programme Development Team, who facilitate evidence searching and appraisal, research, liaising with external organisations, editing, publication and dissemination. SDCEP use a variety of publication formats including, print, on-line, web and smart phone apps.

The latest publication is “The Management of Acute Dental Problems (MADP)”, (March 2013). This guidance encourages consistent provision of safe and effective care on an individual basis to patients with acute oral problems. It is intended for use in any healthcare setting and should prove valuable to general medical practitioners, accident and emergency staff and pharmacy staff as well as members of the dental team. The full guidance will be available for reference as an online pdf only. A Quick Reference Guide comprising decision support flowcharts will be distributed to dentists and to other relevant healthcare providers (including GP practices, pharmacies and emergency departments). A web-app version of the guidance has also been developed for interactive use on all devices.

Information on Current and Pending Guidelines:

1. **Drug Prescribing:** The smartphone App of the second edition of the guidance has had over 2100 downloads since its launch in April 2012 and continues to receive very positive feedback. An update to the guidance and the App was provided in January.

   RAPiD, the national TRiaDS-led trial of audit and feedback is in development. Data linkage has been carried out. The process for compiling reports from routine data and creation of the traditional audit tool is nearing completion.

2. **Periodontal Management in Primary Care:** Guidance on the prevention and treatment of periodontal diseases is in development. Consultation is planned to take place in the summer. In November, TRiaDS conducted a patient focus group to investigate views on oral hygiene advice and care. This will be reported to the Guidance Development Group in March.
3. Practice Support Manual (PSM): The Communication and Infection Control topics were made available to all registered users of the website (www.psm.sdcep.org.uk) in December. Approximately 1200 users are now registered for access to the online PSM.

4. Oral Health Assessment & Review (OHAR): A report of the analysis of the information provided by over 1000 dentists via the OHAR audit was presented to the Dental Quality Improvement Group. A pilot to evaluate an educational intervention to support dental teams to provide appropriate alcohol advice to their patients has started.

5. Adult Dental Health Survey: TRiaDS and SDPBRN are working with PSD, ISD and the University of Glasgow, to pilot the feasibility of collecting epidemiological data in general practice.

6. Combined Practice Inspection (CPI): The finalised version of the CPI checklist was posted on the ScottishDental.org website in November 2012.

7. Patient Experience Questionnaire: TRiaDS and SDPBRN have collaborated with NHSScotland’s Patient Experience Programme to develop a patient experience questionnaire. The NHS Highland pilot report was presented in October. Analysis of patient feedback (CPI pilot and NHS Highland pilot) regarding the structure and content of the Patient Experience Questionnaire is complete and will be reported shortly. A study to explore methods to enable patients with cognitive limitations and other special needs to provide feedback on their experience of dental care started in February.

A consistent finding in health services research is that the translation of research findings into practice is unpredictable and can be a slow and haphazard process. TRiaDS (Translation Research in a Dental Setting) is a collaborative, multi-disciplinary Research Methodology Group (RMG) that has been formed to develop a programme of knowledge translation research embedded within the Scottish Dental Clinical Effectiveness Programme (SDCEP) guidance development process. TRiaDS has public, academic, policy, service and professional members, including external national and international leaders in the area of knowledge translation science.

During the previous five years, an innovative, evaluative knowledge translation framework has been developed to inform, support and influence delivery of evidence-based practice in dental primary care. This framework supports NHSScotland achieve the three quality ambitions of safe, effective, person centred care. In the Dental Directorate, this process has been successfully employed to inform the development and translation of evidence-based clinical guidance into practice, contributing to the efficient use of educational resources to support the delivery of NHSScotland’s Healthcare Quality commitment to implement evidence-based practice, thus ensuring patients gain the maximum benefit by receiving the most appropriate care at the right time.

Future priorities for the Programme centre around the incorporation of data from other NES Directorates. Initial discussions have taken place to identify priority areas in Optometry, where an important area in which current practice fails to meet the recommended standards is in the diagnosis of Glaucoma, resulting in inefficient, inappropriate referrals to secondary care Ophthalmology services; impacting on patient safety, care quality and peoples’ experience of the service. An action plan has been developed, which includes consulting with Optometry Scotland, a review of the published
guidance, the development of tools for the measurement of current practice and the barriers and facilitators to change. The results will quantify the knowledge practice gap and inform the development of a theoretically robust educational intervention. The intention in year 3 is to evaluate (using an experimental design if possible) the impact of this intervention on professional behaviour.

Discussions with Pharmacy have highlighted that a key challenge for the delivery of effective education is the new contract and increasing scope of the Community Pharmacist role, including consultation, advising and care planning. Given the generalist nature of the pharmacist’s role there is a need to consult with the profession to identify and narrow the areas of practice for prioritisation. TRiADS have previous experience of consultation with this professional group through scoping of the MADP guidance project where it was identified that the first professional contact for many people, with regard to oral health problems is their community pharmacist. An action plan has been developed to take this important piece of work forward.

In areas of Knowledge into Action gaps, TRiADS will collaborate with the network of Knowledge Brokers in the NHS Health Boards to assist clinicians and practitioners improve the implementation of guidance and best practice. In the first instance the TRiADS framework can be applied to assist with the design of actionable formats for knowledge, whether that is care bundles, decision aids, clinical pathways and/or decision support. This will embed behaviour that enables evaluation of Knowledge into Action across the different professional groups and is the opportunity to embed in both primary care and the single contractor group. This is complementary to the current strategy, which has a focus on the acute care sector providers in Medicine. A demonstration of cross working in this area has recently been the successful webinar delivered by TRiADS RMG member, Professor Jeremy Grimshaw, where he participated with Knowledge into Action leaders to deliver the event to over 40 participants.

SDPBRN & IQuaD
The Scottish Dental Practice Based Research Network (SDPBRN) is a network of dentists in GDS, Community, and Hospital Services, Dental Public Health, dental educators, DCPs, Vocational Training trainers and trainees, policy makers and researchers interested in developing evidence-based dental primary care practice. SDPBRN is funded by NHS Education for Scotland and supported by University of Dundee Dental Health Services Research Unit/Dundee Dental School, University of Glasgow Dental School and the Edinburgh Dental Institute.

SDPBRN relies on the partnership and participation of a wide range of dentists, DCPs, educators, policy makers and researchers, to help conduct high quality research. A pool of over 50 practices has been established as “Rapid Evaluation Practitioners” who are called upon to take part in a variety of research studies. This network is used to produce and deliver evidence which is based on real practice experience, informed by the people providing actual care, and consequently relevant to dental primary care. In addition SDPBRN supervises PhD students in dental primary care research, provides practical support to dentists or DCPs conducting their own research projects, offers training such as the Remote and Rural Training days and contributes to external grant funding applications such as the IQuaD HTA trial. A research symposium is organised on a bi-annual basis providing an opportunity to showcase the latest in dental practice based research. These are well attended events with academics and practitioners alike.
IQuaD (Improving the Quality of Dentistry) is an exciting five year study evaluating the effectiveness of scale and polish and oral hygiene advice to improve periodontal health in adults attending general dental practice.

This is a UK-wide, randomised, controlled trial being conducted in collaboration with NHS Education for Scotland and the Universities of Aberdeen, Dundee, Edinburgh, Newcastle, Manchester and London. Recruitment has taken place and the study, now in its second year, is progressing well.

10. Hospital Training (HDS)

As part of its core business, NES provides senior house officer (SHO), dental foundation (DF2), and Specialty (StR) training to GDC standards, within the hospital dental service (HDS), and across the 13 dental specialties. During 2013-14 the Directorate will provide up to 77 SHO/DF2 and 41 StR training places. Study leave for this group of trainees is also managed by the Directorate.

11. The Salaried Dental Service (SDS)

The Directorate also provides postgraduate training places and continuing professional development for the SDS. During 2013-14 up to 42 DF2 and 27 DF training places will be made available within the service. In addition, the Directorate will develop an Adults with Incapacity programme to meet legislative requirements and the needs of the service.

12. Childsmile & Caring for Smiles

Childsmile Core is a Scotland-wide initiative which aims to tackle health inequalities, to help improve the health of children’s teeth. Through the Childsmile initiative, every nursery in Scotland is offered free, daily, supervised toothbrushing for their children, and a number of nurseries and schools in targeted areas also provide fluoride varnish and toothbrushing in primary one and two. Every child is provided with a dental pack containing a toothbrush, tube of fluoride toothpaste and an information leaflet on at least six occasions by the age of five. All families with newborn babies across Scotland are now offered information on Childsmile from their health visitor. If the family is not registered with a dentist, Childsmile staff will contact families at the three month stage to offer oral health advice and help them find a dentist for their child.

Childsmile Programme promotes a shift in balance of care towards prevention rather than treatment by targeting the early years age group. It is based on a strong evidence-base, which includes SIGN guidelines, SDCEP Guidance, HEAT target nine for child oral health and supports Government strategies such as Better Health Better Care5, Equally Well6 and Getting it Right for Every Child7. Evidence suggests that (between 2008 and

2010) the oral health of P1 children in Scotland improved in every deprivation category. Further details on the improving oral health of the population in Scotland are included in the Workforce Report (The Executive Summary is included as Appendix 1).

Childsmile training is delivered by the Directorate. Dental Nurses and Dental Health Support Workers are required to undertake the NES Childsmile training course.

The NES Childsmile training course covers:

- Dental public health
- Caries and fluoride
- Oral soft and hard tissue
- Application of fluoride
- Health/safety and infection control
- Benefits of breastfeeding/weaning and early nutrition
- Child protection
- Working with children in the clinical/community setting
- Health behavior change and effective communication
- The social and medical model of health
- Inequalities/equitable services in health and a community development approach
- Action planning a Childsmile oral health promotion session
- A mini-OSCE testing knowledge and skills on standard and enhanced caries prevention specific to age.

The NES Childsmile team has now been charged with developing training in support of the ‘Caring for Smiles’ initiative, which targets staff working in care homes.

13. **Workforce Modelling**

The Directorate provides expertise and analysis of workforce data, training and labour markets and trends in access to health and social care through the AIM for Workforce programme. With the funding for two full time staff being met by the Directorate, the AIM programme will, in 2013-14, continue to work in partnership with National Services Scotland (NSS) and other stakeholders to develop and analyse dental and DCP training and workforce data. This will include work on migrant dentists, the retention of VDPs and the labour market for dental nurses. The latest of a series of biennial dental workforce reports was published in September 2012. The Executive Summary of this report is included as Appendix 1.

The AIM programme also provides invaluable cross-directorate support; in 2013-14 the programme will also deliver; a report on the exit survey for the pre-registration pharmacist scheme (PRPS) and hospital pharmacy vacancy analysis; link to the existing psychology workforce and trainee data projects covering quarterly workforce reports for psychology services, child and adolescent mental health services and an assessment of pilot psychological therapies workforce capacity data to support HEAT access targets and; publicise the AHP AIM workforce data reports for speech and language therapy and occupational therapy.

7 Getting it Right for Every Child, Scottish Government, 2012
14. **DCPs**

**Dental Nurses**
The Directorate provides pre-registration dental nurse training to ensure there is a supply of fully qualified dental nurses eligible for GDC registration. During 2013-14 we will complete the transition from a NEBDN diploma course to the SVQ qualification, for general, hospital and salaried dental nurses.

Post-registration training is provided for dental nurses to achieve enhanced skills beyond the minimum regulatory requirements. During 2013-14, we will ensure that up to 100 qualified dental nurses will be able to access enhanced skills training.

**Hygienists / Therapists**
The Directorate supports the undergraduate primary level qualification in dental hygiene-therapy to aid role development and team working for a changing dental workforce. During 2013-14 up to 130 hygiene-therapists will be in training in HEIs across Scotland.

**Technicians**
A new distance-learning technician training course based at Aberdeen dental school commenced in Spring 2013, offering up to eight places in the first year. The course is SQA accredited and has been approved by the GDC. The course will ensure a supply of qualified and registered technicians for the workforce in Scotland.

**Clinical Dental Technicians**
Funding is available on an annual basis from Scottish Government to allow NES to support the running of a course in Clinical Dental Technology at Edinburgh Dental Institute. This group of professionals has been identified as playing a key role in the provision of dentures in people who are older or who have special needs.

**Orthodontic Therapists**
The Directorate supports the provision of orthodontic therapy training at Edinburgh Dental Institute, to increase the number of qualified orthodontic therapists in the workforce. During 2013-14, up to eight places will be made available.

**Practice Managers and Receptionists**
In 2013, the Directorate has undertaken to provide VT for up to five general dental practice managers and 15 training places for dental administrators. The course will also be available to medical receptionist colleagues.

15. **Keeping in Touch (KITS), Return to Work (RTW) and TRAMS**

KITS and RTW provide dentists who are on a career break or returning to dentistry after a break the opportunity to stay up to date with their clinical skills and CPD, or revise their skills prior to starting employment. This enables skilled practitioners to remain in the

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dental workforce. Introduction to NHS dentistry in Scotland courses are also run and there have been recent requests from various Health boards to increase the availability and frequency of these courses.

Through TRAMS additional training, remediation, assessment, mentoring and support is provided to dentists working in the Scottish GDS and the SDS. This scheme has run initially as a pilot from March 2012 and a review will be undertaken around summer of 2013.

The dentists offered TRAMS have included some practitioners who are returning to work after an extended career break and those referred to the scheme by a stakeholder organisation following performance issues. Only dentists with current GDC registration and who are indemnified by a Dental Defence Organisation are accepted onto the scheme. The management structure includes a programme board, mentors and assessors - see the flowchart below.

To date there have been five General Dental Practitioners who have taken place in the scheme – two self referred, two from the GDC and one from the indemnity organisation supporting them. Seven salaried dentists have also commenced the TRAMS process.

Once a personal development plan is created dentists undergo an individual retraining programme with assessment of clinical skills, as required, using a modified Longitudinal Evaluation of Performance (derived from the VDP LEP). Mentors work with the individual dentists as they go through the stages of their PDP. In order to facilitate this, 15 dentists from throughout Scotland have recently competed a four day Coaching and Mentoring Course.

Indemnity organisations are very supportive of the TRAMS programme. So far one dentist has fully funded his retraining and others have contributed. It is intended that the programme will be self funding after the initial pilot phase.
** where required an occupational health or behaviour specialist may be involved in the action planning group with the agreement of the dentist under assessment
16. **Education in a Digital Age**

NES has worked with the Digital Design Studio (DDS), part of the Glasgow School of Art, to produce the world’s first anatomically accurate interactive 3-D Head and Neck learning resource. Part of a set of four 3-D Training packages, these resources will allow students to dissect the head and neck “virtually”. An interactive dental injection simulator has also been developed, which gives the students the opportunity to experience what it is like to give a dental local anaesthetic injection, and links this with the anatomical model to check that the injection would have been successful. A package detailing the common disease processes found in the head and neck, and one which provides education in health inequalities, are also included in this workstream.

To ensure that dental teams and undergraduates are able to take advantage of the new educational resources that are being launched, and to ensure that Scotland is able to maximise the use of new technologies, NES has invested in state of the art 3-D teaching laboratories in Aberdeen, Dumfries, Dundee, Glasgow, Inverness and Stornoway. All the centres are linked and it is possible for a tutor in one centre to lead a lesson with students at multiple centres at the same time. This capability is already being used by hygiene/therapy students based in Dumfries, Inverness and Stornoway.

These facilities will be available to local groups such as schools and other public sectors to help meet the aspirations of Scotland’s Digital Strategy. These educational packages are being launched on 24th April by the First Minister.

**SDEO**

Scottish Dental Education Online (SDEO) is a permanent collaboration between the NHS and Universities in Scotland that develop dental e-learning material. SDEO’s initial focus was to help dental students in numerous areas, such as virology and dental development, which they find difficult to understand using conventional teaching methods. As the number of resources increased it became apparent that many people within dentistry and healthcare in general could use the SDEO material.

SDEO resources are available free to NHS staff in Scotland via the NES Portal, and they are also available for use by any staff and students from the collaborating universities. A repository of teaching material that can be downloaded is available to tutors and academics.

17. **Improving management structures – New national work streams and a move to four regions**

The Dental Directorate senior management team has set out vision for the future direction of its structure and educational delivery. It was agreed on 29th February 2012:

- To reduce the number of regions. (This will fall from five to four on 1/4/2013 after the retirement of the East Director of Postgraduate GDP Education and the merger of the North-East and East regions)

- To nationalise workstreams to ensure greater efficiencies and improve quality and consistency of process.
This work is ongoing with the assistance and support of our colleagues in OD, HR and Performance Improvement.

Appendices:

Appendix 1 - Dental Workforce Report (Executive Summary)
Executive summary

Oral health

• The oral health of children and adults in Scotland provides a measure of the demand for dental services in Scotland.

• Data from the National Dental Inspection Programme (NDIP) showed that:
  – between 2008 and 2010 the oral health of Primary 1 (P1) children improved in each Scottish Index of Multiple Deprivation (SIMD) decile;
  – P1 children from more deprived SIMD deciles had worse oral health than children from less deprived SIMD deciles; and
  – the oral health of P1 children in the most deprived SIMD decile in 2010 was about the same as the oral health of the average P1 child in 2003.

• Data from the Scottish Health Survey (SHeS) showed that:
  – between 2008 and 2010 the oral health of adults, as measured by the proportion of adults with no natural teeth, improved in almost all age groups and should continue to improve; and
  – in 2010 adults in the most deprived areas had worse oral health than adults in the least deprived areas.

• The incidence of oral cancer in Scotland increased in all age groups, among men and women, and more rapidly among those from the most deprived communities.

The supply of dentists

• The capacity to deliver dental services is a function of the number of dentists.
• The number of NHS dentists in general and NHS General Dental Practitioners (GDPs) in particular increased significantly between the publication of the Dental Action Plan in March 2005 and September 30th 2011.

• Between September 30th 1995 and September 30th 2011 the average age of NHS GDPs decreased, the percentage of female NHS GDPs increased and the percentage of NHS GDPs who qualified outside Scotland increased.

• Data from the University and College Admission Service (UCAS) showed that:
  – the ratio of applications to accepted places for Bachelor of Dental Surgery (BDS) courses increased between 2008 and 2011.

• Data from the Higher Education Statistics Agency (HESA) showed that:
  – the output from Scottish dental schools increased between academic years 2006-07 and 2010-11;
  – over half of BDS students were female, and a large majority were domiciled in the UK; and
  – in common with Scottish domiciled medical students, a relatively small percentage of BDS students were from the most deprived SIMD quintiles.

• The latest intake targets for academic year 2012-13 mean that the output from Scottish dental schools is fixed until 2017, when the output is expected to be 165.

• The Dental Undergraduate Bursary Scheme (DUBS) provides bursaries to undergraduate dental students in return for a commitment to work in NHSScotland after graduation:
  – between academic years 2006-07 and 2011-12 3,283 bursaries were granted to 1,307 students at a total cost of £13.132m yielding an implied commitment of 4,590 dentist years;
  – the mean four-year retention rate of DUBS recipients who entered NHSScotland between 2007 and 2010 was 0.75 and the mean four-year retention rate of non-DUBS recipients who entered NHSScotland between 1996 and 2006 was 0.71.

• On September 30th 2011, there were 200 Vocational Dental Practitioners (VDPs), which was more than ever before.

• Data from NES showed that:
– there were 261 Vocational Training (VT) numbers issued in VT year 2010-11, which was more than ever before; and
– the retention rate of dentists who completed Dental Vocational Training (DVT) in the UK was much higher than the retention rate of European Economic Area (EEA) dentists.

The supply of Dental Care Professionals

• Dental Care Professionals (DCPs) are a group of healthcare professionals who work with dentists to deliver dental services.

• DCPs continue to play an important role in the provision of oral health care in Scotland, including the delivery of Childsmile services, which target inequalities in the oral health of children.

• Data from the General Dental Council (GDC) register showed that:
  – the number of registered DCPs in Scotland increased overall between 2008 and 2011, which consisted of a 22% increase in the number of registered dental nurses and a nine percent decrease in the number of registered dental technicians; and
  – the number of individuals registered in more than one profession has increased, which indicates that the DCP workforce is increasingly able to respond to changes in the demand for dental services.

• Data from UCAS showed that:
  – between 2005 and 2011 the ratio of applications to accepted places for Oral Health Science (OHS) training was relatively high, indicating significant demand to train as a dental therapist.

• Data from the Scottish Qualifications Authority (SQA) showed that:
  – Between 2008 and 2011 the number of certified dental technicians increased by 181.

• Data from HESA showed that:
  – the number of students graduating from OHS courses in Scotland and therefore able to register as a dental therapist is likely to increase during the next few years.

• Data from NOMIS and the Annual Survey of Hours and Earnings (ASHE) provided evidence of a deterioration in the labour market outcomes for dental nurses:
the number of dental nurses claiming Jobseeker’s Allowance (JA) increased relative to the number of dental nurse vacancies since 2009; and
the average hourly pay of dental nurses decreased between 2009 and 2011.

• The number of DCPs employed by NHSScotland increased by over 80% between 2007 and 2011.

• The proposed removal of restrictions on direct access to DCPs is likely to have a significant impact upon the market for dental services.

• Very little is known about the number or activity of the majority of DCPs who work in the General Dental Service (GDS).

The utilisation of dental services

• The utilisation of dental services is a function of the supply of dental services and the demand for dental services.

• Data on GDS registration rates showed that:
  – the registration rates of both children and adults continued to increase during the past two years with more than 87% of children and 75% of adults registered at the end of March 2012.

• Data on GDS treatments between financial years 1999-2000 and 2011-12 showed that:
  – the total cost of treatment increased;
  – the total number of courses of treatment increased; and
  – there was very little variation in the composition of the cost of treatment between financial years 2005-06 and 2011-12.

• An analysis of the proximity of GDS dentists and their registered patients found that:
  – patients who lived in the most deprived areas were closer to their practice than patients in the least deprived areas;
  – patients who lived in remote areas were further away from their practice than patients who lived in urban or accessible areas; and
  – patients who lived in relatively rural or Island NHS Boards were further away from their practice than patients who lived in relatively urban NHS Boards.
• Data from the 2009 SHeS showed that:
  – during the previous 12 months, 51% of people aged 16 and over received NHS dental treatment, 17% received private dental treatment and 31% received no dental treatment; and
  – less than one percent of people aged 16 and over had never been to a dentist.

• Data from Denplan showed that:
  – Between April 2008 and April 2012 the number of patients registered with Denplan decreased by 15%.

Forecasting the dental workforce

• If recent trends continue, there is forecast to be a relatively large increase in the supply of NHS GDPs during the next 10 years.

• The projected changes in the size and composition of the population are forecast to increase the demand for NHS GDPs during the next 10 years.

• Compared to most demand forecasts, there is forecast to be an excess supply of NHS GDPs, which increases during the forecast period.

• The forecast excess supply of NHS GDPs is likely to be an underestimate because the forecast demand for NHS GDPs does not account for the potential contribution of dental therapists with or without the removal of restrictions on direct access.