

Online Research @ Cardiff

This is an Open Access document downloaded from ORCA, Cardiff University's institutional repository: <https://orca.cardiff.ac.uk/id/eprint/117247/>

This is the author's version of a work that was submitted to / accepted for publication.

Citation for final published version:

Bullock, Alison ORCID: <https://orcid.org/0000-0003-3800-2186>, Barnes, Emma ORCID: <https://orcid.org/0000-0001-6447-6647>, Moons, Kirstie, Chestnutt, Ivor G. ORCID: <https://orcid.org/0000-0002-9228-800X> and Cowpe, Jonathan 2018. Skill-mix in the dental team: future directions and support mechanisms. *Dental Health: The Journal of the British Society of Dental Hygiene and Therapy* 57 , pp. 29-31. file

Publishers page:

Please note:

Changes made as a result of publishing processes such as copy-editing, formatting and page numbers may not be reflected in this version. For the definitive version of this publication, please refer to the published source. You are advised to consult the publisher's version if you wish to cite this paper.

This version is being made available in accordance with publisher policies.

See

<http://orca.cf.ac.uk/policies.html> for usage policies. Copyright and moral rights for publications made available in ORCA are retained by the copyright holders.



Skill-mix in the dental team: future directions and support mechanisms

Alison Bullock, Emma Barnes, Kirstie Moons, Ivor G. Chestnutt, Jonathan Cowpe

Abstract

It is a time of change: in patient demographics and treatment needs; in the composition of dental teams; and in NHS dental contracts and arrangements for Direct Access. Although studies across the health service reveal benefits from better use of skill-mix, there are significant barriers to the optimisation of skill-mix in dental practice. To help practices to optimise skill-mix, we developed and tested a whole-team self-evaluation tool. The Skills Optimiser Self-Evaluation Tool (SOSET) is a process that has a team meeting with a Quality Improvement (QI) tutor at its core. During the session, the team discusses the descriptions of four criteria or levels within each of the seven dimensions. The team celebrates areas where the practice is doing really well and agrees priorities for improvement. A 'Sources of Help and Advice' document is provided, and the QI Tutor may also offer further resources. The development of the SOSET was based on an analysis of existing evidence and its usefulness for setting objectives for optimising dental team skill-mix has been demonstrated in the pilot testing.

Background context

A time of change: patient needs, dental teams and contracts

Internationally the rates of caries and periodontal disease are declining,¹ and the number of patients who do not require active treatment following a recall examination is increasing.² However, more of the ageing population in the UK are retaining their teeth and many present with complex treatment needs and multi-morbidities.^{3,4} Amongst the young, although the incidence of cavities in children is reducing, tooth decay remains a problem across the UK and improvements are unequal and linked to deprivation.^{5,6} Demand for dental services is unrelenting and access to NHS services is variable.

Given the proportion of dental patient needs that are not complex, there has long been scope to make more use of dental care professionals (DCPs). It is 25 years now since the Nuffield Report⁷ recommended greater use of DCPs and nine years since the original GDC Scope of Practice guidance.^{8,9} With extended duties,⁹ routine examinations and restorations can be delegated to singly-qualified dental therapists or dual-qualified dental therapists/dental hygienists (DTs).¹⁰ About a third of appointments are for patient care that could be met by hygiene-therapists.¹¹

'Direct Access' arrangements were introduced to improve patient access to services by allowing DTs to undertake their full scope of practice without first needing a dentist's prescription.¹² However, DTs cannot hold health service contracts, specifically performer numbers, and are thus unable to open a course of NHS treatment. Currently only patients treated privately can benefit fully from Direct Access. Guidance from the GDC advises that practically, Direct Access needs to

operate in team-settings with a dentist on hand to report on radiographs prescribe medicines and local anaesthetics and ensure appropriate patient care.¹² The current NHS contract for primary dental care doesn't support innovative skill mix or needs-led care delivery. However, proposed new models of funding which emphasize prevention and self-care provide increased opportunities for DTs.^{13,14} The new NHS Dental Contract is being tested and will likely be further rolled out as the pilot sites mature .

Skill-mix

What is meant by "skill-mix" is open to interpretation and Bourgeault et al (2008)¹⁵ remark that "skill-mix is a somewhat amorphous term that has come to mean different things to different stakeholders". To some, skill-mix refers to the mix of occupations or grades or posts in an organization. To others, it concerns the types of staff within a multidisciplinary team. Elsewhere, skill-mix is referred to more generally as people with the right skills doing the right jobs. This links to the prudent health maxim, 'only-do-what-only-you-can-do', which means healthcare professionals should be working at the maximum of their clinical competency¹².

In a categorisation of skill-mix initiatives, Sibbald and colleagues¹⁶ refer to actions to change roles: enhancement (extending the role of a particular group of workers); substitution (exchanging one type of worker for another); delegation (the movement of a task from one type of worker to another); and innovation (new types of worker). The work of the dental therapist in the dental team is perhaps most clearly a case of role extension (enhancement). We might also suggest that delegation occurs (e.g. when simple restorations are moved from the dentist to the dental therapist) which could, in the longer-term, lead to substitution (as dental therapists replace dentists). However, this is far into the future as skill-mix developments in dentistry have been slow to progress.^{17,18}

Benefits and barriers

Studies across the health service reveal benefits from better use of skill-mix. These include: freeing up more qualified staff for the complex treatments;¹⁹ improved access to services;²⁰ helping underserved populations (e.g. younger and older patients);²¹ reducing health inequalities²² and delivering system efficiency savings. Better skill mix can enhance job satisfaction, reduce wait times, improve patient satisfaction with their care²³ and increase practice productivity.

Despite these recognised benefits, we have yet to establish how to optimise the skills of the dental team to achieve best service delivery. Known barriers to employing DTs in the GDS include: dentists' knowledge of what DTs can do, concern about patient acceptance, surgery accommodation, availability of supervision by a dentist.^{16,24,25} Mechanisms that help to address these barriers include: an established referral system, team training, a payment system that supports DTs' employment, good team communication and a workplace culture that values teamwork. It is clear that optimum skill-mix is not just about having the right people but about them working together effectively as a team. The key message from the literature is that there are significant barriers to the optimisation of skill-mix in dental practice. Practices have to find innovative ways of working to surmount these challenges. Through training and support, dental teams can enhance their teamworking and develop practical processes to facilitate each team member's contribution to patient care. To help practices to optimise skill-mix, we developed and tested a whole-team self-evaluation tool.

A tool to support teamwork

The Skills Optimiser Self-Evaluation Tool (SOSET) is a straightforward dental practice team development tool. Facilitated by a Quality Improvement (QI) Tutor, it allows the whole team to focus on how they are addressing a skill-mix/teamwork approach to their delivery of oral healthcare. Using the SOSET enables all in the practice to critically review how they work together to provide high quality patient-centred healthcare. Dental practice performance is enhanced when people work as a team and feel able to discuss issues constructively.

SOSET was developed and tested as part of a recently completed project funded by the Health and Care Research Wales (HCRW) and shown to be a timely and acceptable practice development toolkit. It was adapted from an established self-evaluation process - Maturity Matrix Dentistry (MMD), a self-evaluation practice development tool originally designed for GP Primary Care and Pharmacy teams,²⁶ and which is an approach welcomed by dental care professionals (DCPs) in particular. SOSET is a process that has a team meeting with a QI tutor at its core, possibly within a 'lunch-and-learn' session. During the session, the team discusses the descriptions of four criteria or levels within each of the seven dimensions. They celebrate areas where the practice is doing really well and agree priorities for improvement (including who will lead, and the timeframe). To help practices, a 'Sources of Help and Advice' document is provided, and the QI Tutor may also offer further resources.

The seven dimensions of the SOSET matrix are set out in Box 1. Within each dimension is description of four levels or criteria. For example, the second dimension – delegation within the team – ranges from “Dentists do not currently delegate tasks. DCPs do not have opportunities to use their full scope of practice” to “We have clear referral processes and pathways in place. Treatment plans and the actions carried out are noted in sufficient detail in the patient record system”. The dimensions and criteria within the SOSET matrix were initially identified from our literature review and then refined following repeated consultations with external dentistry professionals (including from government, practitioners, educators). The draft was piloted with 11 practices, supported by QI Tutors from the Dental Section of the Wales Deanery. Based on data from individual post-session feedback forms (n=93) and Tutor reflections, the SOSET matrix was further refined. This included reducing the number of dimensions from nine to seven, and the criteria within each from five to four.

Box 1: The Seven SOSET Dimensions

1. Belief in teamwork
2. Delegation within the team
3. Team communication
4. Training
5. Patients' views on teamwork
6. Staffing and team management
7. Premises and equipment

Although the process does not require evidence of where the team thinks the practice is on the matrix, they are advised that the team needs to agree and there is nothing to be gained from over-inflated claims. In agreeing priorities, teams are

warned that it is seldom practical to work on more than three at any one time. They are encouraged to set realistic objectives and timescales, and a template is provided to enable this. The practice team may wish to repeat the SOSET process after an agreed time interval, to assess progress in their priority areas, and select the next areas to work on. The SOSET process is summarised in Box 2.

Box 2: The SOSET Process

During a facilitated practice meeting with a Quality Improvement (QI) Tutor, the dental team discuss the SOSET matrix

They decide the priority dimensions (and criteria) for improvement in the practice, which team members will take the lead on each, and an approximate timescale

To encourage self-directed learning, a 'sources of help and advice' document is available

In summary, the SOSET process:

- is a straightforward way for the whole practice team to discuss skill-mix
- acknowledges that a practice may be at different levels of progress in each domain
- enables good practice to be recognised alongside areas for improvement
- allows different members of staff—or individuals—to discuss educational needs related to teamwork

Conclusions – making skill-mix work

Changing patient needs coupled with contract reform create a powerful driver for modifying the skill-mix in the dental team. However, there are significant barriers to optimising skill-mix in dental practice. To help support dental teams, we developed SOSET. Its development was based on an analysis of existing evidence and its usefulness has been demonstrated in the pilot testing. In these changing times, the SOSET process can help dental practices to set objectives for optimising the skill-mix in their team.

The SOSET matrix and guidance is available from the authors on request.

Acknowledgements

The paper draws on a study funded by Health and Care Research Wales. We thank other members of the study team including Ceri Negrotti, Wendy Warren, Mick Allen, Dave Hannington, Sue Bale and research nurses Alison Chandler and Lisa Mellish. Special thanks go to the three QI Tutors in the Wales Deanery who ran the pilot: Kathryn Marshall, Susan Stokes and Lesley Taylor.

References

- ¹ Brocklehurst P, Macey R. Skill-mix in preventive dental practice - will it help address need in the future? *BMC oral health* 2015; 15 Suppl 1S10-S
- ² Macey R et al. Feasibility study: assessing the efficacy and social acceptability of using dental hygienist-therapists as front-line clinicians. *Br Dent J* 2016; 221(11): 717-21
- ³ shows https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/489756/What_is_known_about_the_oral_health_of_older_people.pdf
- ⁴ Bullock A, Firmstone V. A professional challenge: the development of skill-mix in UK primary care dentistry. *Health services management research*. 2011; 24(4): 190-5.
- ⁵ WG Taking Oral Health Improvement and Dental Services Forward in Wales: A Framework outlining priorities for dentistry and a future work programme. March 2017
- ⁶ Public Health England (2016) National Dental Epidemiology Programme for England: oral health survey of five-year-old children 2015. PHE: London
- ⁷ Nuffield Foundation. The education and training of personnel auxiliary to dentistry. London: The Nuffield Foundation, 1993
- ⁸ General Dental Council. Scope of Practice. London: General Dental Council, 2009
- ⁹ General Dental Council. Scope of practice. September 2013. London: General Dental Council, 2013
- ¹⁰ Macey R et al. The Efficacy of Screening for Common Dental Diseases by Hygiene-Therapists: A Diagnostic Test Accuracy Study. *Journal of Dental Research* 2015; 94(3): 70S-8S.
- ¹¹ Evans, Chestnutt & Chadwick (2007) The potential for delegation of clinical care in general dental practice. *British Dental Journal*, 203 (12)695-09
- ¹² General Dental Council. Guidance on Direct Access. 2013
- ¹³ Department of Health. Dental contract reform: Engagement. London: Department of Health, 2014
- ¹⁴ Department of Health. Dental contract reform. Overview document. 2015
- ¹⁵ Bourgeault IL, Kuhlmann E, Neiterman E, Wrede S (2008) How can optimal skill mix be effectively implemented and why? WHO Policy Brief. Copenhagen: WHO
- ¹⁶ Sibbald, Shem McBride. 2004. Changing the skill mix of the healthcare workforce. *J Health Serv Res Policy* 9 S128-38
- ¹⁷ Jones G et al. A survey of the workload of dental therapists/hygienist-therapists employed in primary care settings. *British Dental Journal* 2008; 204(3).
- ¹⁸ Harris R, Burnside G. The role of dental therapists working in four personal dental service pilots: type of patients seen, work undertaken and cost-effectiveness within the context of the dental practice. *British Dental Journal* 2004; 197(8): 491-6.
- ¹⁹ Turner S, Ross M. Direct access: how is it working? *Br Dent J*. 2017;222(3):191-7.
- Bonehill J. Direct access to dental treatment: understanding the pros and cons. *Dental Nursing*. 2013;9(9):528-31
- ²⁰ Williams DM, Medina J, Wright D, Jones K, Gallagher JE. A review of effective methods of delivery of care: skill-mix and service transfer to primary care settings. *Primary dental care: journal of the Faculty of General Dental Practitioners (UK)*. 2010;17(2):53-60.
- Richards D. Skill-mix and service transfer to primary care settings. *Evidence-based dentistry*. 2011;12(2):51
- ²¹ Brocklehurst P, Macey R. Skill-mix in preventive dental practice - will it help address need in the future? *BMC oral health*. 2015;15 Suppl 1:S10-S.

²² Mathur MR, Singh A, Watt R. Addressing inequalities in oral health in India: need for skill mix in the dental workforce. *Journal of family medicine and primary care*. 2015;4(2):200-2.

Yang T, Chen B, Wanchek T. Dental Therapists: A Solution to a Shortage of Dentists in Underserved Communities? *J Public Health Reports*. 2017;285-288(132):3.

²³ Turner S, Tripathee S, MacGillivray S. (2013) Direct access to DCPs: what are the potential risks and benefits? *BDJ* 215:11 577-582

²⁴ Ross MK et al. The acceptability of dually-qualified dental hygienist-therapists to general dental practitioners in South-East Scotland. *British Dental Journal* 2007; 202(3)

²⁵ Ward P. The changing skill mix - experiences on the introduction of the dental therapist into general dental practice. *British Dental Journal* 2006; 200(4): 193-7.

²⁶ Barnes, EJ, Howells, EP, Marshall, KA, Bullock, AD, Cowpe, JC and Thomas, H. 2012. Development of the Maturity Matrix Dentistry (MMD): a primary care dental team tool. *BDJ* 212 (12), pp. 583-587