

Oral Health & Inequalities for Southampton Children

Supplementary to Public Health Annual Report 2015

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Information from:

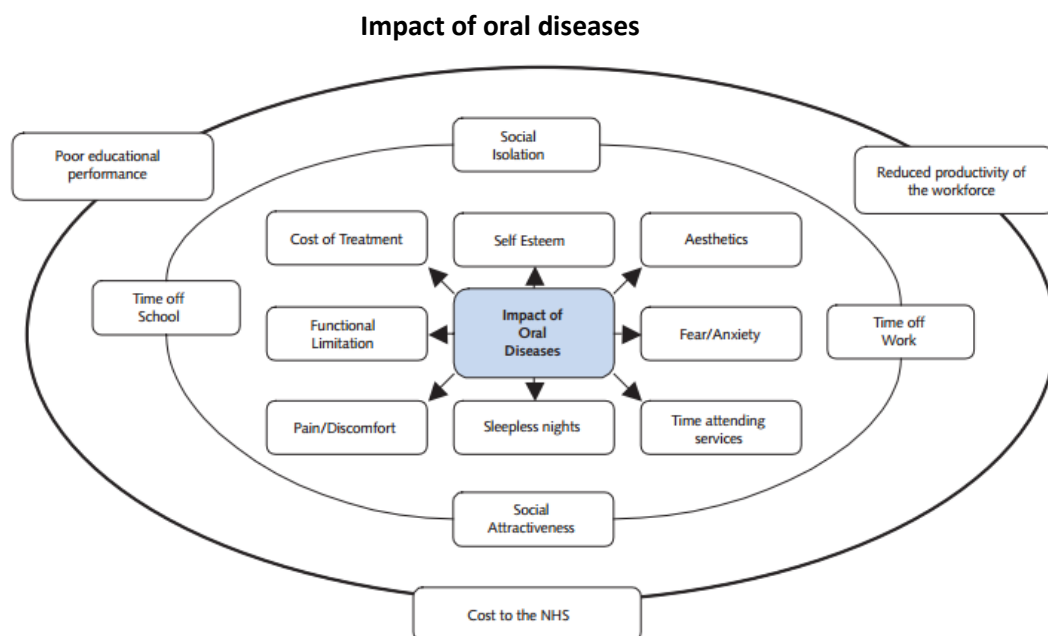
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Oral Health & Inequalities for Southampton Children

Why is this issue important?

Good oral health is even more important in children than adults as they are just learning to speak and socialise and for whom a varied healthy diet is essential for development and achievement of potential. Poor oral health results in pain and distress, which is undesirable particularly in young children. Poor oral health can also have wide-reaching impacts on individuals, families and the economy, as illustrated in Figure 1 below.

Figure 1



Source: Modified from Department of Human Services (1999)

In some children, particularly those from younger age-groups, trying to restore (fill) decayed teeth can be challenging as they may not be able to cooperate. In these instances, a general anaesthetic (GA) may be used to remove all decayed teeth to minimise the impact of a stressful and negative experience. The wellbeing of the child is prioritised over “saving” any teeth. In some instances, permanent teeth (adult) as well as primary (baby) teeth have to be removed. The most common reason for a child to be admitted to hospital, anywhere in the country, is for dental decay and almost all result in GA extractions¹.

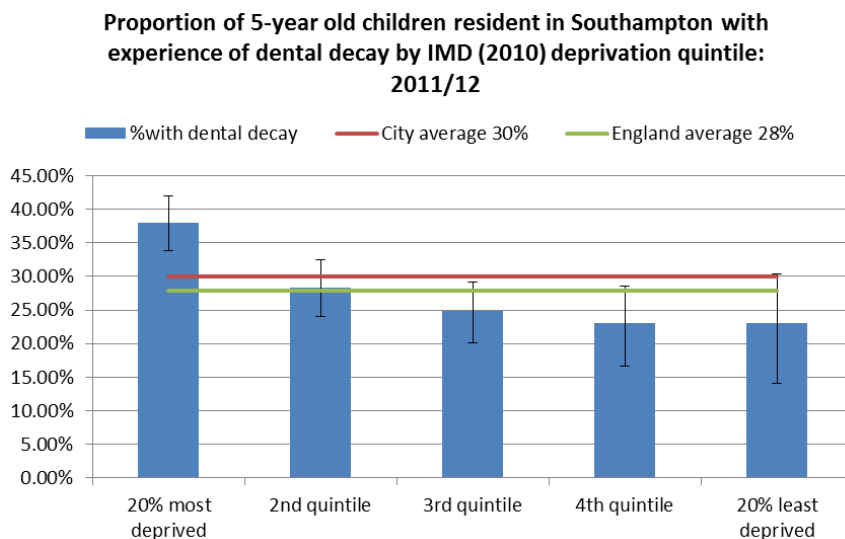
Since 2013, responsibility for the surveillance and improvement of oral health moved to local authorities. Various organisations, including the Local Government Association, have raised the importance of oral health as part of general health in children. A joint Local Government Association and Public Health England (PHE) report states, “When children are not healthy, this affects their ability to learn, thrive and develop. Good oral health can contribute to school readiness and the

prevention of school absence”². Dental decay, like many other conditions, is more prevalent in more deprived communities, adding to the inequality gap.

What is the situation in Southampton?

Child dental health surveys indicate that children in Southampton have poorer oral health than many other areas in the country. In the last survey (2011-12) of 5-year-old children, around 30% of Southampton children had experience of dental decay (England = 27.9%). Figure 2 below shows the distribution of dental decay experience across different levels of deprivation in the city; 38% of children living in 20% most deprived areas experienced dental decay compared to 23% in those living in the 20% least deprived – an inequality gap of 15%.

Figure 2

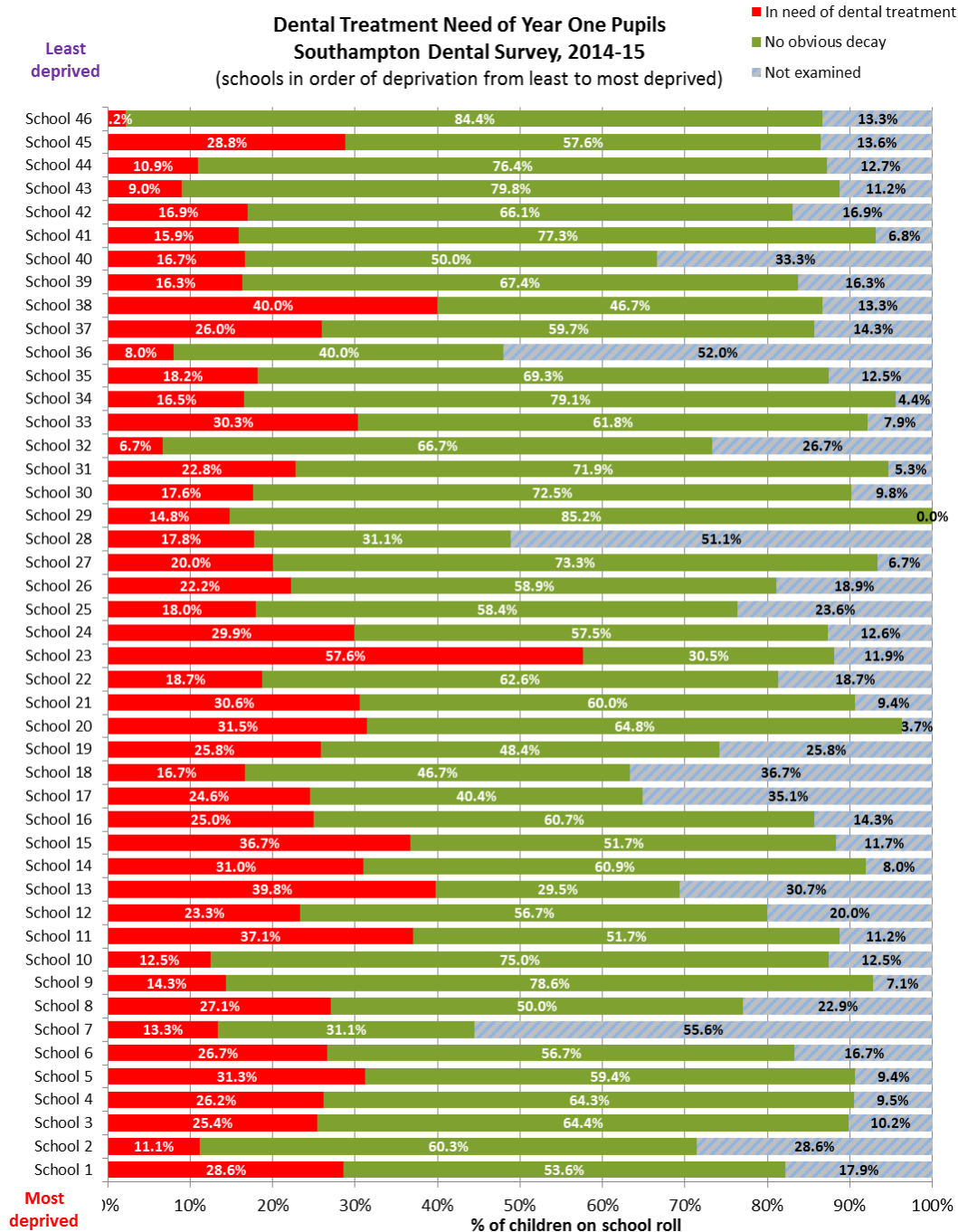


Local data collected as part of the 2014-15 dental survey of Year 1 children, deemed that a total of 644 children (27.5%) were identified as needing to see a dentist due to dental concerns at the time of the dental survey examination. Figure 3 shows the breakdown of treatment need as a proportion of all children on the school register; those deemed to be potentially in need of treatment, those with no obvious decay and those not examined. The data is at school level, but individual schools have been anonymised for the purpose of this briefing.

Some of the school-level data on treatment need would have been affected by the proportion of children who were not examined, mainly because consent was not obtained. For example, less than half the children were examined in three schools. It may be that if more children had been examined in these schools, a higher proportion of children with dental decay would have been identified. There is no clear relationship between participation rates or treatment need and deprivation. As with the national picture, deprivation is not the only factor influencing participation rates in Southampton. Treatment need varies widely across Southampton schools; ranging from 2.2% to 57.6% identified as needing treatment. A full dental examination with the aid of radiographs may

also identify more children with dental decay, not immediately obvious with the visual examination conducted in schools as part of the dental surveys. This translates to a large number of Southampton children.

Figure 3

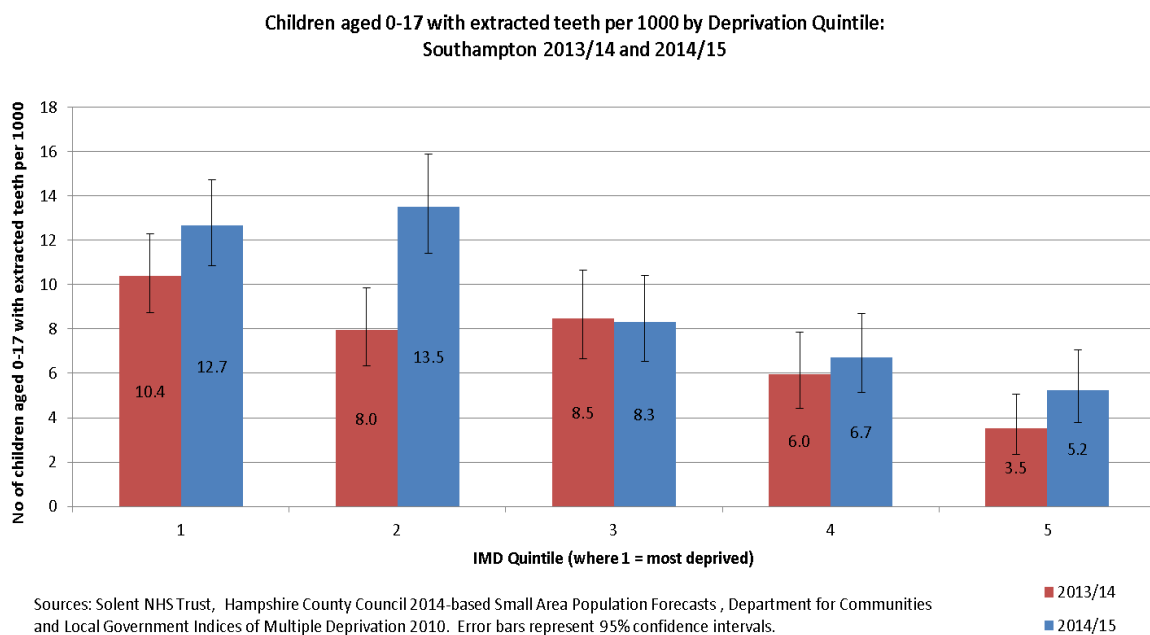


The number and rate of children in Southampton who had teeth extracted under GA increased across all ages between 2013/14 and 2014/15. In 2013/14 there were 396 children in the city (a rate of 8.0 per 1000 residents) who had 1,677 teeth extracted. This increased to 493 children (9.8 per

1000) in 2014/15 (an increase of 24.5%) who had 2,248 teeth extracted between them. This includes 162 children aged 0-5 years in 2013/14 increasing to 191 in 2014/15 (an increase of 17.9%).

GA dental extractions were more common amongst children from more deprived areas of Southampton. Figure 4 shows that in both 2013/14 and 2014/15, there is a large gap in the rate of children with teeth extracted under GA between the highest and lowest deprivation quintiles. This clearly highlights the impact of deprivation on the risks of poor dental health in children.

Figure 4

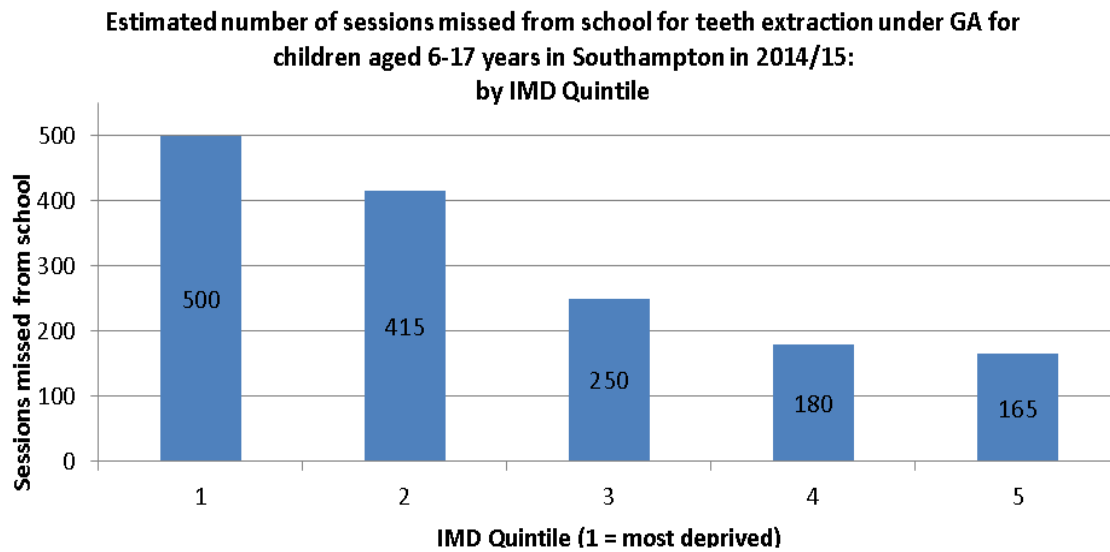


Each GA extraction for school-aged children will potentially result in five missed sessions from school (one session for the presentation to dentist, one session for the GA pre-assessment clinic, one session for the day of extraction, one day for recovery on the following day and one session for post assessment). In reality there are likely to be more sessions missed for sickness days associated with toothache and for recovery time from the procedure. Additionally, parents/carers may need to take leave from work to take children to the various appointments.

Using an estimate of five missed school sessions missed, GA dental extractions would have accounted for 1510 missed sessions in Southampton amongst 6-17 year olds in 2014-15. The chart below shows the difference between deprivation quintiles, with 500 missed sessions in children from the most deprived quintile compared to 165 in the least deprived quintile. This represents a three-fold difference and may contribute to differences in achievement at school.

This figure does not include absenteeism for toothache and dental treatment carried out under local anaesthetic in high street dental practices. This figure will add to the inequalities as dental decay is higher in children from more deprived backgrounds.

Figure 5



Sources: Solent NHS Trust, Department for Communities and Local Government Indices of Multiple Deprivation 2010

The price from the National Tariff Payment system 2014-15 is £427³. The total cost of carrying out GA dental extractions for 493 Southampton children in 2014-15 was £210,511. This is a substantial cost to Southampton's health economy. This does not include the economic impact of parents or carers who have to take the children to multiple appointments.

What is currently being done locally?

An oral health improvement programme is in place in line with national guidance and best available evidence⁴.

Supervised toothbrushing programmes

There are currently around 1,000 children in 24 Early Years settings participating in supervised toothbrushing programmes. These are being expanded to include all Early Years' settings over the next year. The programme also includes advice and information about health eating and encourages parents to take children to a dentist regularly for further preventive care and advice.

Multi-agency working

- The oral health promotion team work with health visitors and school nurses to support vulnerable families with access to dental care within the Special Care Dental Service.
- Training sessions are being provided to local pharmacists about advising patients on sugar-free medications.
- A session on oral health is included in the annual foster carers training to benefit Looked After Children (LAC).
- The oral health promotion team contributed to the guidelines for the Healthy Early Years Award (HEYA) for pre-schools.

- A dental passport has been developed in conjunction with mental health and learning disability teams to enable continuity of dental care for their patients.
- Collaboration with the smoking cessation team has resulted in the addition of the need to visit a dentist to their assessment form following on from a training session.

Developing local initiatives to support national programmes

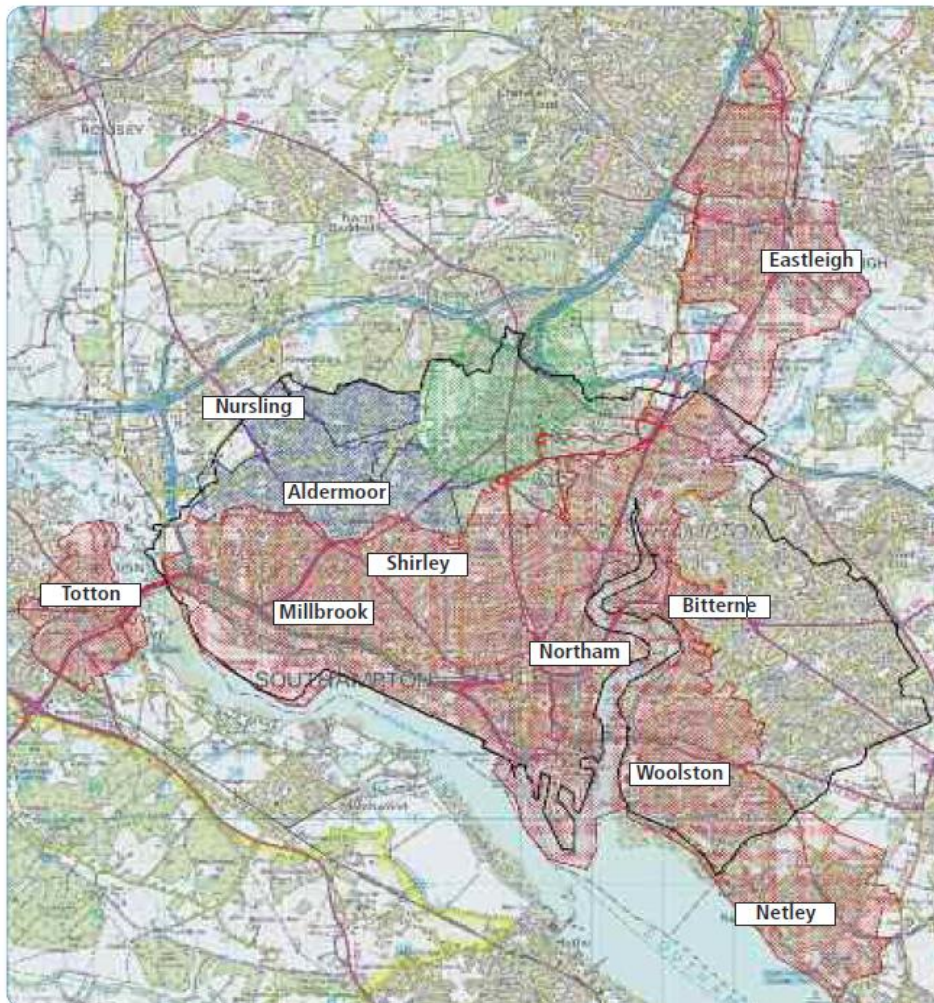
National programmes such as Stop Smoking campaigns, National Smile Month and Mouth Cancer Awareness initiatives are used to promote oral health locally and address common risk factors such as smoking, alcohol consumption and health diet.

What more can we do?

1. Oral health should be considered within other programmes for young children. For example, oral health assessment and promotion could be included in the Healthy Child pathway to ensure that every child is taken for a dental check-up as soon as teeth erupt and then regularly to prevent dental disease and maintain a good level of health.
2. A process to regularly collect data on dental extractions carried out under GA could be established. This will require discussions with NHS England who commission these services within Southampton. These data are useful in measuring the impact of poor oral health in Southampton children and on the local economy. Children undergoing GAs for dental extractions potentially present a safeguarding issue. If these data are collected regularly, they can be monitored by the Safeguarding Boards who can correlate it with other issues in local areas.
3. A water fluoridation scheme to supplement the targeted measures in Southampton could improve oral health in the city. Such a scheme was consulted on by the then Southampton City Primary Care Trust proposed a water fluoridation scheme for the City which was consulted on in 2008. The fluoridation scheme previously proposed would include 160,000 Southampton residents (67% of the local population) in central Southampton, Weston, Lordshill, Outer Shirley, Freemantle/ Polygon, Portswood and St Denys. The scheme would also potentially include around 35,000 people in Eastleigh, Totton and Netley in southwest Hampshire (see figure 6).

Figure 6

Map with shaded areas indicating areas covered by proposed 2008 scheme⁵



Fluoride is a mineral which occurs naturally in all water supplies. At the optimum level of one part of fluoride per million parts of water (1 ppm), it is known to benefit dental health by strengthening the tooth enamel and making it more resistant to decay. Water fluoridation is the controlled adjustment of a fluoride compound to a public water supply in order to bring the fluoride ion concentration up to a level that effectively prevents caries. When fluoridated water is drunk, the increase in fluoride ions in the saliva results in a chemical interaction which changes the tooth enamel structure making it more resistant to decay. This process carries on for as long as fluoridated water is drunk, continuously protecting the teeth. Salivary fluoride also inhibits the oral bacteria from producing enzymes which dissolve the tooth substance. If fluoridated water is consumed up the age of 7 years, during tooth enamel development, the fluoride is incorporated into the enamel structure increasing resistance to decay, but this is believed to have secondary impact compared to the continuous protection from salivary fluoride.

Over 400 million people in 25 countries worldwide drink water with added fluoride including in the United States of America, Ireland, Australia and New Zealand. Around 10% of the England population

benefit from fluoridation schemes, mostly in the West Midlands. There is evidence from monitoring of water fluoridation schemes in the UK and around the world that this is an effective way to reduce dental decay and the dental inequality gap.

The Public Health England 2014 water fluoridation monitoring report states⁶:

“When deprivation and ethnicity (important factors for dental health) are taken into account, five-year olds in fluoridated areas are 28% less likely to have had tooth decay than those in non-fluoridate area”

“In fluoridated areas there are 45% fewer hospital admissions of children aged one to four for dental caries (mostly for extraction of decayed teeth under a general anaesthetic) than in non-fluoridated areas”.

“The reduction in tooth decay in children of both ages in fluoridated areas appears greatest among those living in the most deprived local authorities”.

Detailed analyses of the data found no evidence of a negative impact on general health outcomes including hip fractures, cancers or Down’s Syndrome.

References

¹ Health and Social Care Information Centre. Children in Hospital Episode Statistics – July 2012 to June 2013.

² Local Government Association and Public Health England. Tackling poor oral health in children Local government’s public health role. October 2014.

³ NHS England. 2014-15 National Tariff Payment System. Annex 5a- National Prices.
<https://www.gov.uk/government/publications/national-tariff-payment-system-2014-to-2015>.

⁴ National Institute of Clinical Excellence. Oral Health: local authorities and partners. October 2014.

⁵ NHS South Central. Public consultation on the proposal for water fluoridation in Southampton and parts of south west Hampshire, 2008.

⁶ Public Health England. Water fluoridation. Health monitoring report for England 2014.