# Oral health ambassador scheme: training needs analysis in the community setting

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## Key points

- Community healthcare staff have a unique opportunity to support oral health needs of vulnerable community patients.
- The main barriers community nurses face to delivering oral health promotion include lack of training, equipment and time.
- Interventions aimed at reducing oral health interdisciplinary knowledge barriers should be implemented to improve holistic patient care.


## Abstract

**Introduction** Successful oral health promotion relies on resource availability, adequate training and stakeholder engagement. Community nursing teams are in a unique position to promote oral health due to their vulnerable service users who have increased oral health concerns. This article will share results from a training needs analysis.

**Aims** To understand the previous oral health promotion experience of staff within community nursing teams, including identification of previous training and barriers to oral health promotion.

**Materials and methods** An electronic training needs analysis was distributed to non-dental, patient-facing staff within Birmingham Community NHS Foundation Trust.

**Results** In total, 91% (n = 120) of staff members had seen a patient who displayed oral health concerns, 68% (n = 90) of responders had never received training for assessing a patient's mouth and providing mouth care and 9% (n = 12) of staff had received internal trust training regarding oral health. Lack of training impeded 56% (n = 74) of participants from providing oral care and 92% (n = 121) of participants expressed they would benefit from further oral health training.

**Conclusion** Community nursing teams should be supported to engage with oral health promotion to encourage reduced knowledge and confidence deficits, which will support holistic patient management to encourage improvement of oral and general health.


## Introduction

Oral diseases are highly prevalent within the UK, despite many being largely preventable. The cost of dental care to the NHS between 2017–2018 was £3.6 billion in England alone.[1] The health sector has a legal responsibility to maximise preventative strategies to address existing national health disparities, including oral health inequalities, in line with the Health and Social Care Act.[2] Oral health promotion (OHP) advice should be in the remit of any healthcare professional, especially for staff providing care to vulnerable patients at increased risk of developing oral disease.

During the initial wave of COVID-19 in March 2020, several dentists within Birmingham Community Healthcare (BCHC) NHS Foundation Trust volunteered for redeployment to integrated multidisciplinary teams (IMT) to support community nurses with daily tasks, including diabetes management, wound care and palliative care. IMTs can include district and community nurses, healthcare assistants and clinical case managers, who work closely with general medical practitioners (GMPs). Direct experience within this healthcare environment highlighted how vulnerable patients are suffering with unmanaged oral health conditions, a majority of which are largely preventable or easily resolved with early intervention. With regular contact with this patient cohort, community nursing teams are in a unique position to support oral health needs, signpost to dental practitioners and support the diagnosis of oral disease, which in turn supports overall general health.

OHP relies on the availability of resources, adequate training and stakeholder engagement to achieve positive impacts to patients' oral health. Sturrock[3] concluded that dental professionals are often siloed from other professional groups, leading to a lack of integration or service collaboration, limiting the quality of patient care. The launch of a local 'oral health ambassador scheme' within the hospital trust has been designed to support the integration of oral health into the wider healthcare system. The scheme was developed following a training needs analysis (TNA), with subsequent tailored oral health e-learning, OHP strategies and bespoke oral health packages within each team.

TNA are a useful tool to support service delivery by enabling resolution of disparities between staff member development aspirations and organisational requirements to ensure service delivery.[4] This article will explore the results of the TNA which may inform further community OHP interventions within other trusts.

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## Aims

The aims of this TNA are to understand the previous experience of community nurses with oral health, including self-rated confidence in OHP, identification of previous training and barriers to delivery.

## Methodology

An electronic TNA was designed on SmartSurvey and distributed to approximately 2,500 patient-facing staff across five divisions within BCHC NHS Foundation Trust through electronic mailing lists and local communication bulletins. The dental division was excluded from the survey distribution, to improve result validity. The survey remained active between 1 January 2021 and 31 March 2021.

The TNA used a combination of closed and open free-text questions, with the confidence section of the survey consisting of Likert scale answers. The survey consisted of three components relating to participants' previous exposure, experience and confidence relating to oral health concerns and signposting to dental services.

For participants to be eligible they needed to meet the following inclusion criteria:

1. Undertaken a patient-facing role within the last month
2. Current employee (including those with honorary contracts, bank and locum staff) of BCHC
3. No previous formal dental qualification.

If patient answered 'yes' to having a formal dental qualification or undertaking a non-patient facing role, their answers were excluded from the results.

The survey's introductory statement outlined that participation was voluntary and that anonymised results would be shared to support the development of future oral health interventions. Implied consent was achieved by participants completing the survey. Contact details of the authors were provided should the respondents have any queries following completion of the survey.

The survey was initially piloted with selected IMTs before trust-wide distribution in December 2020. The survey remained active for three months.

## Results

### Participant demographics

A total of 179 participants responded to the TNA, with 132 suitable for inclusion. Given the wide-scale distribution of the survey, it is impossible to estimate a true response rate. The five divisions across the trust were represented by respondents from a wide range of professional backgrounds. Figure 1 outlines the full participant demographic breakdown. Participants were from a range of bandings (related to the NHS Agenda for Change pay scale), from Band 2 to Band 8a, with most responders being Band 7 (n = 49, 37%).

### Previous exposure to oral health training

The results revealed that 91 (68%) responders had received no previous oral health training during their undergraduate or postgraduate training. Most oral health training was obtained during responders' training as part of their initial qualification. A breakdown of oral health training experience is outlined in Figure 2. Other sources included previous inpatient experience and during specific courses, including palliative care training.

In total, 120 (91%) respondents reported to have seen a patient in which they had oral health concerns. In these situations, 64 responders spoke to the patient's family and 63 signposted externally. Free-text answers commonly cited referring to the patient's GMP. No participants reported referring patients with oral health concerns to a dentist or dental professional. Figure 3 outlines the management strategies utilised by participants when oral health concerns were identified.

### Barriers to OHP

Many barriers were identified from the participant responses, with lack of training identified as the primary barrier by 78 (59%) responders. 'Other' barriers were identified by 22 responders and included 'carers not completing oral care properly', 'no update within the trust' and 'lack of confidence' (Fig. 4).

Despite links between oral health and general health being well established, only

**Fig. 1 Participant demographics**

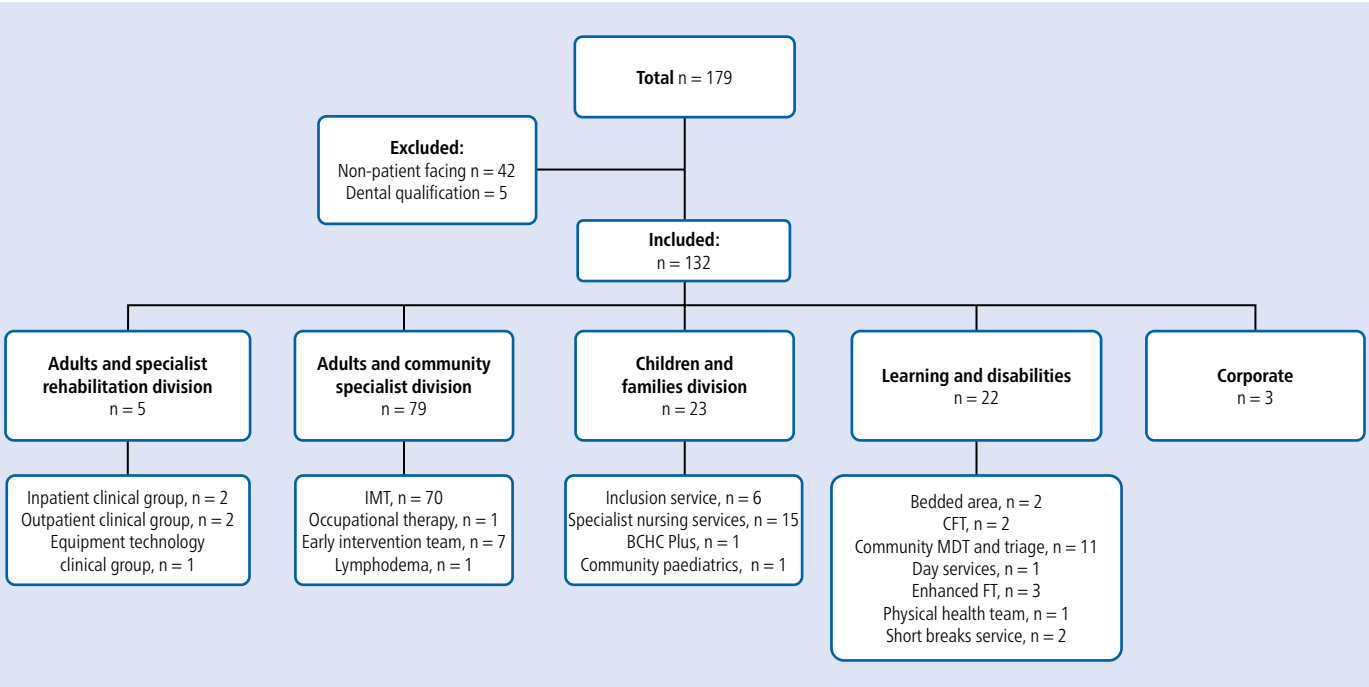
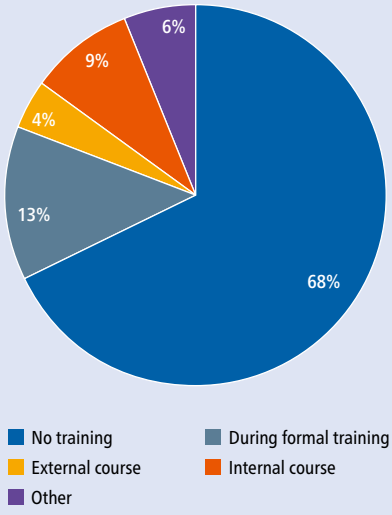


**Fig. 2 Participants' previous oral health training experience**




115 (87%) of participants reported to strongly agree or agree with the statement 'mouth care is essential for patient care'.

### Confidence with oral health tasks

Self-reported confidence was assessed in relation to seven outlined oral health tasks which IMTs may encounter. Figure 5 shows these self-reported confidence levels, with the lowest confidence rates reported for accessing resources to support patients with their oral needs and providing mouth care in a patient with challenging behaviour.

## Discussion

### Oral health concerns in the community

The authors have previously demonstrated that patients who are treated in the community setting are generally at increased risk of poor oral health, xerostomia and oral candidiasis, often in relation to additional medical, cognitive and physical disabilities.[5,6] Previous literature targeting community nursing audiences has already been published with the aim to integrate oral health education into the overall holistic approach to patient care.

Studies within the hospital setting have identified that poor oral health is strongly associated with malnutrition which can impede patient recovery.[7] The *Smiling matters* report[8] identified that access to domiciliary visits is a significant issue. Therefore, those providing domiciliary care within IMTs are in a unique position to support the oral health needs of their patients while contributing to the patients' overall general health. For those in community

**Fig. 3 Management strategies utilised when oral health concerns were identified**

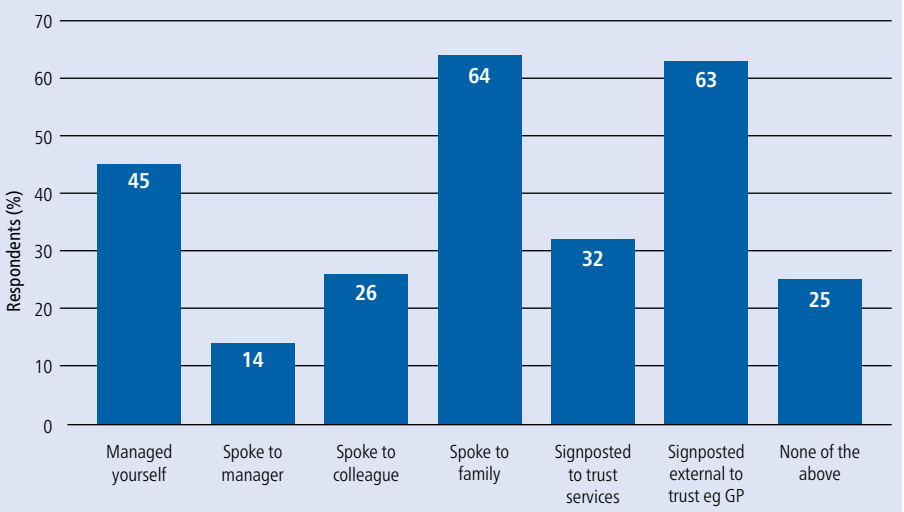



**Fig. 4 Barriers to oral health promotion**

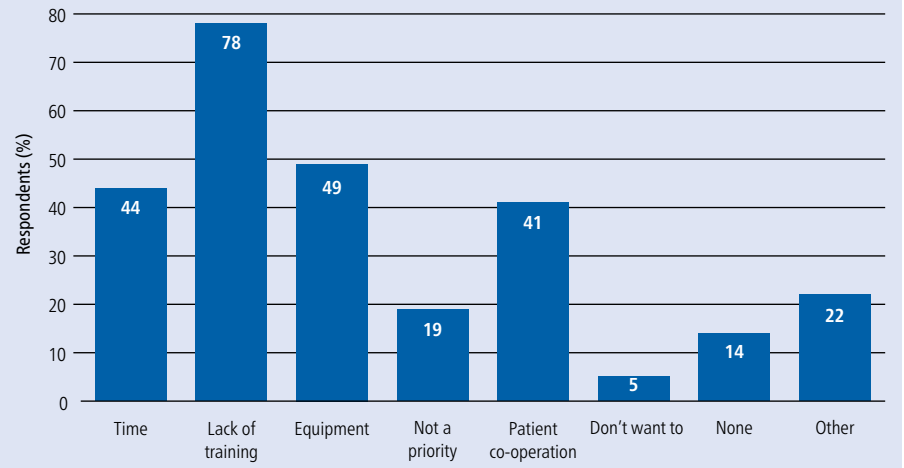
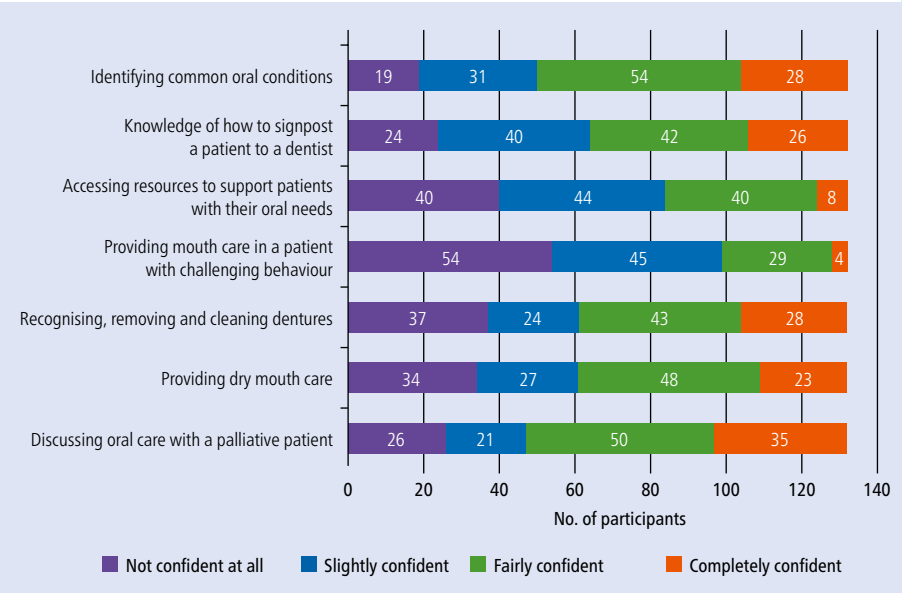



**Fig. 5 Participants' self-reported confidence with oral health tasks**



living in care homes, National Institute for Health and Care Excellence guidance is in place to emphasise the importance of early mouth care assessment, appropriate care plan documentation and support signposting to routine and urgent dental services, and mouth care training for staff.[9]

With the move of the NHS to developing integrated care systems, NHS England has identified this as a route to improve health and disease prevention through development of 'place-based' health and care systems. This could provide an opportunity to unify siloes and integrate oral health with the management of general health, which is exciting and should be seized.[10,11] Collaboration between dental and non-dental workforces to promote oral health and educate service users about the symbiotic relationship between oral health and general health is essential, particularly with the growing concerns surrounding the aging population.

## Oral health initiatives

Health promotion strategies as defined by the Ottawa Charter should enable people to increase control over the determinants of health, with an emphasis on initiatives to be empowering, holistic and sustainable.[12]

While oral health initiatives exist, the authors found first-hand that, in BCHC, these resources weren't being accessed or had limited relevance to those working in the community setting.[13] This disparity was also demonstrable in the TNA, with oral health reported as 'a neglected subject in the homes; hospitals seem to have a better understanding and more equipment'. The TNA and developing oral health ambassador scheme are part of the first OHP initiative which has investigated OHP among IMTs in the community environment, with alternative successful healthcare-professional-led OHP strategies being community pharmacists, midwives and inpatient settings.[14,15,16]

Prior to defining an OHP strategy, investigations including TNAs should be completed to understand patient needs and barriers that exist to ensure that interventions are tailored appropriately. Training needs analyses involve a cyclical process which has the potential to maximise organisational change by upskilling staff, alongside providing a useful tool to identify barriers and resolve stakeholder disparities between individual staff and organisational service delivery needs.[4,17]

The success of the Mouth Care Matters (MCM) scheme is evident in the literature, with wide-scale improvements to oral health awareness reported within inpatient healthcare teams.[18] Healthcare professionals, and specifically community nurses, are in a unique position to promote oral health and signpost patients to dental services due to their service users being predominantly vulnerable members of society who often demonstrate increased oral health concerns, for example, palliative patients or patients with diabetes.

## Training in oral health

Hospitalised patients can only receive optimal mouth care if staff have been provided with 'adequate tools, products and training'.[18] The findings in this TNA were consistent with Garry *et al*.,[19] who reported that most healthcare professionals had received no formal training in oral health and for those that had, this was most likely during their pre-registration experiences. This TNA has demonstrated a majority of respondents (92%) wanted further training in this area.

This TNA identified that participants had low levels of confidence in accessing resources and supporting oral care in patients with challenging behaviour. The development of MCM has been transformational among healthcare professionals to ensure mouth care is considered an integral part of general care, particularly in hospitalised patients.[13]

Staff working within IMTs often work independently, providing healthcare within a domiciliary setting. Therefore, it is imperative that OHP training is appropriately tailored to support this professional group. Existing resources could be developed to extend their relevance to the community setting.

## Barriers to OHP

In addition to lack of training, the other three main barriers identified within this training needs analysis were time pressures, lack of equipment and patient cooperation. Preston *et al*.[20] identified similar barriers to OHP in medical wards and geriatric settings.

Arguably, the most pertinent barrier to OHP is the time restrictions that nursing staff face, which is following an increasing trend due to increased demand on services, burnout and loss of NHS staff. This trend is also being experienced by the dental profession, with a recent British Dental Association survey highlighting over '40% of dentists indicate they are likely to change career or seek early retirement in the next 12 months due to current pressures on the service'.[21]

The Care Quality Commission review[8] identified lack of equipment, including toothbrushes and toothpaste, as a barrier to staff delivering oral health: 44% of respondents in this TNA also identified lack of equipment as an obstacle impeding the ability to provide oral care. One responder stated that they 'normally purchase this myself', which seems counterintuitive when promoting oral health within the community. Although the MCM initiative has made huge strides in providing equipment and training to predominantly staff responsible for inpatients, this TNA highlights equipment accessibility issues in community settings.

Patient cooperation was a further barrier identified within the TNA. While a daily task for most, performing toothbrushing and mouth care for another individual can present new challenges, especially when behaviours may provide further complications. To overcome this barrier, hands-on training and online videos discussing simple behavioural management techniques may support nursing teams to educate families and carers to complete oral hygiene regimes.

## Signposting oral concerns

Annually, more than 600,000 GMP consultations are for dental problems.[22] Our results identified that none of the respondents referred oral health concerns to a dental professional and instead favoured referrals to a GMP, which is likely due to their close professional relationship and often sharing a base with GMP practices.

In addition, difficulties in accessing dental care may account for the significant number of GMP dental consultations, particularly in the current climate. The NHS dental statistics for England showed 15.8 million adults were seen by an NHS dentist in the 24 month lead up to 31 December 2021, which is a drop of six million compared to pre-COVID-19 figures.[21] Furthermore, statistics from the National GP Patient Survey identified that 23% of responders had been unable to arrange an NHS dental appointment in the last two years.[23]

Appropriate management of oral health concerns should primarily be conducted by a dental professional. Utilisation of the wider medical profession is important; however, while OHP advice can be given by healthcare

teams, management of acute dental conditions require specialist dental knowledge, skills and equipment. Previous studies demonstrate limited postgraduate knowledge among junior doctors, with 94% not feeling confident at managing oral conditions and 28% of accident and emergency doctors diagnosing oral cases incorrectly.[24] Other studies have demonstrated the limited oral health care provided to undergraduate medical students, with only 11 of 21 medical schools responding to confirm that oral health is included within the undergraduate curriculum.[25] Furthermore, there is no defined commissioning structure regarding who creates and delivers oral health training.

When medical concerns are identified or suspected by a dental professional, then a patient will be referred or signposted to their GMP for ongoing investigation and management. It is essential that dental professionals are supported by stakeholders to reciprocate this support to promote holistic care and make every contact count.[26]

## Future steps

Dental professionals engage in daily OHP when educating individual patients. However, as a profession, there are wider improvements that can be made to support both colleagues and patients in a non-dental environment. While it is important to acknowledge the increasing demand on all aspects of NHS services, the dental profession can support our colleagues and continue to highlight the importance of oral health in the wider context of general health.

Within this Trust, the authors have utilised the learning and feedback from the wider healthcare team in the TNA to develop a bespoke e-learning package to support specific training needs. It is essential this e-learning module is easily accessible, succinct and can act as a resource pool to ensure optimum staff engagement and subsequent patient benefit. To address the concerns surrounding equipment and accessibility to care, specific oral health packages have been constructed and dispatched to each IMT. These packages contain referral information, fact sheets, samples and supplemental information to support OHP in the community environment. Although these are small steps, this is a positive movement which has senior endorsement to support the oral health, and therefore subsequent general health, of our patients.

## Conclusion

Redeployment of dental colleagues during the COVID-19 pandemic has provided a unique opportunity for a shared learning experience, enabling integration of care pathways and supporting intervention. The results of this TNA have generated essential stakeholder feedback regarding confidence deficiencies and barriers, which should be integrated into the designing and delivery of tailored future OHP strategies. More research needs to be conducted to understand the impact that OHP initiatives have on patients' oral-health-related quality of life. With demands on the NHS at an all-time high, appropriate educational delivery and utilisation of medical, dental and allied health professionals within the wider integrated care systems can help support appropriate allocation of resources and signposting for patients.

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*Ethics declaration*

*The authors declare no conflicts of interest. The HRA Tool determined that ethical approval was not required for this study, due to no clinical, sensitive, or patient data being collected. Implied consent was achieved due to participants voluntarily completing the survey, which was anonymised and without incentive.*

*Author contributions*

*All authors were involved in the conception, data collection, data analysis, writing and reviewing of the manuscript.*

## References

1. NHS England. Menu of evidence-based interventions and approaches for addressing and reducing health inequalities. 2021. Available at https://www.england.nhs.uk/ltphimenu/ (accessed October 2021).
2. UK Government. Health and Social Care Act 2012. 2012. Available at https://www.legislation.gov.uk/ukpga/2012/7/contents (accessed October 2021).
3. Sturrock A, Cussons H, Jones C, Woodcock C, Bird L. Oral health promotion in the community pharmacy: an evaluation of a pilot oral health promotion intervention. *Br Dent J* 2017; **7:** 521–525.
4. Hicks C, Hennessy D. Identifying training objectives: the role of negotiation. *J Nurs Manag* 1997; **5:** 263–265.
5. Archer N, Martin K, Johnston L. Oral conditions in the community patient: part 1. *Br J Community Nurs* 2020; **25:** 490–495.
6. Martin K, Johnston L, Archer N. Oral conditions in the community patient: part 2 – systemic complications of poor oral health. *Br J Community Nurs* 2020; **25:** 532–536.
7. Gil-Montoya J A, Subirá C, Ramón J M, González-Moles M A. Oral health-related quality of life and nutritional status. *J Public Health Dent* 2008; **68:** 88–93.
8. Care Quality Commission. Smiling matters: oral health in care homes. 2019. Available at https://www.cqc.org.uk/sites/default/files/20190624_smiling_matters_full_report.pdf (accessed August 2021).
9. National Institute for Health and Care Excellence. Oral health for adults in care homes. 2016. Available at https://www.nice.org.uk/guidance/ng48/chapter/Recommendations (accessed October 2021).
10. The King's Fund. Integrated care systems explained: making sense of systems, places, and neighbourhoods. 2021. Available at https://www.kingsfund.org.uk/publications/integrated-care-systems-explained (accessed October 2021).
11. Briggs A D, Göpfert A, Thorlby R, Allwood D, Alderwick H. Integrated health and care systems in England: can they help prevent disease? *Integr Health J* 2020; DOI: 10.1136/ihj-2019-000013.
12. World Health Organisation. Ottawa Charter for Health Promotion. 1986. Available at https://www.who.int/publications/i/item/ottawa-charter-for-health-promotion (accessed October 2021).
13. Health Education England. Mouth care matters: a guide for hospital healthcare professionals. 2019. Available at http://mouthcarematters.hee.nhs.uk/wp-content/uploads/sites/6/2020/01/MCM-GUIDE-2019-Final.pdf (accessed October 2021).
14. American Academy of Pediatric Dentistry. Guideline on perinatal oral health care. 2011. Available at https://www.aapd.org/assets/1/7/g_perinataloralhealthcare.pdf (accessed September 2022).
15. Health Education England. Mouth care matters: a guide for hospital professionals. 2016. Available at http://mouthcarematters.hee.nhs.uk/wp-content/uploads/2016/10/MCM-GUIDE-2016_100pp_OCT-16_v121.pdf (accessed May 2022).
16. Quinlan K. Patient mouth care: going back to basics. *BDJ Team* 2017; **4:** 17098.
17. Gould D, Kelly D, White I, Chidgey J. Training needs analysis. A literature review and reappraisal. *Int J Nurs Stud* 2003; **41:** 471–486.
18. Otukoya R, Doshi M. Selecting the right tools for mouth care delivery in hospitals. *Nurs Times* 2018; **114:** 18–21.
19. Garry B, Boran S. Promotion of oral health by community nurses. *Br J Community Nurs* 2017; **22:** 496–502.
20. Preston A J, Kearns A, Barber M W, Gosney M A. The knowledge of healthcare professionals regarding elderly persons' oral care. *Br Dent J* 2006; **201:** 293–295.
21. British Dental Association. Urgent action needed as millions miss out on NHS dentistry. 2022. Available at https://bda.org/news-centre/press-releases/Pages/Urgent-action-needed-as-millions-miss-out-on-NHS-dentistry.aspx (accessed May 2022).
22. Cope A L, Chestnutt I G, Wood F, Francis N A. Dental consultations in UK general practice and antibiotic prescribing rates: a retrospective cohort study. *Br J Gen Pract* 2016; **66:** 329–336.
23. NHS. National GP patient survey 2021–2022. Available at https://gp-patient.co.uk/surveysandreports (accessed May 2022).
24. Doshi M, Weeraman M, Mann J. A survey of the knowledge of junior doctors in managing oral conditions in adult inpatients. *Br Dent J* 2019; **227:** 393–398.
25. McCann P J, Petrina Sweeney M, Gibson J, Bagg J. Training in oral disease, diagnosis and treatment for medical students and doctors in the United Kingdom. *Br J Oral Maxillofac Surg* 2005; **43:** 61–64.
26. Lawrence W, Black C, Tinati T *et al.* 'Making every contact count': evaluation of the impact of an intervention to train health and social care practitioners in skills to support health behaviour change. *J Health Psychol* 2016; **21:** 138–151.