Dental Health in Children (0-11)

Nottingham City Joint Strategic Needs Assessment April 2009

Introduction

Nottingham City's children have the second worst record in England (and the worst in the East Midlands) for decayed missing and filled teeth (dmft) in the biannual national survey of 5 year olds in schools. Intermittent surveys for other ages up to 14 show similar poor oral health.

As well as the obvious problems of pain or infection, poor oral health is associated with low weight and failure to thrive in infancy. Poor dental hygiene may persist into adult hood when periodontal disease is associated with heart disease, which is reversible if oral health improves. Poor maternal oral health is also associated with premature birth.

This assessment is largely limited to children aged 0 to 11 as the national survey at 5 years of age indicates previous and subsequent oral health.

Key issues and gaps

- Nottingham has the 2nd worst recorded oral health in five year olds
- Lack of a comprehensive dmft census/survey
- Lack of fluoride for children
- Low uptake of provided services
- Lack of qualitative information on reasons for low uptake
- Lack of service provision in some areas

Recommendations for Commissioning

- Training the trainer health promotion support to frontline workers universally but particularly in communities where English is a second language
- Strengthen links with nutrition services
- Survey and social marketing to identify blocks to attendance and encourage regular visits to the dentist

1. Who's at risk and why

All ages are at risk of poor oral health. This assessment uses the national 5 year old survey to indicate dental health of 0 to 11 year olds. The main risk factors for poor oral health are diet and nutrition, and poor oral hygiene. Fluoride in drinking water, whether naturally occurring or added, is protective against dental decay. Nottingham City has low levels of fluoride in its water at 0.25 μg/l, which is a quarter of the target level when fluoride is added to drinking water (Drinking Water Inspectorate).

Children in areas of Nottingham with the poorest dmft results also tend not to visit the dentist. Children who visit the dentist regularly rather than only when they have symptoms have better oral health (ONS - Impact of Oral Health)

Children from deprived areas are more likely to have poorer oral health with more severe decay of more teeth, and when treated are more likely to have teeth extracted. (ONS - Social Factors)

2. The level of need in the population

Dmft in Nottingham's five year olds has increased from 2.33 per child in 2002 to 3.10 per child in 2006. During the same time the national average has fallen from 1.49 to 1.47 dmft per child. The current rate of dmft in Nottingham City is three times that of surrounding Nottinghamshire, and only one other local authority in England currently has a worst record. (British Association for the Study of Community Dentistry). In 2005, those aged 11, had the 6th worst dmft survey result in England. Against a background of national improvement, Nottingham City's five year olds dental health is at the average level for England 35 years ago.

In Nottingham City the dmft survey has been limited to a small number of schools and pupils. 5% of 5 year olds have been surveyed compared with an England average of 43%. 23 out of 80 schools who teach 5 to 11 year olds have been surveyed in 2006. Among these schools the percentages of pupils eligible for free school meals or who speak English as a second language significantly predicts the number of diseased, missing or filled teeth per child (and accounts for about half the variation between schools). Using this information, it is possible to derive a synthetic estimate for all schools in Nottingham.

This shows that children in the most deprived fifth of schools have four times as many dmft as the children in the fifth of schools that are least deprived.

Of surveyed schools, the school with the worst number of dmft per child has 30 times more dmft per child than the best (5.75 v 0.2)

Within Nottingham, children living in Clifton North or South, Bulwell Forest, or Wollaton West are significantly more likely to have visited a dentist in the previous two years (50-60%) than those living in Arboretum, Bulwell, or Radford and Park (20-30%). Surveyed schools in the areas with the lowest attendance tend to have the highest rates of dmft.

(The results for the survey conducted during 2007-8 have not yet been published).

3. Current services in relation to need

Dental services are commissioned geographically but individuals may access any dentist they wish. Those in employment often choose to visit a dentist close to where they work rather than where they live, and the rest of the family may follow. It is therefore likely that a large proportion of the activity counted in the statistics on which our targets are based relates to

people who are not resident in Nottingham and not registered as patients with Nottingham City PCT. Some usage information by place of residence is available but this is limited. There is evidence of gaps in provision in some localities.

As at March 2007 90% of Looked after children had visit the dentist in the previous 12 months (a total of 295 children).

4. Projected service use in 3-5 years and 5-10 years

Dmft survey results are worsening while service use is currently decreasing. The expected outcomes from planned interventions are to improve dmft survey results and increase use of services.

The birth rate is increasing locally as are the proportion of children who have English as a second language. If there is no positive action taken then service usage will increase and levels of oral health will continue to decline.

5. Expert Opinion and Evidence Base

The DH have published an evidence base of interventions to improve dental health in children (DH - Delivering Better Oral Health)

Robust cost effectiveness information is not available though there is some evidence that the cost of delivering an oral health promotion programme results in a greater reduction in overall dental services expenditure in the UK. (Appraisal of Economic Evaluation of Leeds DHE programme)

6. Unmet needs and service gaps

There is no reason to believe that the volume of dental care available within Nottingham City is insufficient to meet the needs of the population as 40% of dental practices are known to have additional capacity available. Dental care is also being provided for people who are known to be resident outside of the county.

Similarly there is no indication that the quality of dental services is significantly below average. Therefore, poor oral health may indicate a block to access, either from families not seeking regular dental care, or providers not offering sufficient services convenient to patients.

Water Fluoridation is a contentious issue. In other deprived areas where poor oral health may be expected, but fluoride is either naturally high or is added to drinking water, the dmft survey results are much better (Drinking Water Inspectorate). However, there have been public concerns over any possible health risks of water fluoridation. The PCT will consider the technical feasibility and potential benefits of water fluoridation in line with guidance issued by the Chief Dental Officer.

At the last comprehensive national survey of children's oral health and service usage in 2003, only 1-2% of children used non NHS dental services and at 5 years old only 6% of children had not visited the dentist (ONS - Patterns of Care) . Within Nottingham City it is likely that the use of non NHS dental services is low for children, considering that Nottingham City is the 7th most deprived local authority. There are no directly comparable data with the national survey, but locally 40% of 0-4 year olds have visited a dentist in the previous two years. This suggests that locally far fewer children visit the dentist compared with the rest of England.

7. Recommendations for Commissioning

- Commissioning services based on preventative care in line with *Delivering Better Oral Health*
- Undertake a dmft census of 5 year olds
- Undertake a dmft survey of 6 to 11 year olds
- Increase reach and awareness of the City Smiles dental health promotion programme
- Training the trainer health promotion support to frontline workers universally but particularly in communities where English is a second language
- Strengthen links with nutrition services
- Survey and social marketing to identify blocks to attendance and encourage regular visits to the dentist
- Improve provision and access to specialist services
- Review the full range of salaried dental services for the City
- Explore different models of delivery considering child/family friendly
- Review the minor oral surgery service

8. Recommendations for further Needs Assessment

- A full equality impact assessment needs to be completed
- Survey attitudes to explore blocks and enablers to accessing services
- Conduct a social marketing analysis following a dental access survey
- Further explore any issues raised in the full dental health needs assessment
- Undertake a dmft census of all primary school children
- Undertake the national BASCD dmft survey due for 12 year old children dmft
- Increase reach and awareness of the City Smiles dental health promotion programme

9. Key Contacts

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