NICE National Institute for Health and Care Excellence

Putting NICE guidance into practice

Costing statement

Implementing the NICE guidance on Oral health: approaches for local authorities and their partners to improve the oral health of their communities (PH55)

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1 Introduction

1.1 This costing statement considers the cost implications of implementing the recommendations made in 'Oral health: approaches for local authorities and their partners to improve the oral health of their communities' (NICE public health guideline 55).

1.2 A costing statement has been produced for this guideline because the oral health needs, level of uptake and the way services are implemented is expected to vary significantly between areas.

1.3 Local authorities commission services for improving the oral health of their population, while dental services (such as in primary care, secondary care or community settings) are commissioned by NHS England.

1.4 Organisations should evaluate their own practices against our recommendations and assess the potential local costs. Some of the issues to be considered are discussed in this statement.

2 Background

2.1 Oral health is important for general health and wellbeing. Tooth decay (dental caries) and gum disease (periodontal disease) are the most common dental problems in the UK. They can be painful, expensive to treat and can seriously damage health if left unchecked (Dental quality and outcomes framework, Department of Health 2011). However, both problems are largely preventable (Levine and Stillman-Lowe 2009[1]).

2.2 Many of the risk factors for poor oral health – diet, oral hygiene, smoking, alcohol, stress and trauma – are the same as for many other chronic conditions, such as cancer, diabetes and heart

[1] Levine RS, Stillman-Lowe CR (2009) The scientific basis of oral health education: sixth edition. London: British Dental Journal

disease. Taking action to address these risk factors will help avoid a range of potential healthcare costs in the future.

2.3 Factors such as socioeconomic deprivation can contribute to regional differences in oral health. The economic analysis developed to inform the guidance estimated that children and young people from the most deprived 20% of the population have a 42% likelihood of having experienced dental caries by the age of 12; for children from the least deprived 20% of the population this figure is 25%. As well as requiring dental treatments such as fillings, poor oral health can lead to tooth extractions under general anaesthetic and hospital care (see section 3.7).

2.4 Local authorities have responsibility for commissioning local surveys of dental health, dental screening and improving the oral health of their populations. Publicly funded treatment (such as at a dentist, primary care or in secondary care) is commissioned by NHS England.

2.5 Oral health improvement initiatives may avoid the need for future dental treatment such as fillings or tooth extractions under general anaesthetic, potentially saving NHS England money as the commissioner of publicly funded dental treatment. Local authorities and their health and wellbeing commissioning partners should collaborate to ensure that initiatives which improve oral health are funded appropriately.

3 Recommendations with potential resource impact

3.1 The guideline focuses on children and adults whose economic, social or environmental circumstances, or lifestyle, place them at high risk of poor oral health or make it difficult for them to access dental services. The recommendations likely to have the largest cost impact are those based in nurseries and schools, which are

aimed at children who are most at risk of poor oral health. They cover tooth brushing supervision and fluoride varnishing.

Tooth brushing supervision

- Recommendation 15: consider supervised tooth brushing schemes for nurseries in areas where children are at high risk of poor oral health.
- Recommendation 19: consider supervised tooth brushing schemes for primary schools in areas where children are at high risk of poor oral health.

Background

3.2 The recommendations suggest that the proposed tooth brushing schemes could include: a designated lead at all establishments where they are run; access to advice from a dental professional if needed; and free toothbrush and fluoride toothpaste packs (1 set to use on the premises and 1 set to take home).

Potential costs

3.3 The cost of introducing such a scheme may depend on how it is structured and delivered. For example the designated lead may be a current member of staff, such as a teacher or teaching assistant working within core hours. If this is the case, it is likely that no additional staff costs will be incurred.

3.4 It is anticipated that the support and training required for people delivering the scheme (including the designated leads) will be the main cost incurred. This training may be provided by members of an existing community oral health team, or by an external supplier. As a result the costs could vary widely.

3.5 Where one exists locally, the community oral health team should be able to provide the designated leads with professional dental advice. In many cases, this will not involve additional costs.

3.6 If local authorities provide free toothbrush and fluoride toothpaste packs, the toothbrush and the fluoride content of the toothpaste should be age-appropriate (Delivering better oral health - Public Health England, 2014). The cost of an age-appropriate toothbrush, 100ml of toothpaste and an educational leaflet (purchasing 25 to 1200 units via NHS Supply Chain) is:

- aged 2–6 years: £1.21
- aged 6 years and over: £1.01.

The scheme should include 2 sets, costing approximately £2–£2.40 per child.

Potential savings

3.7 If action is not taken to prevent dental caries additional dental treatment may be required, such as fillings or tooth extractions which can require general anaesthetic and a surgical team.

- Fillings, root canal treatment or extraction of teeth in a dental surgery costs £75 for all people under 18, and adults who are exempt from paying for treatment[2].

- Under 2014/15 payment by result tariffs, an under-18 inpatient admission to extract 1 tooth under general anaesthetic is £427 as an elective admission, and £821 as a non-elective admission (Healthcare Resource Group (HRG) CZ30U). Extraction of multiple teeth costs £558 as an elective admission, and £1060 as a non-elective admission (HRG CZ42U)[3]. It is anticipated that preventive action such as supervised tooth brushing has the potential to reduce future costs.

[2] This is the cost for a band 2 treatment under the NHS Dental contract. In England around 35% of adults are exempt from paying for dental treatment.
[3] The economic analysis developed alongside the guidance used a figure from the Personal Social Services Research Unit (PSSRU), which estimated the cost of an inpatient stay for dental extraction at £1160 (Curtis L (2013) Unit Costs of Health and Social Care, University of Kent). The Health Resource Group figures are used here to reflect of the likely cost to the commissioner of these procedures under Payment by Results.

3.8 Supervised tooth brushing schemes aim to establish good life-long oral health habits and may reduce demand for a range of dental treatments in the future. This could lead to long-term savings for the NHS – particularly following interventions with younger age-groups. However, due to uncertainty around the impact, the scale of these savings cannot currently be quantified.

Community-based fluoride varnishing treatments

- Recommendation 16: consider fluoride varnish programmes for nurseries in areas where children are at high risk of poor oral health.
- Recommendation 20: consider fluoride varnish programmes for primary schools in areas where children are at high risk of poor oral health.

Background

3.9 The recommendations suggest that if a supervised tooth brushing scheme is not feasible, local authorities and their health and wellbeing commissioning partners should consider a community-based fluoride varnish programme. This should involve at least 2 applications of fluoride varnish per year.

Potential costs

3.10 This service could be provided by dental hygienists or specially trained dental nurses commissioned by the local authority. For example a dental nurse on band 6 would have a salary midpoint of £29,759 (rising to around £36,151 including superannuation and national insurance - NHS Agenda for Change, 2014/15). Additional overheads, including management, facilities and transport costs should be assessed locally.

3.11 Training is needed for these staff to perform fluoride varnishing in schools. The associated costs depend on the provider and can vary

widely. An example of approximate costs from 1 provider is available in Appendix A.

3.12 The cost of the materials required for fluoride varnishing should be checked with the provider. Appendix B gives an example of the costs for 1 local authority, in which fluoride, disposables and other clinical equipment accounted for around 8% of the total cost.

Potential savings

3.13 If action is not taken to prevent dental caries, it can require additional dental treatment such as fillings or tooth extractions. Details on the potential savings for NHS England are shown in section 3.7.

4 Other considerations

4.1 As well as training staff such as dental hygienists or dental nurses to administer fluoride varnish, training may also be needed for other frontline staff who work with groups at high risk of poor oral health. This is to ensure they can give advice on the importance of oral health and promote good practice. For details of approximate costs see Appendix A.

4.2 Promoting oral health can potentially incur a range of costs, depending on local arrangements.

4.3 As the risk factors for poor oral health are the same as for many other chronic conditions, improving oral health for other 'high-risk groups' can avoid costs associated with a range of other healthcare needs (see section 2.2). These groups include adults who are socially deprived, people who are homeless, or older people who are frail.

5 Conclusion

5.1 Organisations are advised to assess the local resource implications of this guideline.

5.2 Potential additional costs may be incurred as follows:

- supporting and training designated leads in targeted nurseries and schools to provide a supervised brushing scheme
- providing toothbrush and toothpaste packs
- Staff time, training and materials required for fluoride varnishing.

5.3 Potential areas for savings locally are:

- reductions in dental treatment, for example, for fillings or tooth extractions
- less demand for a wide range of dental treatments in the longer term as a result of improved oral health care.

Examples of organisations currently implementing oral health improvement approaches are available from the Shared Learning section of the website. Additional examples of costs reported for implementing oral health programmes are included below.

Appendix A

Example training costs

There are a wide range of potential suppliers of local or online courses on oral health. In each case the associated costs depend on factors such as the number of delegates, the materials required and the venue. The costs shown are those reported by 1 provider, but can vary widely:

Fluoride varnishing

Training in how to deliver fluoride varnishing cost £150 per delegate for a group of 15 delegates. The costs were primarily for the student workbooks, the venue and external speakers.

In this example, the way the service was commissioned meant that some of the staff running the course worked for the local authority's oral health improvement team, so there were no additional staff costs.

Frontline staff

A 3.5 hour course for 20 delegates cost £15 per delegate. This included raising awareness of a range of oral health issues and equipping them to provide advice on good practice.

Appendix B

Example costs – Fluoride varnishing programme

The costs in table 1 were provided by a Local Authority who implemented a fluoride varnishing programme which aimed to treat around 6,000 children, each receiving 2 treatments per year.

In this example, the costs per child were approximately £28 per child per year, but will vary locally. Savings such as those avoided for future treatment of dental caries cannot be estimated at this stage.

Table 1: Example costs of a fluoride varnishing programme aiming to treat 6,000 children (figures rounded to the nearest thousand)

	Annual cost (£)
Staff Costs	
Dental nurses	61,000
Admin - front of house Admin	13,000
Dentist	5,000
Oral health promoter	15,000
Management and specialist clinical support costs	37,000
Operating Costs	
Software / database	2,000
Marketing (leaflets, postage, etc.)	2,000
Other	4,000
Equipment and supplies	
Clinical materials (fluoride, disposables, safety and infection control products	14,000
Trust Overheads and indirect costs	
HR, IT, Estates	16,000
Total programme cost	169,000

About this costing statement

This costing statement is an implementation tool that accompanies NICE's guideline: Oral health: approaches for local authorities and their partners to improve the oral health of their communities (NICE public health guideline 55).

Issue date: October 2014

This statement is written in the following context

This statement represents NICE's view. It was arrived at after careful consideration of the available data and through consulting professionals. It should be read in conjunction with NICE's guideline. The statement focuses on those areas that may have an impact on resource utilisation.

The cost and activity assessments are estimates based on a number of assumptions. They provide an indication of the potential impact of the principal recommendations and are not absolute figures.

Implementation of this guideline is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guideline, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity and foster good relations. Nothing in this guideline should be interpreted in a way that would be inconsistent with compliance with those duties.