Research to Develop a Communications Campaign to Promote Childsmile within Local Communities
Stage 1: Literature Review

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1. Introduction

*Childsmile* is a universal childhood oral health service which aims to give every newborn in Scotland access to *Childsmile* care, with additional support targeted towards those children and families most in need. The programme is based on a fully integrated model comprising four main components:

- a core tooth brushing programme
- *Childsmile* Practice; promoting oral health from birth
- *Childsmile* Nursery; preventive programmes for children in the nursery setting
- *Childsmile* School: school-based dental service for children aged 4 and upwards.

Over the next three years the programme will be rolled out across Scotland, an expansion that will involve a network of professional groups, including public health nurses, oral health promoters, and community-based *Childsmile* Dental Health Support Workers who will work directly with children and families. For the programme to be successful it is critical that it engages with a wide range of stakeholders, including carers/parents, professional groups and voluntary organisations. Social marketing provides a useful framework for this type of multifaceted promotion.

This review examines social marketing campaigns directed at increasing parental/carers’ and professional engagement with child and family health; specifically campaigns and projects related to childhood oral health, childhood vaccination and breastfeeding. All three areas relate to the topic and target groups for *Childsmile* as illustrated in Table 1.1 below.

<table>
<thead>
<tr>
<th>Topic area</th>
<th>Topic similarity</th>
<th>Target groups</th>
<th>Location of promotion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Childhood oral health</td>
<td>Same</td>
<td>Same</td>
<td>Same</td>
</tr>
<tr>
<td>Childhood vaccination</td>
<td>Preventive care</td>
<td>Young children, their carers, staff providers</td>
<td>Hospitals, schools, wider communities</td>
</tr>
<tr>
<td>Breastfeeding</td>
<td>Change in behaviour and promoting a choice which may be against the social norm</td>
<td>Targeted to expectant and new mothers with specific attention to young mothers, first time mothers, and those in low socio-economic groups. Increasing targeting of the wider social network of fathers, grandparents, and friends.</td>
<td>Pre-natal, hospitals, mother groups etc</td>
</tr>
</tbody>
</table>

1.1 Social marketing

Social marketing interventions have been shown to impact effectively upon knowledge, awareness, attitudes and behaviour in a number of areas such as nutrition, substance misuse and physical activity (Gordon *et al.*, 2006, Stead *et al.*, 2006).
“social marketing is the application of commercial marketing technologies to the analysis, planning, execution and evaluation of programmes designed to influence the voluntary behaviour of target audiences in order to improve their personal welfare and that of society” (Andreasen, 1995: 7)

At the heart of social marketing are six principles; behaviour change, audience research, segmentation, exchange, marketing mix, and competition (e.g. McDermott et al., 2005). Behaviour change and increasingly audience research and segmentation have been incorporated as good practice within health promotion. However, the later three, exchange, marketing mix and competition are less commonly addressed. The exchange concept refers to the exchange of values or benefits for a good or service. One increasingly used approach is incentives, which are provided to foster adoption of behaviour change, for example within smoking cessation (e.g. Cahill and Perera, 2008, Jochelson, 2007). Within oral health ‘free’ items such as toothbrushes packs or beakers may play a similar role and are especially relevant, as incentives tend to be used to motivate a person to try a desired behaviour for the first time. The term ‘marketing mix’ refers to the 4Ps of the marketing mix – product, price, place and promotion. Social marketing promotional campaigns use marketing more extensively than just running a mass media campaign, typically selecting a range of media and channels to reach the target audience(s) with relevant messages and support. Other Ps include ‘policy change’ and ‘people’ – for example, training of intervention delivery agents. The concept of ‘competition’ relates to competition between behaviours, activities and resources for different stakeholders. For oral health competition can occur in a number of areas for different stakeholders as illustrated in Table 1.2.

Table 1.2 ‘Competition’ in the area of oral health

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Competition Factor</th>
</tr>
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<tbody>
<tr>
<td>Parents/carers</td>
<td>Diet choices: healthy food versus desired snacks</td>
</tr>
<tr>
<td></td>
<td>Morning and bed time activities: tooth brushing, bottles as comforters versus difficult bedtimes</td>
</tr>
<tr>
<td>Dentists</td>
<td>Demands on time: providing treatment versus preventive information</td>
</tr>
<tr>
<td>Health promotion staff</td>
<td>Types of messages: oral health versus other topics as a priority message</td>
</tr>
<tr>
<td></td>
<td>Types of activities: short term versus long term continued support</td>
</tr>
<tr>
<td>Public health nurses</td>
<td>Demands on time: prioritising different client groups, risk activities and behaviours</td>
</tr>
</tbody>
</table>

Less common, although highly relevant to the current project is the division between operational social marketing, which is directed at achieving defined behavioural goals (i.e. tooth brushing and registration with dentists), and strategic social marketing, which aims to influence policy and institutional/social structures (i.e. increased value of promoting child oral health by professional groups and inter-
organizational communication). From our scoping interviews it is clear that both of these are relevant to the expansion of Childsmile.

1.2 Research aims and objectives
The overall aim of this project is to inform the communication strategy and the development of local social marketing campaigns designed to improve uptake of the Childsmile programme as the routine dental service from birth in selected areas in Scotland’s three administrative regions.

The aim of this review is to identify the evidence-base and literature and wider information available on social marketing campaigns relating to children and family-child health in three topic areas; oral health, childhood vaccinations and breastfeeding, with a particular focus on service uptake and attendance. This is intended to inform the topic guides and provide illustrative material for the next stage of the study, qualitative research focus groups with parents.

In addition, the review will also inform the following project objectives and questions:

- which family members hold the most influence over the children’s oral and general health?
- what are the main facilitators and barriers to engagement with dental services generally?
- how best to promote a programme as the routine dental or health service available from birth?
- how best to market a programme to meet the needs of expectant mothers, families with newborn and/or young children?
- how best to market a programme to facilitate the registration of babies and young children?
2. Methodology

A flexible structure was used to review the evidence-base and literature available (both grey and academic) on social marketing campaigns relating to children and family-child health in three specific fields; oral health, childhood vaccination and breastfeeding. For each topic systematic searches were undertaken on five key academic databases, see Figure 1.

**Figure 2.1 Academic databases**

<table>
<thead>
<tr>
<th>Database</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>IBSS (BIDS)</td>
<td>International bibliography of social science research</td>
</tr>
<tr>
<td>Ingenta</td>
<td>Global research gateway</td>
</tr>
<tr>
<td>Applied Social Science Citation Index &amp; Abstracts (ASSIA)</td>
<td>Multidisciplinary database covering the journal literature of the social sciences</td>
</tr>
<tr>
<td>Science Citation Index</td>
<td>Multidisciplinary database covering the journal literature of the sciences</td>
</tr>
<tr>
<td>Medline</td>
<td>Database of the life sciences literature.</td>
</tr>
<tr>
<td>Sociological Abstracts</td>
<td>Multidisciplinary full text database, with a strong focus on social science research</td>
</tr>
</tbody>
</table>

The list of search terms was developed and adapted by browsing the subject indexes from a sample drawn from each database. For both academic and grey literature the following relevance criteria were applied:

- publication date 1995 onwards
- national or international studies published in English
- a primary study with original data on the effectiveness of social marketing interventions in the three fields of interest.

Duplicates were removed and abstracts assessed for evidence of social marketing principles (i.e. behaviour change, audience research, segmentation, exchange, marketing mix, competition). Once full texts of all potentially relevant articles and documents were retrieved, final inclusion/exclusion decisions were made. Papers that were disregarded tended to relate to clinical aspects covering issues such as disease/behaviour prevalence and policy formation. Papers where no transferable learning for the UK context was identified were excluded. Additional searches in these same databases were also carried out to identify barriers and facilitators and risk factors for the three topics. A full list of all the published material used in the review is provided in Section 7.

The academic literature was supplemented by grey literature identified through internet searches on Google and Yahoo. These searches used a variety of search terms including terms used to search the academic literature, researchers’ names from the academic literature and project titles. In addition, email enquiries were made to campaign leads where these were identified.

The final review findings presented are necessarily descriptive as evaluation information was available for only a few of the campaigns identified, reflecting the limited amount of academic studies reporting individual interventions.
Report structure
The following three sections address the three topic areas of: childhood oral health, childhood vaccination and breastfeeding. Within each section, evidence of barriers and facilitators is summarised, followed by case studies of individual interventions or approaches. Learning points are identified after each case study and summary tables are presented in Appendix 1. Appendix 2 summarises barriers and facilitators identified across the review. Section 6 offers conclusions.
3. Oral health

The provision and scope of child oral health services differs across countries depending on the national health care systems. For example, Scotland aims to provide full coverage (preventive care and treatment) free at point of delivery, while others, such as the United States, have only recently expanded public insurance coverage to childhood oral health (CDHP: http://www.cdhp.org). These differences appear likely to influence parental and children’s attitudes to child oral health services identified, as well as the types of oral health campaign strategies, and their promotion.

3.1 Barriers and facilitators to engaging with childhood oral health services

In recent years there has been an expansion in oral health services for children coupled with a growing body of literature regarding barriers and facilitators to accessing these services. Barriers to parents taking children to the dentist include psychosocial aspects covering both their own and the child’s dental anxiety (Soulliere, 2009), mistaken oral health beliefs, low importance of primary teeth and perception of need balanced in relation to costs (Kelly, Binkley, Neace et al., 2005).

A study of 268 UK mothers of young children at high-risk of caries found a number of gaps in knowledge and weak support for oral health (Blinkhorn, Wainwright-Stringer and Holloway, 2001) summarised in Table 3.1.

Table 3.1 Oral health beliefs of parents

<table>
<thead>
<tr>
<th>Tooth brushing</th>
<th>71% were aware that they should brush their children’s teeth twice a day</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>94% were aware to use a small toothbrush</td>
</tr>
<tr>
<td></td>
<td>52% were aware to use only a small pea-sized amount of paste</td>
</tr>
<tr>
<td></td>
<td>3% were aware of the recommended level of fluoride in toothpaste</td>
</tr>
<tr>
<td>Diets</td>
<td>75% were aware sugary foods and drinks should be consumed only at mealtimes</td>
</tr>
<tr>
<td></td>
<td>7% were aware of the four foods and drinks which supplied most sugar to a child’s diet.</td>
</tr>
<tr>
<td>Attitudes to milk teeth</td>
<td>75% believed dental decay in milk teeth was very important</td>
</tr>
<tr>
<td></td>
<td>50% wanted their children’s carious teeth restored</td>
</tr>
</tbody>
</table>

Studies have also indicated that low-income caregivers can have poor oral health expectations which can discourage use of dental services (Amin and Harrison, 2009).

Structural factors, such as the location of the service has also been shown to be a barrier (Camardese, 2007) for American teenagers, suggesting this is likely to be an important concern for caregivers and parents of younger children who have to rely on public transport to access services. Additional factors, such as socio-economic status and insurance status have also been identified as important barriers. For example, parents of pre-school children in the United States face barriers such as a lack of insurance coverage, cost of care and difficulty finding providers who accept their insurance (Slack-Smith, 2003). A recent United States survey of 1,608 parents with children between the ages of 3-17 found that 57% of children began going to the dentist by age 3. Overall 82% received regular dental care (defined as seeing the dentist at least once per year), but this fell to 58% of children without dental
insurance. This latter group was also 3 to 4 times more likely to not receive regular
dental care as compared to those with private or public dental health insurance.
Fourteen percent of parents of children with public health insurance found it difficult
to find a dentist who would accept their insurance (Souliere, 2009). This study also
indicated that perceived cost, the main barrier for 25% of parents, was also related to
insurance status, with 12% of parents not obtaining dental treatment which they
considered their child required, of which 9% were covered by private insurance, 13%
by public insurance, and 22% had no insurance coverage. Similar differences in the
perception of barriers in Scotland may exist between NHS and private coverage,
especially in cases where dentists will only accept NHS children if the parents
register as private.

Positive facilitating features associated with engagement with childhood oral health
services include caregiver’s level of education, health beliefs which identify oral
health with overall health, and possessing insurance coverage (Slack-Smith, 2003).
Mothers who are engaged with their own oral health (i.e. have regular dental care)
have also been shown to have a facilitator role, both for younger children (3-6 years
old) who are more likely to receive preventive services and dental care in the future
(Grembowski, Spiekerman and Milgrom, 2008), and for 9 year olds for whom they
are more likely to actively supervise tooth brushing (Saied-Moallemi, Vehkalahti,
Virtanen et al., 2008). Indeed there are indications that positive oral health beliefs
can minimise potential structural barriers such as a lack of accessible transportation,
school absence policies, and discriminatory treatment (Kelly, Binkley, Neace et al.,
2005).

Focussing on oral health professionals, a number of barriers have been identified
which make it less likely for them to provide child focused oral health treatment and
information. These include lack of training and poor clinical understanding of child
oral health. A recent survey study explored the different barriers for East and West
Germany dentists to restore primary teeth in kindergarten children (3-6 year olds) (n=
320 dentists) (Splieth, Bünger and Pine, 2009). In East Germany paediatric dentistry
was taught in structured courses and lectures, including clinical training, whereas the
West German curriculum did not provide training in paediatric dentistry until
unification. Overall parents’ attitudes were not seen as a barrier, and dentists
recognised the need for restoring primary teeth. However barriers included concerns
about children’s anxieties (e.g. child’s fear of the dentist chair and the drill) and the
inadequate reimbursement for fillings. A minority (35%) of East German dentists
agreed that providing restorative treatment in 3-6 year olds was stressful compared
to 65% in West Germany. This difference was not linked to other variables (i.e.
gender, time available for treatment, or perceived value of treatment) and thus the
difference in training is likely to be the main factor in the difference in perception of
stressfulness of treating 3-6 year olds.

3.2 Oral health campaigns
The literature review and grey literature identified a number of childhood oral health
campaigns which used various strategies to promote both individual behaviour
change (e.g. increased and more efficient tooth brushing) and service engagement
(e.g. fluoride varnish). The organisations which run these campaigns often employ a
range of activities with specifically targeted initiatives supported by media campaigns
and professional outreach. The next section explores the campaigns in relation to
four main approaches; community engagement, school-based programmes, public awareness campaigns and professional engagement. The review is necessarily descriptive as evaluation information was available for only a few of the campaigns identified. A summary of the cases reviewed is provided in Appendix 1 (3.2).

3.2.1 Community engagement campaigns
The literature identified two community engagement campaigns employing significant social marketing features.

(i) Healthy Teeth, Happy Children (Vancouver, Canada)
Healthy Teeth, Happy Children, was a seven year community-based Canadian oral health promotion programme aimed at a Vietnamese urban minority population of pre-school children (Harrison and Wong, 2003). The project was based on observations of the extensive dental treatment needs of Vietnamese children, as noted by local service providers. The project aim, directed at inner-city Vietnamese pre-school children in Vancouver, was to design a culturally sensitive health promotion programme to improve dental health.

Strategy and campaign approach
The project consisted of four phases: diagnostic information gathering, planning, implementation and ongoing evaluation. The initial period of information gathering was carried out by a community dental health worker and a dental hygienist through interviews with Vietnamese mothers attending Child Health Clinics and an assessment of the dental health of the children. Whilst all children younger than 18 months were caries-free, there was extensive tooth decay in young children. The investigators found high levels of bottle use during the day and during sleep-time long past recommended weaning age and that some parents did not see primary teeth as important.

In consultation with the target group it was decided to name the campaign ‘Healthy Teeth, Happy Children’ which is an English translation of a familiar Vietnamese proverb. The intervention consisted of a video on infant dental health and one-to-one counselling supported by community-wide activities. Recruitment and counselling sessions were carried out at the twice monthly Vietnamese Child Health Clinics which coincided with scheduled infant immunization visits. A Vietnamese lay health counsellor provided counselling to mothers with telephone follow-up providing support and coaching (Table 3.2). The child dental health worker was also available for ‘drop in’ consultations which proved popular.
Table 3.2 Counselling schedule at immunisation visits (Healthy Teeth, Happy Children)

<table>
<thead>
<tr>
<th>Age of child (in months)</th>
<th>Messages</th>
<th>Gift to parent</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Importance of baby teeth</td>
<td>Teething soother</td>
</tr>
<tr>
<td></td>
<td>Soother for comforting</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Teething</td>
<td>Pamphlets in Vietnamese</td>
</tr>
<tr>
<td></td>
<td>Tooth cleaning</td>
<td>language</td>
</tr>
<tr>
<td>6</td>
<td>Tooth cleaning</td>
<td>Infant toothbrush</td>
</tr>
<tr>
<td></td>
<td>Avoiding bottle in bed</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Baby bottle tooth decay</td>
<td>Training cup</td>
</tr>
<tr>
<td></td>
<td>Switching from bottle to cup</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Review all topics</td>
<td>Infant toothbrush</td>
</tr>
</tbody>
</table>

The programme also incorporated a series of additional awareness raising activities:

- video used by the Child Dental Health workers with parents and mother and toddler groups in local community centres and Neighbourhood House
- article on dental health in a local Vietnamese magazine
- child dental health booths at local festivals (i.e. Lunar New Year festival)
- window displays near bus stops during Dental Health Month.

Outcomes
A process evaluation was carried out with follow-up assessments being held four times (Harrison and Wong, 2003). In total 112 mothers had more than one counselling session, and four follow-up assessments were undertaken over a 6 year period (16, 25, 8 and 17 children respectively). Participating children 18 months of age and older had significantly fewer decayed surfaces than the comparison group of similar age children from a different community (p<0.05). Throughout the seven years the mothers who had had more than one counselling visit reported significantly less use of sleep-time and daytime bottles for their children, and their children had significantly less prevalence of caries compared to similarly aged children at baseline. At baseline (n=14) 83.3% used a daytime ‘comfort’ bottle compared to 6.3% at the 1996 follow up, and 69.2% used a sleep-time bottle compared with 13.3% at follow up. Fifty percent of children were caries-free at baseline compared with 93.8% in 1996 and 42.9% in the comparison group. Similar encouraging results were seen in the following years, for example 66.7% of children used a sleep-time bottle in 1994, down to 12% in 1998 and 11.8% in 2001. The success of the programme is also supported by a project in 1999 which screened 5 year old children in schools in the same area for signs of visible decay and found that of the 536 children, 32.1% had tooth decay compared to 5.9% of children taking part in this project. Reasons given for parents not attending for the follow-up assessment included; families having a family dentist, not seeing the need for another dental examination, movement away from the area, and the mother having a job.

Learning points
- Projects can connect to a target group’s language, culture and experience (e.g. as refugees) by using staff who share the same cultural and ethnic background.
Providing interpersonal support options helps to accommodate different communication preferences and provides continuity of service. For example, in the current case, lay health counsellors are available to provide face-to-face support in conjunction with telephone follow-up and ‘drop in’ sessions.

Projects should be aware of, and where relevant, link with other health, social and cultural events such as scheduled infant immunization visits, annual awareness events, and local festivals.

(ii) Beakers for Bottles (Huddersfield, England)
Beakers for Bottles was a five day awareness raising campaign targeting the South Asian community in the Birkby area of Huddersfield (Andrew, 2004).

Problem definition
The South Asian community was identified as having a high level of oral health problems following initial audience research.

Strategy and campaign approach
This project was run in February 2002 and led by health visitors of the Birkby area of Huddersfield working with the Department of Health and local oral health promoters. Families and carers of children over six months old were invited to exchange their feeding bottles for a new beaker, toothbrush and toothpaste at the local health centre. In addition, advice on local dentists, tooth friendly food and drinks and correct brushing practice was offered. An interpreter helped with translation, and posters and leaflets were provided in English, Punjabi and Urdu.

Outcome
In total 135 families attended the programme and the campaign was well received. However, this was a short, one-off event with no concrete evaluation. While it was noted that further oral health promotion events in the community were planned, the review could find no evidence of these. As is often the case with time-limited projects it is likely that the NHS staff involved have moved on.

Learning points
- Exchange of children’s oral health products (feeding bottles for a new beaker, toothbrush and toothpaste etc) can be an important way of gaining parents’ interest and involving them with services.
- Information has to be communicated in an accessible way using appropriate language in order to maximise reach and value to the intended audience group.

3.2.2 School-based programmes
Schools, with their ‘captive’ audiences, can be effective places for identifying and treating children at high risk from dental disease (GIH, 2001). In addition, bringing dentist services to children often removes many of the barriers to oral health care, (e.g. parents’ inflexible work schedules, lack of transportation and eligibility), and in some cases minimises bureaucratic processes and cost.

(i) St. David’s Dental Program (Texas, USA)
The St. David’s Dental Programme (Jackson, Jahnke, Kerber et al., 2007) which began in 1998 is a free mobile dental van service which provides screening,
treatment and oral health preventive information to two counties in Central Texas. This programme is led by the St. David’s Community Health Foundation and the City of Austin\(^1\) to target low income children in schools with a majority of students who are economically disadvantaged in Central Texas. Many children and adults in the United States do not have insurance coverage for dental health, and provision of Medicaid care is below the required level. The programme aims to reach children (and adults) in public schools during school hours and treatment occurs on mobile dental vans (The Tooth Mobiles) parked in schools’ parking lots.

**Strategy and campaign approach**

The programme aims to provide dental sealants, treatment and prevention to children in Austin’s low income public schools using portable equipment. The vans are self-contained, fully equipped mobile dental facilities run by an operations team (Director of Operations, Clinical Director, Information Resource Manager, Site Coordinator, Consent Form Coordinator, Oral Health Educator, a Volunteer Coordinator, and a Van Assistant) and a clinical team which is solely employed for dentistry work. The programme employed three dentists (one part-time), three dental assistants, two part-time dental hygienists. Volunteer dentists were used as a source of supplemental help (9% of the service in 2005). They also play an important part in raising community awareness about the need for dental care and help to reassure the private local dental community that the dental programme is not competing for paying patients. The programme is expanding to incorporate a referral system and building a network of private dentists willing to provide free services in their offices to at least two patients per year.

The delivery of dental services proceeds through the following steps:

1. Programme staff map out a master screening and site sequence and meet with teachers and school administrators to explain the programme, its importance, the role of teachers and administrators, and data on past performance specific to the individual campus. Teachers give students “opt-out” forms for parents who do not want their children screened. Programme staff issue reminders, collect signed consent forms and give out incentives (gift certificates for local businesses) to parents and to those teachers who have a 100% return rate.

2. On screening days, a dentist screens all students, excluding those who opted out, to determine their dental needs. The dentist gives each student a language-appropriate form with the screening results and requests consent if the child needs sealants or treatment. Categories of recommended action included: dental work that could not be performed on the Tooth Mobile, dental work that could be performed on the Tooth Mobile, and sealants undertaken through the programme.

3. The van visits the school three weeks after screening and treatment is provided for students who returned consent forms. Portable sealant clinics are run inside the school while children needing therapeutic dental care attend the van.

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\(^1\) The project is also supported by Michael and Susan Dell Foundation, Topfer Family Foundation, Still Water Foundation, A Glimmer of Hope Foundation, Dell Corporation Foundation, Austin Community Foundation, Texas Department of State Health Services, and individual donors.
Outcome
Since 1998, the program has provided 132,791 screenings for oral health treatment needs and 38,634 encounters for sealants or treatment. During 2005-2006 only 2% of students opted out of the first step of screening. Initial evaluation indicates that return of the consent form was much higher when teachers and other school staff understood the programme, chose to emphasise it to students and parents, and encouraged the return of consent forms. Consent forms were returned by 75% of students in 2005-2006, compared with 54% in 2004-2005, as teachers and staff responded to increased awareness raising and the use of incentives. Further evaluation is to be carried out through a longitudinal study to estimate the impact of the programme’s services on individuals and the community over time. Qualitative measures will include level of awareness and positive image in the community and among community dentists, and quality of relationships with schools and agencies.

Learning points
- Removing structural barriers is important and can be done by bringing the service to the client group, in this case by using vans to provide a mobile service during school hours.
- Establishing the support of trusted intermediaries, in this case teaching staff, is critical to engaging the client group. To achieve this, significant time, resources and planning need to go into building relationships and links with local intermediary groups.
- Informed consent is important. However opt-out consent can be used for non-treatment, low-risk stages such as screening which is a useful method of assessing need within the target population and increasing reach.
- Providing education combined with incentives and rewards is critical to engaging children, parents and local implementers, in this case teachers and school management.

(ii) Love Teeth with Your Kids Programme 2008-09 (Hong Kong)
Since 1993, Hong Kong Oral Health Education Unit (OHEU: https://oheu.toothclub.gov.hk/ohii_ext) has been carrying out a region-wide pre-school children oral health promotion programme named “Brighter Smiles for the New Generation” aimed at 0-6 year olds. The programme uses the Maternal and Child Health Centres and schools (kindergartens and nurseries) as dissemination stations, encouraging frontline workers such as nurses and teachers to become ‘oral health ambassadors’. Nurses run one-to-one counselling sessions or seminars with parents at the Maternal and Child Health Centres. Kindergartens and nurseries can visit the ‘Brighter Smiles Playland’ which has interactive games and activities (games, display boards, models and CD-ROMs). The OHEU also run a highly visible health promotion bus. A Simulated Oral Laboratory is available where five cyber-looking dummy heads are installed with teeth models which allow the visitor to practice tooth brushing and flossing techniques as they follow a demonstration shown on the computer screens. During 2008 and 2009 the OHEU is also developing a pre-school programme aimed at 3-5 year olds. Information and images of programme components are available on the OHEU website, including the Playland, the Oral Health Promotion bus and the Simulated Oral Health Laboratory.
**Strategy and campaign approach**

The OHEU runs a school-based programme aimed at promoting daily self-care habits in 3-5 year old children and at establishing a habit of daily supplementary tooth brushing for children by parents or adults at home every night. The pre-schools are asked to set aside a six-week period from November 2008 to May 2009. Education materials from the OHEU are provided and teachers are asked to remind the parents to watch the Cartoon and to read the ‘Brighter Smiles for the New Generation’ picture book with their children. This educational programme has been evaluated and demonstrated statistically significant increases in the oral care habits among children as well as parents.

The student handbooks include instructions and tooth brushing record sheets which parents fill in. Teachers check the tooth brushing records to assess children’s performance every week and paste award stickers on the front covers of the student handbooks. Once the six weeks tooth brushing activities have been completed teachers reward the students with appropriate certificates (Self Care for the child’s independent effort and Love Kids for the parent’s supplementary tooth brushing effort). Teachers also submit the students’ records online or by fax and The Tooth Club selects schools for a number of awards such as the Best Performance, 5-year Continuous Participation and Highest Participation Rate. The lists of awarded schools are publicised on the website and in the Teacher’s Manual.

A range of bilingual (English and Chinese) education materials are provided:

- ‘Toys’ World’ cartoon video - children and parents learn oral health messages from the story in the cartoon video CD
- Teacher’s Manual - contains the programme guidelines, lists of Awarded Schools
- certificates - Self-Care Certificates and Love Kids Certificates
- stickers - Weekly Award stickers and Gold, Silver, Bronze and Merit Certificate stickers
- student handbook - contains programme introduction, the ‘Pledge for Parent and Children’ and the ‘Tooth brushing Record sheets’ etc
- posters - for promotion on notice boards
- paper teeth model - a teaching aid for teachers
- the ‘Brighter Smiles for the New Generation’ Picture Book Series – ‘First visit to the Dentist’ for 3 year old class, ‘Love your Teeth Say No to Snacks’ for 4 year old class and ‘My new Tooth’ for 5 year old class.

**Outcomes**

The programme has 600 schools with around 100,000 children participating every year (Chan Cheng, 2008). It also incorporates high profile targeted campaigns with strong branding. The evaluation is ongoing.

**Learning points**

- Non-oral health professionals such as nurses and teachers can have an important role as ‘oral health ambassadors’ and are vital stakeholders in location-based oral health programmes.
Mobile vehicles are valuable as highly visible health promotion advertising and reach individuals and communities who would be unlikely to travel to attend events.

Providing a system of awards at both child and school level can help to incentivise participation when supported by linked and branded educational materials and activities.

(iii) Tooth Tutor Programme (Vermont, USA)
Dr Dynasaur is a publicly funded state health insurance programme for Vermont children administered by both the Vermont Department of Health and the Office of Vermont Health Access (CHCS, 2004). Dr Dynasaur also covers oral health care services. Whilst low income families who do not have private insurance are a key target group, the programme has broad income guidelines and families can be eligible for Dr Dynasaur even if the parents are working or have other health insurance. The Vermont Tooth Tutor programme runs in conjunction with Dr Dynasaur and aims to give every child access to preventive, restorative and continuing care in a dental office.

Background
Only 52% of eligible children were enrolled in the Dr Dynasaur programme and in 2004 a three year demonstration project was begun to tie into the Tooth Tutor programme to improve ‘consumer education’.

Strategy and campaign approach
A multi-pronged approach to improving access to oral health care has been developed and includes a media campaign, dentist recruitment and retention efforts, and an expansion of the school-based Tooth Tutor programme. Vermont’s Tooth Tutor programme is a school-based programme aimed at increasing children’s understanding of oral health and increasing access to oral health services.

The Tooth Tutor programme provides a curriculum so that all students can benefit from dental health education in the classroom provided by the Tooth Tutor. This gives students the opportunity to learn more about their teeth and their dental health. The Tooth Tutor also identifies children in the school who are not registered with a dentist, helps families find dental services and provides free dental screening if needed. Children have access to preventive, restorative and continuing care in a dental office, or ‘dental home.’ The ‘dental home’ is a dentist which provides ongoing dental care, as well as answering dental questions or emergencies.

Market research was carried out to identify the most relevant messages for consumers. This included a literature review and focus groups with caregivers to identify barriers, beliefs, and behaviours and subsequently to test the effectiveness of sample messages. The firm conducted a baseline survey prior to the media campaign and will conduct a repeat survey following the campaign. Vermont chose to target the ‘back to school’ time period (early Fall 2004) to launch the programme with a second wave in 2005.

The media campaign used radio, television, and print advertisements of oral health messages along with a toll-free helpline number incorporating the word ‘smile’ (CHCS, 2004). The ads were designed and produced in Vermont, using Vermont
children. The campaign emphasised the need to see a dentist regularly and how to make and keep appointments. Helpline callers were provided with age-appropriate oral care guidelines for their children, information on who to call about Dr Dynasaur insurance, transportation, questions or problems, and a list of licensed dentists and Tooth Tutor (school-based oral health) programmes.

**Outcome**

There were 45 Tooth Tutors working in 122 schools across Vermont. This was a three year project that ended in 2007. Pre- and post-campaign telephone surveys were conducted to establish changes in knowledge, attitudes, and behaviours, but no published results have been identified.

**Learning points**

- The Vermont programme recognises the value of having a multi-pronged approach, in this case combining a media campaign, telephone helpline, oral health schools education programme, dentist recruitment and retention strategy, and improved access to dental services.
- A particularly striking feature of this programme was the decision to use specifically trained staff and dedicated tutors to take oral health messages into the schools, to identify children at greatest need and to act as a link between the target group and local dental health services.

(iv) Mighty Mouth School’s Programme (Ireland)

Recent evidence in Ireland indicates that 30% of 5 year olds have one or more decayed, missing or filled teeth, while over two thirds of 15 year olds have decay in their permanent teeth (Vhi Healthcare, 2004). To help tackle these issues the Dental Health Foundation (DHF) of Ireland runs a number of oral health awareness campaigns and school-based programmes.

**Strategy and campaign approach**

The ‘Mighty Mouth School’s Programme for 5-6 year olds’ was developed by the DHF and is currently funded by the Department of Health and Children, and supported by the Irish Expert Body on Fluorides and Health. The DHF has worked with oral and general health promotion teams in the eastern region and in partnership with teachers, parents and children. The aim is to inform children and parents about the value of good dental care, dental services for children and the role of tooth-friendly foods and drinks, and to ensure supervised regular and effective tooth brushing with fluoride toothpaste. The programme used an educational settings-based approach and was developed to address the needs of parents and teachers concerned. It connects with the Social, Personal and Health Education (SPHE) curriculum for primary schools in Ireland. The programme uses a range of products, including four colouring cards, some of which are also available as posters (see, for example, http://www.dentalhealth.ie/download/pdf/B&W_col_cards.pdf).

One poster also includes a ‘Winning Smile’ rap to reinforce the message of tooth brushing for children. Other material for children includes an ‘Acid Attack - Tooth Decay’ poster, a diagram of The Food Pyramid, a Tooth Fairy Box which can be folded by the children to keep their teeth, a Brushing Diary with gold stars to colour in and a Certificate.
The teachers’ and parents’ guides cover a range of information, including an explanation of the links with SPHE, importance of diet, tooth decay, the main dental health messages for 5-6 year olds, the food pyramid, and dental services (http://www.dentalhealth.ie/publications/index.tmpl?max=20&neRlDdataрг=find_all). In addition, teachers and parents can request: Certificates, the Tooth Fairy Box, the Food Pyramid poster, large toothbrush and puppet and a tube of fluoride toothpaste for demonstration purposes from the Oral Health Promoter.

At the start of 2006 the DHF developed and tested an additional programme – ‘Every Child Can Have a Winning Smile’ - an innovative school-based oral health promotion programme targeting 7-8 year olds in areas of high social deprivation and disadvantage in Dublin and Belfast. The programme set out to:

- encourage toothpaste use
- improve child oral health-related quality of life and self-esteem
- increase children’s oral health-related knowledge and attitudes
- assess changes in reported oral health behaviours among children living in relative poverty.

This was developed and tested in partnership with a number of oral health, public health, professional and academic organisations in Eire and Northern Ireland. In similarity with the Mighty Mouth Programme, a detailed resource pack was produced for the programme. The campaign used a leaflet and poster, for clinics, surgeries and classrooms. The simple, easy to read leaflet was designed for parents and teachers to provide clarification as to who can use the children’s dental health service and relevant contact details (Every Child Can Have a Winning Smile, 2009 http://www.dentalhealth.ie/download/pdf/EveryChildLeaflet.pdf).

Outcomes
The programme was evaluated as an RCT based on the equilibrium salivary fluoride level assay which assessed if children were brushing their teeth (DHF, 2006). This showed that all children increased their use of fluoride toothpaste, while qualitative research showed increases in oral health-related quality of life, self-esteem and knowledge and attitudes relating to their oral health. The staff involved (oral health promoters and school personnel) were also very positive, viewing it as a feasible partnership between oral health promoters and schools:

- all children increased their use of fluoride toothpaste between baseline and six months
- after 12 months the impact of the visit by the dental team was lost in comparisons to the control schools as salivary fluoride levels dropped to their baseline levels or lower
- the impact of the intervention in the Belfast group, with educational intervention but no toothpaste supplies, was lost by 12 months
- over the whole 12 month study the Dublin experimental group, which included regular distribution of free toothpaste, had a sustained increase in the frequency of toothpaste use
Learning points

- This programme like many others underlines the importance of building partnerships with key stakeholder groups, in this case across oral and general health promotion teams, teachers, parents and children. Using existing curriculum requirements as a vehicle for ensuring oral health messages are delivered to the target audience appears to have been particularly important to developing the work in Irish schools.
- Outcome evidence suggests that this type of programme can have a significant impact on tooth brushing behaviour, but that programmes need to incorporate extended measures and activities if they are to have a sustainable impact on behaviour.

3.2.3 Public awareness
Many organisations run public awareness campaigns to support more specific and targeted interventions. For example, the Irish Dental Health Foundation which runs school-based programmes outlined in the previous section, also produces indoor wall-posters on 'Tooth Tips' for 0-2 and 2-7 year olds. The Hong Kong Oral Health Education Unit (OHEU: https://oheu.toothclub.gov.hk/ohii_ext), which runs the Tooth Club has a wide range of media materials, including oral health leaflets, booklets, posters and Video CDs. It also runs an adult campaign, ‘Love Teeth Campaign 2008-09’ aimed at increasing public awareness of oral health. This combines newspaper advertorial, promotion in a TV situation comedy, on-line advertisements, MRT (train) trackside panel advertising and a promotional poster.

A number of organisations also run time-focused events such as ‘oral health weeks’, an example of which is the Australian Dental Association programme outlined below. The current UK National Smile month is relatively new and not reviewed here (http://www.nationalsmileweek.org).

(i) Australian Oral Health Week
Australian Oral Health Week is an annual awareness raising project run by the Australian Dental Association (ADA)

Problem definition
Australia is in a unique position as a country with one of the worst dental health records for adults, but one of the best for children. For example, in comparisons with other countries, 12 year olds have the seventh lowest average number of decayed, missing and filled permanent teeth (AIHW, 2002). This is largely due to the national fluoridation of the water system implemented in the 1960s and 1970s. However, in 1996 the national dental service, including the dental checks which were offered from 12 months to help with early diagnosis and prevention of dental disease, were restricted to low income families eligible for state health coverage. As a result large regional variations in childhood oral health exist between different regions of Australia

Strategy and campaign approach
The ADA produces oral health information using a combination of leaflets, newsletters and a website. Their largest outreach campaign is an annual community awareness programme, the Dental Health Week. This is run by a social marketing company and acts both as a public awareness activity and as an opportunity for ADA
members to become involved with the local community. Each year the annual event targets a specific population as well as providing more general information.

In 2004 the campaign, run by ADA and a range of industry partners (Listerine, Colgate, Wrigley’s extra and Kraft Cheeses stick) was named ‘Healthy Smiles’ and was supported by a fact sheet, leaflets and a competition. People were encouraged to attend the dentist and talk about their oral health. In addition, specifically targeted information was also provided:

- teachers were encouraged to hold oral health classes and were provided with support material
- parents were given information to educate and inform their children about looking after their oral health, especially with regard to diet and cleaning routines.

In 2005 the event was run solely by ADA with the industry partners undertaking their own oral health promotions\(^2\). The ADA 2005 event was aimed at increasing awareness of oral care for children and expectant mothers. A range of material was produced for parents, professionals and the media, including, media releases on ‘decay and sugar’, ‘dental health and pregnancy’, and ‘drinks and dental decay’.

In 2006 the campaign focused on teenagers and particular risk factors connected to their oral health such as drinking bottled water and oral piercings (ADA Awareness Week: [http://www.ada.org.au/dhw/dhw06.aspx](http://www.ada.org.au/dhw/dhw06.aspx)). A range of information sheets and posters were produced including; ‘dental erosion a silent epidemic’, ‘oral piercings what you need to know’, and ‘nutrition to help fight dental decay’.

In 2007 the campaign focused on oral health for young adults (18-25 year olds). This age group are termed the “fluoride generation” and recognised as being at risk from dental decay due to lifestyle factors. The information produced in 2007 included:

Parents  
Your Child’s Diet, Your Child’s First Dental Visit, Fluoride, First Aid for Teeth

Teachers  
Let’s Talk Teeth, Let’s Look At Our Teeth, Food and Teeth, Looking After Our Teeth

The latest campaign, run during August 2008 was themed as a ‘7 day dental boot camp’ ([Bootcamp ADA](http://www.dentalhealthweek.com.au/bootcamp.htm)). The entry page links to sections for parents, teachers and children. The ADA produced oral hygiene guidelines and tips for parents and carers of young children and included a postcard containing tips for the child’s dental health, a series of fact sheets and a brochure. The 2008 campaign was directed at providing ‘basic training’ for children and produced intervention materials for children, parents and teachers. The boot camp is accessed from the website, which also provides linked information for parents, related classroom activities for teachers and extra children’s activities.

\(^2\) For example Colgate-Palmolive currently ran ‘Unique Oral Health Month Promotion’ which aimed to reach younger, urban consumers through a unique video animation.
“This 7 Day Dental Boot camp will give kids the basic training they need to look after their teeth and understand what’s good for them and what they should avoid. You can start your kid’s Boot camp program anytime – just click on the first day and get them started with Day One’s Basic Training”

Outcomes
This annual campaign, commissioned by a professional dental organisation, has the backing of health professionals (dentists) as well as involving a number of key stakeholder groups (teachers, parents). However, no evaluation was found, and outcomes of awareness are difficult to assess. An added complication is that in Australia oral health is the responsibly of the State, not Federal government, which means there are variations in the provision of services across the country.

Learning points
- Time-focussed events such as awareness weeks have a number of benefits: they provide an opportunity for oral health professionals to become involved with the local community; they can minimise the problem of message saturation or overload; and they can be a useful agenda setting tool using a combination of paid for and free media to profile a particular theme or message.
- Perhaps of particular relevance to Childsmile at this point in its development, is that national events of this type can rally the support of regional and local bodies to a particular cause, whilst at the same time providing them with the necessary flexibility and freedom to respond in ways that are sensitive to regional differences and local need.
- They also demonstrate how awareness events provide a forum for bringing together disparate bodies who would not normally work together. However, the Australian experience indicates that corporate involvement needs careful assessment and monitoring.

3.2.4 Professional engagement
Professional engagement in the provision of childhood oral health information and treatment is critical. Two professionals groups are particularly significant in improving child oral health; dentists and school staff. A number of programmes and campaigns employ specific strategies designed to engage professional stakeholders.

(i) Dental Health Institute of Ireland
The Dental Health Institute of Ireland is a professional organisation which plays an important role in setting the agenda for dental health in Ireland. It also has a role in developing and running specific awareness raising campaigns.

Problem definition
The 2006 all-Ireland survey of children’s oral health indicated that while it has improved over the last three decades, socio-economic factors still play a major role in disparities in oral health in Ireland (Nunn, 2006).

Strategy and campaign approach
The Irish Dental Health Foundation promotes oral health in Ireland through advocacy work, providing information about fluorides, developing programmes, and supporting
health professionals. The Foundation works closely with the Department of Health and Children and Health Promotion Unit and seeks to play a complimentary role in supporting the work of public health bodies.

Training dental professionals is seen as one way of improving practice. The DHF initiated a Specialist Certificate in Health Promotion (Oral Health) which provides training for dental teams and professionals with an oral health role to support the delivery of oral health services using a health promotion approach.

Outcomes
An evaluation of the oral health promotion course (Costello, Hodgins and Connolly, 2006), suggests that child oral health promotion was seen as a key development area by participants. The majority taking part in the training initiative claimed to have moved to a more holistic and client-centred approach as a result of attending, and felt there had been improvements in clients’ knowledge, attitudes, behaviour and self-efficacy as a result of these changed practices. However, some reported a lack of resources, time and support from colleagues that resulted in a more limited focus on treatment rather than preventions. Interestingly, respondents indicated the importance of ‘personal interest’ and ‘a desire to ‘enhance employment prospects’ as key motivators to taking part in the course and 19% of respondents had subsequently been promoted.

Learning points
- Professional engagement can be stimulated by a number of activities such as advocacy work with professional bodies and institutions, provision of information on new developments, and professional development through training and support services.
- The Irish experience illustrates the value of professional training and support in oral health promotion skills to advancing preventive goals.
- It also illustrates two additional learning points regarding delivery, namely that training should not necessarily be restricted to dental teams but can also be advantageous when extended to other oral health professionals; and that an expectation of career enhancement from accredited courses can be an important motivator to professionals to pursue further training. The latter is of particular importance in understanding the exchange element that underpins participation in this type of training.

(ii) Smile Alabama! Initiative (Alabama, USA)
The number of children in the Medicaid programme in Alabama was increasing and a greater number of dental providers were required. In 2000 a three year grant from the Robert Wood Johnson Foundation funded the Smile Alabama! initiative to improve oral health care services for Medicaid-eligible children by increasing the number of participating dentists by 15% and the number of children receiving dental care annually by 5% (Greene-McIntyre, Finch and Searcy, 2003).

Strategy and campaign approach
This three year dental campaign was based on a multidimensional, strategically planned outreach approach composed of four specific components: claims processing, dental reimbursement, providing education and recruitment, and recipient education. Specific interventions were implemented for each component.
For example, Component 3: Provider Outreach and Education focused on activities and materials that support dentists who enrolled in the Medicaid Dental Program. Approaches included state-wide dental workshops, attendance at professional association meetings, a dental newsletter, materials for provider support, face-to-face visits for recruitment and retention of dentists and creation of dental ambassadors.

**Outcome**
The dental programme was judged a success as it exceeded targets for each grant year. For example, at the start 19 counties had one or no dental providers. This number dropped to just 11 counties within the first year. However, due to the short term nature of the grant it is not clear if these gains have been sustained. In addition, a recent change in national policy with regard to child oral health is likely to impact on future coverage of the Medicaid programme.

**Learning points**
- The Alabama experience indicates that substantial investment is necessary to engage professionals in provision of services for those living in more disadvantaged circumstances and that such developments must be underpinned by careful strategic planning. However, for any gains to be fully realised there is also a need for initial investments to be sustained in the longer term.

(iii) Healthy Smile, Happy Child (Manitoba, Canada)
Healthy Smile Happy Child (HSHC) is a community-development prevention initiative aimed at existing caregivers and parents, which focuses on preventing early childhood dental decay. It aims to incorporate key early childhood oral health promotion messages into daily practice. Initial pilots have now been expanded to a province-wide initiative.

**Strategy and campaign approach**
One evaluated element of the HSHC initiative was a series of ten capacity-building workshops held between November 2006 and July 2007 with service providers and community members who work with infants, pre-school children and their families. The workshops lasted 1-2 hours, used an interactive PowerPoint presentation, a video covering early childhood caries and a group discussion about project resources and how these could be used. The training was provided by non-dental professionals in recognition that a range of professionals are in a position to give oral health care messages.

**Outcomes**
A pre- and post-workshop survey design was used to measure changes in participant knowledge, awareness and self-reported behaviour (MacIntosh, Schroth, Edwards et al., forthcoming). This explored awareness of important oral health information and messages. The pre-workshop survey revealed that a number of participants had limited knowledge, with between 15% and 45% selecting the option “I don’t know” in over half of the questions posed. Improvements were seen in the post-workshop survey administrated one month afterwards, with a 16% increase overall in the proportion of correct answers. Notably, 83% believed that a first dental visit should occur by the first birthday (compared to 36% pre-workshop, p<0.001),
and 86% thought a mother with untreated decay placed the child at risk (compared to 45% pre-workshop, p<0.001).

Whilst the workshops increased awareness of oral health messages, it is not clear if the behaviour changes which were self-reported regarding information giving behaviour were followed in practice. The study also had relatively small sample size, and a restricted geographic coverage. In addition, as participation in the workshop was voluntary it is unlikely to have reached those most resistant to engaging in this type of message giving behaviour.

Further qualitative research was undertaken with parents, caregivers, health care professionals and other service providers in 2007 (Sarson and Wilson, 2008). Recommendations to emerge from this work included a need for more oral health-related training for health professionals and other service workers on how to communicate socially sensitive oral health messages. In particular parents identified a need for oral health practitioners to better understand how not to shame parents when discussing oral health behaviour. In addition, both parents and service providers suggested involving a broader range of professional groups in oral health education activities than was currently the case, including those working in the public school system and day care services.

**Learning points**

- The Manitoba experience illustrates how the workshop can be a useful tool for increasing professionals’ understanding and engagement with oral health prevention, including those professionals without an existing or clear oral health remit. Key to this assessment is that it takes into account other time demands and pressures, and the priorities that non-allied groups attached to oral health.
- Using non-clinical dental professionals to provide workshop training was also found to be useful as it recognised the wide range of professionals positioned to give oral health care messages and led to an increased understanding of other professionals’ roles and how these messages could be integrated into working practices.
4. Childhood immunisation campaigns

Childhood immunisation programmes are the key public health measure to protect the health of children and the public from preventable communicable diseases. The World Health Organisation recommends that immunisation uptake should be 90% to ensure that the population has "herd" immunity – a type of immunity that occurs because of the low risk of an unvaccinated person coming into contact with a diseased person. To maintain these rates most countries have an extensive network of promotion and monitoring systems.

4.1 Barriers and facilitators to uptake of childhood immunisation services

There is considerable literature covering the major barriers to childhood immunization. Factors identified include parent-related factors (e.g. lack of knowledge of immunization schedules (Lieu, Black, Ray et al., 1994, National Vaccine Advisory Committee, 1991, Langkamp and Langhough, 1993, Salsberry, Nickel and Mitch, 1993, Lannon, Brack, Stuart et al., 1995, Willis, Brittingham, Lee et al., 1999), perceptions that vaccination is relatively unimportant (Keane, Stanton, Horton et al., 1993), factors associated with the social or physical environment (e.g. limited availability or high cost of transportation and child care, work conflicts, family circumstances) (Zimmerman, Ahwesh, Mieczkowski et al., 1996), and factors associated with the health care delivery system (e.g. appointment times and immunization policies, limited operating hours, too few staff, long waiting times, and missed opportunities to immunize (Orenstein, Atkinson, Mason et al., 1990, Abbotts and Osborn, 1993, Bobo, Gale, Thapa et al., 1993, Keane, Stanton, Horton et al., 1993, Brenzel and Claquin, 1994, Wood, Halfon, Sherbourne et al., 1994, Weese and Krauss, 1995).

Lack of knowledge and risk perception have been found to be factors for parents in the UK completing childhood immunisation programmes with some parents more likely to see vaccination as riskier for their child than not being vaccinated (Smailbegovic, Laing, Bedford et al., 2003). The MMR immunisation in particular has come under intense media scrutiny leading to parental mistrust in UK. In August 1997 80% of parents saw MMR as 'completely safe' or presenting a 'slight risk' but by February 2002 only 60% of parents reported similar opinions (Pearce, Law, Elliman et al., 2008). This decrease in confidence is attributed to changes triggered by negative media coverage of the MMR and increased concerns related to side-effects (notably autism). Similarly, a study in Texas found that the mistaken belief that natural immunity (from disease exposure) was superior to vaccine-induced immunity correlated with parental concerns regarding vaccine safety (Prislin, Dyer, Blakely et al., 1998). However, in a nationwide American study of over 13,500 parents only 22.6% of parents saw vaccine side-effects as a barrier to vaccination, and this was not statistically correlated with children's immunization status (Taylor, Darden, Brooks et al., 2002). Rather, lower immunization rates correlated with alternative parent-cited barriers such as confusing vaccination schedules, vaccine expense, religious objections to vaccination, frequent illness in the child (which delayed immunization), and the inconvenience of the vaccination process.

Barriers experienced by parents will depend on the socio-economic and cultural perspective of the population. A study of immunisation services in Hackney, London which has a high level of hepatitis B carriers and provides routine immunisation for
at-risk babies found that the service must be supported by translation, counselling, and parental referral tailored to the highly mobile and ethnically diverse population (Larchera, Bourne, Aitken et al., 2001). For example, the mother changed her name in 35% of cases and translation requirements were extremely high (85% for Turkish, Vietnamese, and Asian families).

A range of facilitators to help promote uptake of vaccinations is also highlighted in the literature. These include increased awareness of the risks of the illness and increased understanding of the safety of the vaccination. For example, Gnanasekaran, Finkelstein, Hohman et al., 2005 found that among children aged 5-18 years with asthma in Colorado, the weekly influenza vaccination rates increased after the media covered child deaths caused by influenza. Pre- and post- surveys (n=862) to the flu season found that after the media coverage parents were more likely to see their child as at risk from catching influenza and were more likely to consider influenza infections to be severe. In addition, parents felt that there were fewer risks associated with the influenza vaccine than had been identified prior to the beginning of that flu season. Another survey carried out with urban parents from Denver, Colorado found a number of inaccurate beliefs (Daley, Crane, Chandramouli et al., 2007): 47% thought their child was unlikely to contract influenza, 70% thought influenza vaccine could cause influenza and 21% considered influenza vaccination unsafe for a 1 year old child.

Importantly, it would also seem that lack of knowledge is not itself the main barrier. One study in Hong Kong used in-depth interviews with 15 parents to explore general perceptions and health beliefs about childhood immunizations (Tarrant and Thomson, 2008). The parents readily admitted knowledge deficits concerning childhood vaccines but believed that the benefits of immunization outweighed the risks, with family members and peers serving as a source of pro-immunization advice. A second study in UK explored parental views of the new heptavalent pneumococcal conjugate vaccine (PnC7), and found that parental confidence in immunization had been affected by the MMR controversy and that as parents had poor knowledge of the pneumococcal disease they wanted information about the safety and effectiveness of PnC7 (Chantler, Newton, Lees et al., 2006).

Another facilitator of immunisation uptake is recommendation by a health professional, particularly by doctors (Daley, Crane, Chandramouli et al., 2005). It was seen to be the most important factor by the parents (odds ratio [OR]=5.5; 95% confidence interval [CI]=2.4–12.3; p<0.001) along with the belief that getting an influenza shot is a smart idea (OR=3.5; 95% CI=1.3–8.9; p<0.01) (Nowalk, Zimmerman, Lin, et al., 2005).

The influences on clinicians to carrying out immunisation have also been explored. An American study which explored factors influencing paediatricians in their delivery of influenza vaccine for healthy children between 6 to 23 months old in 2004 found that approximately 56% were 'adopters' of the policy recommendation to provide influenza vaccine to these children (n=258) (Clark, Cowan, Rickert et al., 2005). These doctors were more likely to list the American Academy of Paediatrics recommendation as a strong influence and non-adopters were twice as likely to list vaccine purchase cost and parental acceptance as barriers. However, 70% of all the paediatricians listed vaccine shortage as a barrier.
Finally, a report in 1999 by the Communicable Disease Control ‘Vaccine-Preventable Diseases: Improving Vaccination Coverage in Children, Adolescents, and Adults (CDC, 1999)’ reviewed over 4,000 studies of 18 commonly used methods for improving immunization rates. Each was rated as either “strongly recommended”, “recommended” or as having “insufficient evidence” to judge whether it was effective. The strongly recommended approaches were:

- implementing parent and provider reminder or recall systems
- educating targeted parents and providers
- reducing out-of-pocket costs for vaccines
- expanding access to immunizations through increased clinic hours and other measures
- giving feedback to providers.

For many of these interventions, such as the use of incentives, there was insufficient evidence to evaluate effectiveness. The review concluded that using multiple strategies seemed more effective than single efforts. For example, increasing access by extending opening hours could lead to a 3%-7% increase in rates. However, also providing immunizations in the emergency room, and reducing bureaucratic barriers improved immunization rates by as much as 35%. In addition, providing general education about vaccines to the target population raised the rate by 2%-3%, but, when combined with parent reminders rates, this increased to 29%.

4.2 Childhood immunisation campaigns
This literature review was intended to focus on child vaccination campaigns related to social marketing, however the majority of campaigns identified related to adult vaccinations or vaccination in developing countries, e.g. provision of malaria nets during epidemics and the potential for a HIV vaccine. In total, five child and family orientated vaccination campaigns were identified. A summary of the cases reviewed is provided in Appendix 1.

4.2.1 ABC Immunization Calendar Computer Program (St Louis, USA)
A well evaluated approach which seems to have particular relevance to Childsmile was the use of individually tailored immunisation calendars to promote immunisation attendance and completion of schedule at two public health centres in the city of St Louis in Missouri, USA (Kreuter, Caburnay, Chen et al., 2004).

Strategy and campaign approach
Parents of babies aged from zero to one (n=321) were given individually tailored calendars promoting immunization from two urban public health centres. Parents or guardians of eligible babies completed a brief interview with project staff and the interview responses, along with an electronic photo, were entered into the ABC Immunization Calendar computer programme. Parents received personalised calendars covering the months before their baby’s next scheduled immunization and could only receive the next version by returning to the health centre as scheduled (illustration in Kreuter, Caburnay, Chen et al., 2004). The calendar also contained information relating to the next appointment (time, place etc) as well as general information about home safety, injury prevention, clinical preventive services,
parenting skills, and child development, all matched to the child’s current age in months.

**Outcome**

A corresponding child of the same age and sex was selected from the same centre to serve as a control and immunisation status was tracked till the children were 2 years old. In the intervention group 82% were immunized by the end of the 9 month enrolment period, compared with 65% of the control group (P < .001) and by the age of two the higher rate was still present (66% Vs 47%, P < .001). Interestingly, the younger the baby was at enrolment the greater the impact of the intervention. The authors note that the photograph was more important in attracting the interest and attention of the parents than the information contained in the calendar, perhaps reflecting the limited economic situation of many of the parents. The value attached is illustrated by one parent who said: “The calendars are going into a scrapbook. I’ll have to fold them or roll them or something, but they’re going in a scrapbook.” (Kreuter, Caburnay, Chen et al., 2004, p125)

**Learning points**

- The individually tailored immunisation calendars used in the St Louis vaccination programme illustrated how reminder devices designed to personalise attendance and which recognise and reinforce the parent’s emotional attachment to the child, in this case through child photographs and personalised text, may act as incentives and help promote regular dental attendance as well as to providing oral health information and messages.
- The calendar can encourage returning to the service as scheduled as additional sections are conditional on attendance.

**4.2.2 Immunise Australia Programme (Australia)**

In 1995, a national survey found that only 33% of Australian children up to six years of age were fully immunised according to the recommended schedule at that time (ABS, 1996 cited in Carroll and Van Veen, 2002). In response, the Immunise Australia Programme was formulated by the Australian Government.

**Strategy and campaign approach**

Extensive formative research was undertaken to guide the development, implementation and evaluation of campaigns (Carroll and Van Veen, 2002). A key role was to gain understanding of the perceived costs and benefits associated with parents taking their children to be immunised. Barriers identified focussed on practical and medical issues, such as remembering whether the children had been immunised, difficulty in attending, lack of belief in the seriousness of the diseases and importance of scheduled times, and fear of possible side effects. Attitudinal segments were identified and campaign communication was directed primarily towards ‘acceptors’, ‘defaulters’ and ‘questioners’, whilst providing information for ‘advocates’ to confirm their position.

The campaign was designed to increase awareness of the benefits of full childhood immunisation and that risks from the diseases are greater than risks associated with vaccination. Additional goals were to reinforce existing positive attitudes, reduce fears and stimulate parents to check immunisation status. The primary target was parents of children up to five years old. Secondary targets included family and
friends of parents and key professionals such as immunisation service providers and information providers.

The initial phase of the campaign, over six months, was directed at immunisation service providers. It was intended to increase and reinforce their knowledge levels and support for immunisation, thereby increasing opportunistic recruitment by general practitioners. It also meant that relevant service providers were informed about the forthcoming campaign to assist them in meeting requests for information. Components included widespread distribution of the updated Australian Immunisation Handbook, a regular column in a peak professional publication, an interactive satellite programme for remote providers, a regular newsletter, development of the Australian Childhood Immunisation Charter, and distribution of newly developed resource materials.

The community education campaign launched with television commercials showing the experience of whooping cough, later incorporating a 'measles' commercial. Additional promotion included advertising in women’s magazines and posters in health related settings. A further range of support components included Awareness Days, a national telephone information line, and distribution of a childhood immunisation booklet. Extensive public relations activities underpinned the campaign elements, including publicity strategies, stakeholder management and an expert spokesperson programme. Non-English speaking parents were also addressed, with advertising, public relations and education strategies in 13 spoken languages.

The following year (1998) the Programme initiated the National Measles Campaign to increase the proportion of 5-12 year olds who receive their second measles, mumps and rubella vaccinations (MMR) to 95%. The campaign incorporated national mass media and direct marketing to parents to obtain consent for schools based vaccinations by visiting nursing teams. Information kits were distributed to schools and local doctors. A comprehensive public relations campaign promoted the purpose and mobilised an issues-management campaign to counter concerns raised by anti-immunisation groups.

**Outcome**

National telephone surveys were undertaken pre- and post-parental campaign (n=802 and 804 respectively: Cramer and Carroll, 1998 cited in Carroll and Van Veen, 2002). High advertisement recognition (80%) and message recall levels were identified. There was also an improvement of aspects reflecting the campaign aims, for example increased reported domestic discussion about immunisation, improved knowledge of correct ages for immunisation, and raised perceived seriousness of the diseases (e.g. whooping cough from 49% to 69%). Evaluation of the measles campaign showed that 96% of the target age group children received the second MMR immunisation and sero-survey showed that 94% of children were immune to measles.

Policy initiatives providing ongoing incentives to doctors and parents were introduced following the first campaign, particularly linking eligibility for the Childcare Rebate to the child’s immunisation coverage rate.
Data from the Australian Childhood Immunisation Register reflect this positive picture (cited in Carroll and Van Veen, 2002), with levels of full age-appropriate childhood immunisation consistently rising since the campaign began. For example, the proportion of children 12 months of age assessed as fully immunised for their age rose from 76% in the summer prior to the campaign to 85% by the end of the following year.

**Learning points**

- An extensive and multi-faceted service provider campaign prior to mass media campaigns reinforces knowledge levels among professionals and enhances their support for encouraging service uptake, together with readiness to respond to questions triggered by the public campaign.
- Substantial formative research provides in-depth understanding of the target audience(s) and enables communications to address elements of exchange important to the target audience. Similarly, it facilitates segmentation and identification of target groups.
- Effectiveness is enhanced by combining a staged mass media campaign with extensive supportive communications and routes, including non-English language components. Public relations campaigns are important, including working with stakeholders and responding to issues raised in the media.
- A public education campaign can help create an environment that facilitates the implementation of policy initiatives, such as incentives for professional and public programme engagement, which in turn create structural support for the achievements of the campaign.

### 4.2.3 Pneumococcal Vaccine (England)

In September 2006 the pneumococcal conjugate vaccine (PCV) was added to the pre-existing vaccines issued through the UK national childhood immunisation programme. Pneumococcal meningitis is a serious disease which can causes death, long-term nerve damage, deafness, brain damage or epilepsy (Department of Health, 2006). The launch of new vaccinations poses challenging communication requirements both in terms of providing the standard patient information about the new vaccination (i.e. dosage, risks and side effects) and in providing ‘agenda setting’ information so that the vaccination target group understands the risks associated with the disease.

**Strategy and campaign approach**

The PCV was incorporated into the existing childhood immunisation schedule and given at two, four and thirteen months. There was a catch-up campaign for children up to two years who have already started their immunisations. They were contacted by their local GP over a few months to arrange for vaccination.

The Department of Health runs a general information campaign aimed at primary care givers with children under the age of three to promote awareness and use of the immunisation service. The new pneumococcal vaccine campaign included information about the pneumococcal disease which can cause serious illnesses such as meningitis, septicaemia (blood poisoning) and pneumonia if it enters the bloodstream. Parents and health professionals can access information about the changes to the routine programme on the immunisation website [www.immunisation.nhs.uk](http://www.immunisation.nhs.uk) or access leaflets and fact sheets (Department of Health,
2006) from central health promotion resource services and GP surgeries. The leaflets are produced in a range of languages; Arabic, Chinese, Hindi, Irish, Lithuanian, Polish, Portuguese, Russian, and Urdu.

**Impacts and outcomes**
In June 2006, NHS Immunisation Information, part of the Department of Health, evaluated the impact of their childhood immunisation campaign, which included the campaign surrounding the launch of the new pneumococcal vaccine. Interviews with primary care givers showed that the pneumococcal media campaign was well recognised among parents, with TV driving most awareness. Findings also showed high levels of recognition of campaign press ads. The new pneumococcal ‘catch-up’ leaflet was most widely recognised among all current leaflets. The majority of parents were correctly aware that they were to wait to be contacted (BMRB, 2006). Further analysis in 2008 indicated, however, that the uptake of the vaccination was lower in England (89.1% across England’s Primary Care Trusts (PCTs), compared to 96.4% in Scotland and 94.9% in Wales) (Health Protection Agency, 2008).

**Learning points**
- The launch of PCV illustrates the importance of undertaking careful planning when incorporating new programmes into existing service structures. This is likely to be particularly significant to Childsmile as the programme seeks to adapt the service to take account of the current service environment and the differences that exist at regional level.
- This case also demonstrates the value of using multi-media and alternative language options to maximise campaign reach.

### 4.2.4 Measles, Mumps & Rubella (MMR) Catch-up Campaign (England)

Uptake of MMR for children reaching 12 months was around 84.1% in England in 2008 (Ford, 2008), however this falls short of the required 90% coverage indicated by the WHO. The MMR programme is part of the childhood immunisation schedule, delivered mainly through primary care by GP practice nurses. Support is given by Specialist Nurses for Immunisations and Vaccination who assist, for example, by offering advice on complex cases and visiting hard to reach families (NHS Immunisation, 2009).

**Strategy and campaign approach**
The main strategy for increasing coverage of the MMR vaccination has been to run a national ‘catch up’ campaign through English Primary Health Care Trusts (PCTs) and GPs from August 2008 for all children who did not complete the MMR vaccination. Different levels of priority were identified ranging from children who have never had the vaccination to teenagers leaving school.

Structural support included the Department of Health providing PCTs with additional supplies of the MMR vaccine, information materials, and average additional funding of £30,000 per PCT. Childhood immunisations are part of the GP General Medical Services contract for children aged up to 16 years, and the MMR accounts for 25% of the payment within the weighting system. In addition, there are also trained health visitors who vaccinate opportunistically.
The Chief Medical Officer has sought support from PCTs outlining the need to increase coverage of measles through the provision of the MMR vaccine (Department of Health, 2008). PCTs responded in different ways. For example, Nottingham PCT held a ‘MMR Challenge Event’ in June 2008 with a range of stakeholders to explore reasons for the under-performance and to agree local actions to tackle these (Nottingham City PCT, 2008). The Department of Health also produces posters and leaflets for use in medical settings (e.g. surgeries).

The catch-up campaign is also supported by the NHS English and Wales website (www.immunisation.nhs.uk/) branded as ‘immunisation, the safest way to protect your child’. The site contains information for children, parents and health professionals about the science and history of immunisation and about the vaccines in the routine UK immunisation schedule. The website also has an interactive vaccination schedule for parents to fill in the child’s date of birth and what vaccinations they have already had. The results can then be printed off and used as a reminder or taken to the child’s GP, practice nurse or health visitor and used as a prompt to open-up discuss around the role and need for childhood vaccinations. There is a specific area for MMR with information for children, parents and professionals, including leaflets, and key research papers.

London is considered particularly at risk of a measles outbreak because of the size and transient nature of the local population. A pilot intervention is currently being run in 12 PCTs (February - May 2009) as part of a pan-London social marketing strategy to increase uptake of the MMR vaccine (Barnet NHS PCT, 2009). The aim of the intervention is to support local MMR catch-up campaigns as well as assess the effectiveness of the social marketing approaches being adopted. The pilot phase is being run by the London Social Marketing Unit (LSMU) partnered with a marketing agency, and focuses on parents of children in low socio-economic groups, including Black and Minority Ethnic (BME) groups, with 0 and 1 dose of the MMR vaccine. The marketing campaign is likely to include:

- direct marketing mailers to parents with children aged 13 months to 5 years
- media activity (including local press, leaflet inserts and posters)
- face-to-face engagement through community leaders
- ‘rapid response’ toolkit (for use in the event of a measles outbreak).

Outcomes
The evaluation of the 2004-2005 London ‘catch up’ campaign was published in 2007 and indicates that it was successful, with more than 40,000 children vaccinated by the campaign (17,000 of which were previously unvaccinated) (Fraser, Kissling, Ramsay et al., 2007). However, one study reports that in order to minimise the risk of a major outbreak 40% of unvaccinated children would have had to been covered and that the endemic measles transmission risk remains high in several health districts (Choi, Gay, Fraser et al., 2008).

Learning points
- Recent work in the UK to encourage uptake of the MMR vaccine demonstrates some key strengths of web communications in providing an efficient mechanism for ensuring up-to-date information is made readily available in an accessible form, and through its interactive features, enabling
users to prepare and download personalised information, in this case
personal vaccination schedules. The UK experience suggests that this kind of
personalised information can act both as reminders for attending or making
appointments, and as prompts to open a dialogue with local health care
providers.

- The MMR case also indicates that more conventional forms of personalised
communication such as direct mail-outs can also have a useful role to play in
encouraging attendance, especially when received from a trusted source and
supported by local media activity designed to raise the profile of the
vaccination programme.

4.2.5 Nevada Immunization Coalition (USA)
Nevada has one of the fastest growing populations in the United States and is
relatively transient with high numbers of tourists (Nevada Immunization Coalition,
2007). Childhood immunisation rates are low, compared with the country as a whole
(59% compared with 77% of children by the age of two, well below the target for herd
immunity).

Strategy and campaign approach
The Nevada National Immunization Coalition runs a number of events including;
Nevada Infant Immunization Week (NIIW), Protect and Immunize Nevada’s Kids
(PINK), Back to School outreach and NV’R Miss a Shot, the coalition’s media
campaign.

The Nevada Infant Immunization Week (NIIW) was founded in 1996 as a county-
wide initiative with one clinic and 17 children vaccinated. By 2004 the programme
had expanded to a regional initiative with an increasing number of events and
children vaccinated each year. The NIIW provides vaccination information, education
and free vaccinations clinics throughout Nevada. During the 2007 event over twenty-
five clinics were held, with over 5,000 children attending. During 2008 a new ‘Back to
School Immunization Week’ was run as a community event by the Southern Nevada
Immunization Coalition (SNIC) composed of 15 organisations, The coalition, which
included commercial sponsors such as Wal-Mart, vaccinated over 1,600 children.
Free vaccinations were also given out to 150 children at three clinics in at-risk
communities as part of a joint event by the Southern Nevada Health District, CDW
and SNIC. Other events include a ‘Back to School Baseball Night’ run by the
Northern Nevada Immunization Coalition (NNIC), Saint Mary’s Regional Medical
Centre and the Golden Baseball League’s Reno Silver Sox. This was attended by
over 300 families who participated in fun activities and received back to school
immunization clinic information.

The Protect and Immunize Nevada’s Kids (PINK) Project, which started in northern
Nevada in 2005, is a direct educational campaign that provides information in
English or Spanish to new parents prior to leaving hospital. Information is provided in
a purpose designed information portfolio, which includes immunization, health, and
safety information, and is designed to store baby’s records including birth certificates
and immunization cards. The portfolio is given to over 40,000 new parents every
year (Southern Nevada District, 2006).
NV"r Miss a Shot is a state-wide immunization campaign with both consumer and health care provider components. Parents are targeted through a radio campaign and outdoor advertising which carry the message ‘Give your child a shot at life by immunising’. Private physicians and providers are targeted using print media and offered both educational resources and immunisation tools (images of outdoor advertising are available in: Nevada Immunization Coalition, 2007).

The Nevada Immunization Coalition (NIC) undertakes a variety of activities, including lobbying and policy formation, as well as vaccination campaigns and public awareness initiatives. In 2007 the NIC successfully passed a law, AB410, which established an immunisation registry, requiring state-wide vaccination data collection and setting out specific vaccination requirements for children registered in state schools. The NIC also run an annual conference for professionals, during which ‘Immunization and Connecting our Community Awards’ are given out. Attendees from a variety of settings receive up-to-date vaccine information and recommendations, disease-specific education, and strategies to increase immunisation rates. In September 2009 the campaign will be running the Nevada's State-wide Conference on Immunizations and Children’s Health which also functions as outreach (Nevada Immunization Collation, 2008).

There are few published outcomes from the Nevada Coalition, however the extensive detail provided on the types of intervention employed do serve to highlight a number of possible learning points which may be relevant to Childsmile.

Learning points

- The Nevada Coalition serves as a good example of what can be achieved from engaging with, and pooling resources from, a number of wide-ranging organisations, including professional and commercial organisations, in this case a major supermarket chain.

- The work of the Coalition also illustrates the potential value of targeting mothers before they leave hospital, where direct educational campaigns have been widely commended and purpose designed information materials well received. The information portfolio in particular illustrates how information can be packaged in such a way as to meet the wide-ranging information needs of young mothers at this critical stage in their child’s development. This insight suggests there is perhaps scope for combining oral health information with other sources of advice and help as part of a co-ordinated information package.

- Finally, the use made by the Coalition of annual conferences and award ceremonies to bring together professionals and other key stakeholders provide examples of how meeting events can be a useful way of bringing together disparate groups and of sharing examples of good practice. An annual event modelled on this type of experience may serve as a useful forum for sharing ideas and understanding how professionals working in different parts of the country are seeking to address the Childsmile remit. In the longer-term they might usefully provide a setting for making awards and delivering incentives designed to promote good practice and encouraging consistency in service delivery.
5. Breastfeeding campaigns

Rates of breastfeeding in the UK are one of the lowest in Europe (Office for National Statistics, 2006). In 2003 the Department of Health breastfeeding policy was changed to encouraged mothers to breastfeed up to six months, bringing the UK in line with the WHO and UNICEF (UNICEF, 2003). However, only 76% of women begin breastfeeding and only 35% of UK babies are being exclusively breastfed at one week, which drops to 3% at the age of five months (UK Breastfeeding Rates, UNICEF Website: http://www.babyfriendly.org.uk/page.asp?page=21). In general, older women who have completed education beyond high school are more likely to breastfeed, whereas mothers who are single, smoke, and do not participate in childbirth education classes are less likely to exclusively breastfeed (Piper and Parkes, 1996). Indeed only 52% of UK mothers under 20 begin breastfeeding, and 85% of mothers classified in higher occupation groups initiate breastfeeding compared to 59% in lower occupations. Thus, breastfeeding tends to share similar target populations with that of Childsmile, with areas of deprivation and women from low socio-economic groups and younger parents of greatest concern.

5.1 Barriers and facilitators to uptake of breastfeeding

A large volume of literature has been devoted to the barriers and facilitators for the uptake of breastfeeding. The decision to breastfeed or to bottle-feed is often taken early, before pregnancy or during the first trimester (Arora, McJunkin, Wehrer et al., 2000). An American study of 245 mothers who gave birth at a community-based hospital in Pennsylvania found that the most common reasons mothers gave for choosing breastfeeding included; benefits to the baby's health, naturalness, and the emotional bonding with the baby (Arora, McJunkin, Wehrer et al., 2000). The most common reason for these mothers choosing to bottle-feed were; their perception of their partner’s attitude to breastfeeding, uncertainty regarding the quantity of breast milk, and returning to work (Freed, Fraley and Schanler, 1993, Demer, 1995, Freed, Fraley and Schanler, 1992). Barriers to breastfeeding have been shown to include logistical (time constraints, space to feed etc), social and personal attitudes (of women, their partners, family members and health care professionals), physical (lack of milk) (Hill and Aldag, 1996), persistently sore and red nipples (MacDonald, 1995) and time constraints (Cohen, Haddix, Hurtado et al., 1995). In addition qualitative research has indicated that for some women in low income groups breastfeeding is seen as a practical skill, and the confidence and commitment is best achieved by exposure to breastfeeding rather than talking or reading about it (Protheroe, Dyson, Renfrew et al., 2003).

Barriers are also likely to be time-specific. One study, which explored breastfeeding of very low birth weights babies, found that while the main barrier throughout was a concern about the baby’s compromised physical status, different barriers were seen as important in different time periods as shown in Table 5.1 (Callen, Pinelli, Atkinson et al., 2005).
Table 5.1 Changing barriers to breastfeeding in different time periods

<table>
<thead>
<tr>
<th>Time period</th>
<th>Barrier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Following discharge from</td>
<td>low milk volume</td>
</tr>
<tr>
<td>Neonatal intensive care units</td>
<td>nipple and breast problems</td>
</tr>
<tr>
<td></td>
<td>mothers’ compromised emotional status</td>
</tr>
<tr>
<td>1 month</td>
<td>poor technique</td>
</tr>
<tr>
<td>6- and 12-month</td>
<td>provision of complementary feeding</td>
</tr>
</tbody>
</table>

Initial breastfeeding rates are higher in black and minority ethnic (BME) groups but tend to discontinue at a higher rate (Croydon NHS PCT, 2003), indicating that they may encounter more barriers at a later stage. Certain groups also face specific barriers. For example, barriers for working mothers include; insufficiently comprehensive maternity leave policies, lack of child care at or near the workplace, rigid time schedules that do not allow nursing breaks, lack of a location providing privacy for breast-pumping, and no refrigeration facilities for pumped breast milk (Barber-Madden, Petschek and Pakter, 1987).

In the American study previously described of 245 mothers who gave birth in a community-based hospital in Pennsylvania, the factors seen to encourage bottle-feeding mothers to breastfeed included; more information in prenatal class, more information from TV, magazines, and books, and family support (Arora, McJunkin, Wehrer et al., 2000).

Cultural sensitivity is also required when exploring supportive interventions. One study in the UK explored the use of breastfeeding support groups to overcome barriers to exclusive breastfeeding to 6 months among BME groups and with young mothers. It was found that Somali and South Asian women preferred groups that were limited to their ethnic group, whereas Afro-Caribbean women preferred groups that were open to all cultures. Similarly, it has also been found that young mothers prefer to attend groups with their peers only and that families and older women in the community have a disproportionate impact and can have more influence in changing practice (Ingram, Cann, Peacock et al., 2008).

Professionals may also experience barriers to the promotion and support of breastfeeding. These include negative attitudes and poor knowledge of breastfeeding (Bagwell, Kendrick, Stitt et al., 1993) and lack of training (Tennant, Wallaceba and Law., 2006). Personal experience can increase the confidence of health professionals (Freed, Clark, Sorenson et al., 1995) and those who successfully breastfed their own children are more likely to have a positive attitude to breastfeeding (Barnett, Sienkiewicz, Roholt et al., 1995). However, even when health professionals have a positive attitude to breastfeeding their lack of knowledge or confidence to solve breastfeeding problems can result in them not promoting breastfeeding (Patton, Beaman, Csar et al., 1996). Attitudes towards breastfeeding also vary between professional groups, with one Irish study indicating that health visitors and community midwives are more likely to have a positive attitude in comparison to hospital midwives and GPs (Bleakney and McErlain, 1996). A UK study found that knowledge of breastfeeding policy also differs between groups; with midwives, paediatricians and GPs having more accurate knowledge than health visitors, and voluntary sector staff (Wallace and Kosmala-Anderson, 2005). This is also reflected in the results from a systematic review which explored the impact of
training and education programmes for staff on breastfeeding duration and found it often to be inadequate and fragmented (Renfrew, Dyson, Wallace et al., 2005). Different professionals giving inconsistent or conflicting information also has a negative impact on the establishment of successful breastfeeding (Winikoff, Laukaran, Myers et al., 1986), causing frustration for mothers (Garforth and Garcia, 1989) as well as to staff themselves (Wallace and Kosmala-Anderson, 2005).

5.2 Breastfeeding campaigns
A systematic review of the effectiveness of public health interventions to promote the initiation of breastfeeding was commissioned by NICE (Protheroe, Dyson, Renfrew et al., 2003). The authors remark on the poor quality of research and evaluation carried out in this area, and recommend improvements. The review expresses particular concern about sample size, use of appropriate experimental and descriptive designs, consistent definitions of feeding, and useful measures of outcome. Standardising the measurement of initiation and continuation of breastfeeding across the NHS is needed as well as for the four countries of the UK. The main findings which relate to this review are as follows:

Education approaches
While there is some evidence to suggest that distributing breastfeeding literature to the general population is not effective, group health education can be effective among women from different ethnic and low income groups in westernised countries. One-to-one educational programmes were more effective for women who planned to bottle feed whereas group programmes were more effective for women who planned to breastfeed. Paying participants to attend increased participation rates for group classes. Breastfeeding promotions delivered as intensive, involving multiple contacts with a professional promoter or peer counsellor over both the ante- and postnatal period were most likely to have a positive effect on breastfeeding.

Multifaceted interventions
Multifaceted interventions increased initiation rates with five out of six effective multifaceted interventions included a media campaign, in combination with health education programmes, training of health professionals and/or changes in government and hospital policies. Four out of six effective multifaceted interventions included a peer support programme in combination with health education programmes, media programmes and/or legislative and structural changes to the healthcare sector.

Media campaigns
Local media campaigns (in one case TV) can be effective in improving attitudes towards breastfeeding. One study (Coles, Cotter and Valman, 1978) showed an increase in initiation rates as a result of a hospital-based media campaign. Evaluation is needed of the impact of advertising and marketing.

The following section explores six campaigns which have relevance to social marketing: Best Fed Baby, Be a Star, Women Infants and Children Breastfeeding Promotion Campaign, Best Start, National Breastfeeding Awareness Week and the UNICEF Friendly Hospitals programme. A summary of the cases reviewed is provided in Appendix 1.
5.2.1 Best Fed Baby (Lanarkshire, Scotland)

This project worked to promote the health of the baby and the capacity of the family to provide good quality nourishment and nurturing of the child through the provision of monthly reward vouchers which continued if the baby was breastfed.

Strategy and campaign approach

A small scale pilot scheme ‘Best Fed Baby’ (BFB) was launched in 2001 in Lanarkshire (Little, 2004), which provided all pregnant women in the Blantyre and North Hamilton Social Inclusion Partnership (SIP) area with incentives in the form of monthly £50 vouchers for the local supermarket ASDA. These were offered for six months antenatally and three months postnatally, provided the mother breastfed. This was intended to give a practical incentive to eat healthily and to breastfeed.

The project was delivered through a partnership approach:

- midwives identified, registered and referred mothers to health visitor
- health visitors informed the SIP office when the mother came into caseload; monitored the feeding status; and kept the SIP informed of progress
- the SIP managed the finances and operations; administered the issuing of vouchers; monitored and evaluated the scheme; and co-ordinated the work of the agencies involved
- ASDA operated vouchers in-house; trained and managed their staff; redeemed the vouchers; and covered the cost of producing the vouchers.

The project, which took six months to set up, was co-ordinated by a Partnership Development Officer and overseen by a project steering group which comprised community midwives, health visitors and a community dietician. The team also worked closely with the local ASDA store and Regional Director. Part of this activity involved developing a monitoring and delivery system that was both efficient and effective. It was considered particularly important to ensure that midwives and health visitors were motivated to return information to the SIP office promptly so that the mothers received their vouchers in a timely manner.

Another key priority was to ensure that the project was specifically designed to appeal to young mums; avoiding stigmatising the target group was an important consideration. In view of this, the appearance and content of the information pack was designed to promote the benefits of participation, whilst at the same time communicating useful information on breastfeeding and healthy eating. In addition, the vouchers adopted a simple anonymous design, with redeemable items marked using a discrete sticker.

Outcomes

The BFB scheme reported a 100% uptake in 2004 involving 800 mothers, with a corresponding increase in self-reported breastfeeding (from 12% to 30%) and a marked decrease in low birth weight babies (11% to 6%) (Campbell, 2006). An analysis of food purchases suggested that purchasing habits were changed by the project, with some mothers buying more food, new food items and better quality foods. However, it is unclear if this analysis involved a direct before and after comparison of food purchases. It is reported that families on low incomes saw the vouchers as an essential addition to their food budget rather than as a means of
buying other family items. As of 2004 the project received an annual budget of £85,000 jointly funded by NHS Lanarkshire, South Lanarkshire Council and the local SIP. The available literature indicates that the pilot phase and funding was extended until 2006; however there is no evidence that the project existed past this date.

**Learning points**

- The BFB scheme provides compelling evidence for the value of financial incentives to bringing about the desired health behaviour change. Interestingly, this success was in part attributed to targeting and engaging parents in advance of the client group making the desired behaviour change (i.e. before the child is born), which could have significant implications for Childsmile.
- The scheme also underlines the importance of consulting closely with the target group to ensure the service meets users’ needs and takes into account any sensitivities associated with participation. In this case it was important to avoid stigmatising mothers by ensuring vouchers could be redeemed discretely as part of a normal shopping visit.
- Like other complex schemes requiring a number of organisations to work together to deliver the programme, building in sufficient planning time is essential to the development of the delivery procedures and to agree respective roles and responsibilities. In the BFB scheme the steering group was critical to facilitating this process.

### 5.2.2 Be A Star (Lancashire, England)

While breastfeeding typically has a clearly defined target group of new mothers, this group can be extremely heterogeneous. The Be A Star scheme differs from the norm in that it specifically targets young mothers. In the UK media images of breastfeeding are rare and it is exceptional to see a baby being breastfed in public. This is especially true in lower socio-economic groups and for younger mums. Consequently, the Be A Star campaign seeks to promote awareness and positive perceptions of breastfeeding, as well as providing breastfeeding information and support.

**Strategy and campaign approach**

Be a Star was started as a small scale project by three PCTs and involved the production of a series of radio adverts in co-operation with the local radio station, Rock FM. Further financial backing came from neighbourhood renewal funding and allowed the project to expand to seven PCTs supported by staff and volunteers from the ‘Little Angels’ organization. Little Angels is a community interest company which trains breastfeeding peer supporters. The campaign uses a website and blog, bus shelter posters and other outdoor media, and a series of radio advertisements on local commercial radio stations designed to appeal to the target group. A local marketing company, ‘The Hub’, sought to endorse participants as ‘celebrities’ as the ‘cult of celebrity’ was identified as having a strong pull for the target group. Each location uses local mothers in the posters, and develops its own support materials. The campaign aims not only to reach young mothers, but also the babies’ fathers, and the mums’ friends and parents as their support is critical for setting breastfeeding as a social norm. In addition, the Be A Star website seeks to foster a community of breastfeeding mums through discussion areas and blogs.
Outcomes
The media campaign is currently being evaluated to determine if a “buzz” has been created around the issue of breastfeeding. Anecdotal evidence indicates that the campaign has been positively received and has gained media attention and coverage (http://www.beastar.org.uk/). The blog comments are similarly positive and support the type of social change which the campaign is seeking to achieve.

Learning points
- Be a Star illustrates the value of involving local media partners and creative consultancies with expertise in developing culturally relevant communication sites and messages. It is also noteworthy that the creative development process incorporates a bottom-up grassroots approach by actively encouraging the involvement and input of members of the target audience.
- The scheme also places a particular emphasis on targeting younger first time mothers as it was believed the benefits of establishing a breastfeeding habit will benefit future off-spring. Similarly, the scheme also recognises the importance of social networks and norms in helping to bring about behaviour change by involving other key family members such as the baby’s father, and the mums’ friends and parents.
- Finally, Be a Star also illustrates how multi-component schemes can take many years to establish and need to be given time to develop in incremental stages.

5.2.3 Women, Infants and Children Breastfeeding Promotion Program (USA)
Women Infants and Children (WIC) provides Federal grants to States for supplemental foods, health care referrals, and nutrition education for low-income pregnant, breastfeeding, and non-breastfeeding postpartum women, and to infants and children up to age five who are found to be at nutritional risk. Among its many programmes and services, the WIC provides support, education, and promotion for breastfeeding among programme participants and other economically disadvantaged families. As of 2000 the programme was implemented in 54 of 88 WIC state, intertribal or territorial organizations (Lindenberger and Bryant, 2000). The overall programme is summarised as a Social Marketing case study (http://www.social-marketing.org/success/cs-nationalwic.html).

Strategy and campaign approach
The campaign approach was developed through participant observation, in-depth interviews, focus groups, telephone interviews, and survey data from WIC participants, their family members, WIC employees, and other health care providers. The formative research led to repositioning the traditional health benefits of breastfeeding to emphasize a new product benefit – familial bonding from birth. The emotional price of breastfeeding was identified as embarrassment and conflicts with active lifestyles. To reduce prices, a counselling programme was developed to help mothers work through individual constraints. The place strategy targeted hospital environments as well as homes, and focussed on key intermediaries such as professional associations. Media as well as grassroots advocacy comprised the bulk of the promotion strategy with media stressing a congratulatory tone communicated through family spokespersons. Clear target groups were identified: primary targets included pregnant women who were enrolled in the WIC programme or who were income eligible; secondary targets included mothers, husbands and boyfriends of
pregnant women, WIC nutritionists and clerical staff and prenatal health advisors; and the tertiary audience was the general public.

The campaign included patient and family education, staff training, public awareness activities, health professional outreach, and partnerships with the community. The programme also implemented a breastfeeding-friendly clinic environment project which incorporated a videotape component. This videotape was entitled ‘Breastfeeding: Another Way of Saying I Love You’ which included ethnically diverse families and testimonials from mothers (Best Start Social Marketing, 2003).

**Outcomes**

Various evaluations have been conducted in a number of different states. In Iowa, breastfeeding rates in hospitals went from 57.8% to 65.1% after one year, and at six months post-birth had increased from 20% to 32%. Reflecting the major objective of enhanced support for breastfeeding, support among family and friends increased (e.g. perceived support from the pregnant woman’s mother increased from 35.5% to 53%). Perceived support from professionals also increased, with support from the pregnant woman’s prenatal health care provider increasing from 62.4% to 83.8% and from WIC employees from 81.9% to 92.5% (Lindenberger and Bryant, 2000).

An evaluation in Mississippi, a pilot state in the national breastfeeding promotion campaign, ‘Loving Support Makes Breastfeeding Work’ (LSMBW) (Mitra, Khoury, Carothers et al., 2003) found that 72% of the state WIC agencies had used education materials created by the initiative. Based on responses from the breastfeeding coordinators, the most beneficial elements were seen to be the campaign activities, staff training, community outreach, and peer counselling. These professionals also viewed the videotape project developed by Mississippi as useful in addressing barriers to breastfeeding and in training support groups, staff, and health care professionals.

The effectiveness of the Mississippi video resource to address barriers to breastfeeding among low-income women was also evaluated (Khoury, Mitra, Hinton et al., 2002). The 15-minute video was shown to 310 clients from the Special Supplemental Nutrition Program for Women, Infants and Children with 204 clients acting as a comparison group. Survey data was collected before and after the intervention and showed that the video significantly improved women’s perceptions of barriers such as “embarrassment” and “time and social constraints”. No change was seen to the women’s perception of support from female relatives and friends; however it did positively affect views regarding fathers’ support for breastfeeding.

**Learning points**

- The WIC breastfeeding programme provides a good example of how comprehensive formative evaluation can be of value in informing all the planning variables that make up the social marketing mix, and was particularly useful in illuminating the less tangible yet compelling motivations for engaging in the desired health behaviour, namely the emotional benefits to the mother of breastfeeding. These insights have been critical to shaping the whole WIC breastfeeding programme.
- As with many of the other programmes examined as part of this review, the WIC case illustrates the value of programme elements designed not only to
engage the primary target group of mothers, but also to gain the support of secondary audiences such as family members and friends, and professional intermediaries such as health care providers.

- Like the Best Fed Baby initiative in Scotland, the WIC breastfeeding programme also recognises the value of engaging with mothers in hospital as well as the home, a feature that may also be relevant to infant oral health programmes.
- In addition, it is particularly noteworthy that the WIC breastfeeding programme does not rely upon paid media to promote the programme, but instead tends to work at a community level, relying on inter-personal communications and word-of-mouth.

5.2.4 Best Start, Ohio (USA)

‘Best Start’ is an innovative social marketing project designed to promote breastfeeding among low-income women, which also contributed to the development of the WIC programme above (Bryant, Coreil, D’Angelo et al., 1992). One strand reported in the literature incorporated a programme providing training to medical, nursing and secretarial staff at a women’s health centre servicing a disadvantaged, urban community. The programme promoted a three-step approach to educate women about breastfeeding as part of their antenatal visits.

**Strategy and campaign approach**

Focus group interviews were used to identify the determinants of infant-feeding decisions, motivations and perceived barriers and the most effective strategies for encouraging women to breastfeed. These findings were used to design a multifaceted breastfeeding promotion campaign to increase breastfeeding rates and provide lactation support. This included educating staff in a three-step approach based on social marketing. Key features of the three hour training programme included information about breastfeeding and educational techniques for how staff should address women’s questions and concerns about the subject. The Best Start three-step approach is summarised as follows:

1. enquiry to identify concerns about breastfeeding
2. acknowledgement of concern
3. explanation of the benefits of breastfeeding.

Staff were taught specifically not to ask mothers to make a decision about feeding method at the first consultation as experience indicated that a direct approach can discourage engagement and further discussion. Additional elements included support during the 24-hour postpartum hospital stay by lactation nurses and a home visit to all low-income mothers within the first 72 hours. A lactation clinic was also available for mothers with breastfeeding problems.

**Outcome**

The Best Start initiative was evaluated through the hospital data, and from two weeks after birth through records from the outpatient department of children’s hospital. Ninety mother-infant pairs were included in each of the before-after groups; these were comparable for several demographic factors, including ethnicity, parity and type of payment for care. Rates of breastfeeding at discharge were higher for mothers who received Best Start (31% vs. 15%, p<.03). This difference was still
seen two weeks postpartum (21% vs. 13%, p<0.2) (Hartley and O’Connor, 1996). However, it should be noted that most participants were also recipients of the Women, Infants and Children Supplemental Nutrition programme (Protheroe, Dyson, Renfrew et al., 2003).

This work led to a related project by the Hispanic Health Council (HHC) (Stopka, Segura-Perez, Chapman et al., 2005), a community-based social services organisation in the United States. The social marketing campaign, which ran for four months, was directed at breastfeeding in Hispanics/Latino and other low income groups. The HHC also collaborated closely with the University of Connecticut Family Nutrition Program for Infants, Toddlers, and Children. Developmental audience research was carried out with 43 mothers with infants and toddlers less than two years of age through street interviews. Additional in-depth interviews were also undertaken with a sub-sample of women (n=14). Participants were asked to view and comment on a number of sample print, radio, and television social marketing campaigns. Three focus groups with key HHC staff were also undertaken. The campaign slogan ‘Breastfeed with Pride: At all times, in all places’ and associated messages were promoted using a mix of mainly paid media. These included a bilingual newspaper ad; one 60-second Spanish language radio public service announcement; one 30-second TV public service announcement from ‘Best Start’; a photonovela (story told with photographs) that showed the breastfeeding challenges and successes of a Hispanic/Latino family (distributed through HHC prenatal and postnatal services); and a bus billboard ad placed on the exterior and interior of 30 community buses.

Learning points

➢ The Best Start initiative demonstrates that even relatively brief training, in this case provided to general medical and support staff, can have a positive impact on bringing about behaviour change among mothers. As with previous examples it is important that programme content is grounded in an understanding of the factors which determine the infant-feeding decisions of the target group, and the motivations and barriers which underpin these, as well as recognising issues important to professionals.

➢ The related evidence-base also underlines the importance of language and choice of media to reaching the intervention’s target group, especially when this involves targeting specific geographic communities and ethnic groups. The HHC case provides a good working example of how the media can be used to target local communities, a key feature of the next stage of Childsmile’s development.

5.2.5 National Breastfeeding Awareness Week (UK)
Since 1993 the Department of Health has run the ‘National Breastfeeding Awareness Week’ (NBAW) as a nationwide event. The aim of the event is to highlight breastfeeding as the healthiest feeding option for babies and mothers.

Strategy and campaign approach
The Department of Health produces breastfeeding leaflets as part of the national event, and since 2007 the week has been supported with TV and radio advertisements. Health professionals and other stakeholders are actively encouraged to promote the week locally, resulting in health promotion at both a
national and grassroots level. To help with this the NBAW also produces template press releases for local groups to help with media coverage. Selected campaigns include:

2000  Aimed to boost the profile of the Infant Feeding Initiative, which includes over 30 projects across the country.

2004  Aimed at encouraging younger mothers and mothers-to-be to give breastfeeding a go! A key objective was to encourage pregnant mums to think about feeding options much earlier. Consequently, materials followed mothers from the point of first scan to two weeks after the birth, highlighting the key benefits of breastfeeding at each stage.

2007  The event was supported by national TV and radio advertising for the first time. The advertising portrayed women and health professionals as united in telling others that breastfeeding is normal, natural and better for babies. A Breastfeeding Manifesto was supported by a Coalition of over 30 organizations, including UNICEF UK, and MPs were encouraged to sign up at the NBAW launch. The Manifesto’s seven key objectives included implementing the NICE postnatal care guidance for maternity care providers, ensuring the Baby Friendly Initiative becomes a minimum standard in all hospitals and in the community, improving training for health professionals, and introducing legislation to support breastfeeding in public places.

2008  Aimed at young mothers, the Breast Buddy programme (launched by Jenny Frost, a member of the UK music band Atomic Kitten) encouraged young mums to nominate a buddy from their family and friends to provide them with practical and emotional support for breastfeeding. Those signing up received an information pack that included a Department of Health booklet and contact numbers for breastfeeding helplines. Those that registered were also sent regular texts offering encouragement and support during the first few months. The campaign also highlighted Breastfeeding Friendly Places.

The Department of Health produces a range of leaflets to support breastfeeding. These include ‘Off to the Best Start: important information about feeding your baby’, which is produced in conjunction with the UNICEF UK Baby Friendly Initiative (below). The leaflet is a teaching aid designed to help health professionals working with pregnant women and new mothers. Four additional leaflets are produced as stand alone publications for mothers; Breastfeeding and Work, Folic Acid, Weaning, and Bottle Feeding. These leaflets are also supported by a range of posters.

Outcomes
Measuring changes in social norms is highly problematic and must be conducted over a long period of time. As a multifaceted, multi-agency approach is being taken to improve breastfeeding rates in the UK it is not possible to attribute any changes to a single campaign or intervention. Specific programmes have, however, evaluated campaign elements. This includes an evaluation of the Scottish television campaign in support of Breastfeeding Awareness Week. The target audience was intended to include mothers who were pregnant for the first time, who may have decided not to breastfeed, as well as those who were interested in breastfeeding, or who had...
successfully breastfed, along with family members. Qualitative research was carried out to test the concepts and format of an advertisement (Health Education Board for Scotland, 2001). Findings indicated a diverse response. The campaign evaluation suggested that while there was a reported increase in breastfeeding rates, bottle-feeding remained the cultural norm. The evaluation also found that women who breastfed in disadvantaged areas demonstrated a high level of commitment to breastfeeding which set them apart from their peers (Scott and Mostyn, 2003).

**Learning points**
- Experience in the UK suggests that awareness weeks can be an important tool in focusing public attention and raising the profile of specific health issues, and are particularly useful for marshalling the support of local activists and frontline professionals. However, in order to energise such support, resources need to be directed at two levels: generating media attention and advertising coverage at a national level, and providing local activists with the necessary skills and resources to generate press stories and interest at a local level. These findings suggest that as a relatively new initiative *Childsmile* might benefit from taking a lead role in awareness raising initiatives and events such as National Smile Week, both in terms of raising its profile and helping to establish professional links and networks.

5.2.6 UNICEF Baby Friendly Initiative (UK)
The Baby Friendly Initiative (BFI) is a global programme run by UNICEF and the World Health Organization and works with health services to improve infant feeding practices. Key areas of activity include encouraging take-up and implementation of the Ten Steps to Successful Breastfeeding and challenging the marketing of breast milk substitutes. Health-care facilities which implement these practices receive the UNICEF/WHO Baby Friendly award. Launched in the UK in 1994, the BFI is commissioned by various parts of the health service to provide advice, support, training, networking, assessment and accreditation (Baby Friendly Initiative: [http://www.babyfriendly.org.uk](http://www.babyfriendly.org.uk)).

**Strategy and Campaign Approach**
The BFI seeks to work with the health-care system to improve standards of care for pregnant women and breastfeeding mothers and babies, by offering an assessment and accreditation process for good practise. The aim of the campaign is both institutional change and professional development and awareness. Full Baby Friendly accreditation is externally assessed with repeat assessments made every few years. Accreditation signifies provision of a high standard of care for mothers and babies, in line with the Ten Steps (hospitals) or the Seven Point Plan (community facilities). The BFI also provides education and materials to support facilities as they work through each stage.

**Outcomes**
In August 2008 the UK Government announced an investment of £2 million for hospitals in disadvantaged areas to achieve UNICEF Baby Friendly Status. In England, 9.5% of hospitals have achieved this status with an estimated 50% working towards implementation. Progress is monitored by measuring the prevalence of breastfeeding at six to eight weeks in all Primary Care Trusts as a key indicator of the Child Health and Wellbeing PSA target (UNICEF, 2008).
The campaign has been evaluated both in the UK and globally and it has been shown that the proportion of babies breastfed at birth increases by more than 10% on average over four years when hospitals implement the Baby Friendly standards (Bartington, Griffiths, Tate et al., 2006). In Scotland hospitals accredited as Baby Friendly have increased their breastfeeding rate at seven days by 8.1% over an eight year period, compared with a rise of just 2.2% among hospitals without a Baby Friendly award. Hospitals with the additional Certificate of Commitment saw an additional 6.1% for the same period. However, a cluster randomised control trial in 14 localities found that there were no significant differences in breastfeeding outcomes and that the costs of running groups would be similar to the costs of visiting women at home. It concluded that resources may be better directed to the first two weeks after birth, when the highest proportion of women stopped breastfeeding.

Learning points

- The Baby Friendly Initiative underlines the importance of the institutional environment in bringing about behaviour change. It also illustrates the value of using incentives to affect institutional norms, namely the provision of ring-fenced funding and accredited training specifically designed to raise practice standards. Anecdotal evidence would appear to suggest that ongoing support is required for gains to be sustained, together with more rigorous monitoring.
6. Conclusions

This review describes a broad range of programmes and campaigns which share similar aims and target groups with Childsmile. Whilst the authors have sought to highlight transferable learning points for each of these, it is recognised that the members of the Childsmile steering group may well identify additional points of value. Consequently, to help illuminate the work of the interventions involved, the review has also sought to provide web links for all the cases where these exist, as well as examples of the types of communication materials generated. The review also identified other suitable material for use in the Stage 2 focus groups, in addition to the Childsmile items already identified through the initial stakeholder interviews.

In keeping with the review's contribution and the embryonic nature of the project, the authors see the work as part of a developmental process and would be happy to discuss the potential implications of the findings with members of the steering group as part of the agreed reporting process.

The review concludes by drawing upon two frameworks to discuss its findings. Firstly, it examines their relationship with the core concepts that underpin social marketing, and then assesses their implications for the overall aims and research questions set to guide the study. These two analyses are each described in turn.

6.1 Relationship with core social marketing concepts

The review reveals that while social marketing campaigns and concepts have been used fairly extensively in the three topic areas examined, namely oral health, immunisation and breastfeeding, few have been rigorously evaluated and reported in the academic literature. However, despite this gap in the evidence base the review does serve to highlight a number of transferable learning points from available project descriptions, which may prove helpful to the development of Childsmile. These are discussed in relation to six core social marketing concepts.

**Behaviour change:** Many of these endeavours identified have been implicitly designed to bring about behaviour change, for example by affecting awareness and attitudes as well as enhancing support. However, as already outlined few of the interventions reviewed have been fully evaluated. An important limiting factor has been a failure to clearly define behaviour outcomes and the mechanisms of change, or logic models by which intended outcomes will be achieved. It is suggested that a necessary precursor to any outcome evaluation of Childsmile should be a thorough assessment of the programme’s behavioural aims and objectives (e.g. dental registration, attendance for routine checks, brushing practices etc) and the means by which these are achieved (e.g. awareness of campaign materials, knowledge gains, nature and level of engagement with support services etc).

**Audience research:** Audience research is a key element. Research should not only focus on the client group, however, but also on the professional intermediaries and the client groups’ wider lay-support network. This is vital to ensure development of effective interventions and communications which both reach the populations and communities for which they are intended and which identify and address barriers to action and the mechanisms of change. While this review has reported general claims regarding barriers experienced by mothers, it is important to recognise that real
world experience will always relate to a specific context, time and location. Consequently, it is crucial that social marketing campaigns incorporate primary forms of enquiry which are culturally sensitive to the target groups involved and, where appropriate, to the respective roles of secondary target groups and intermediaries.

**Segmentation:** The projects reviewed sought to identify and define a core target group, typically on the basis of socio-economic status, ethnic group and age as well as child care role. However, further segmentation can be helpful, especially in multifaceted campaigns, where other secondary groups (professional and lay) may be crucial to supporting the desired behaviour change. The review also suggests it may be important to not only define who should form the core target group(s) but also at what stage: there is evidence that differing messages and awareness raising activities may be of value at different points in time, including the prenatal stage.

**Exchange:** A number of the projects reviewed incorporated explicit examples of exchange, either through financial incentives or free products. For example, the ABC vaccination calendar (see Section 4.2.1) illustrates how health information can be delivered in a format which surpasses the value of the information itself, for some becoming a cherished memento of childhood. Use of incentives to encourage engagement and participation was found to be of particular value in some programmes, such as the provision of vouchers for enrolling with a programme and taking the necessary steps towards the desired behaviour. Among professionals, providing training which is accredited and professionally recognised can also act as an important incentive to participate. Organisational incentives can be considered, such as vouchers or awards for high recruitment rates. In addition, links with school curriculum and activities, such as providing relevant resources, supports teachers in covering these issues as part of wider teaching activities.

**Marketing mix:** The multifaceted nature of the interventions reviewed show how combining all four social marketing planning variables, or 4Ps, is essential to bringing about the high order effects desired, namely individual behaviour change. Whilst Childsmile is essentially a service-based initiative, the review evidence suggests that free oral health ‘products’ such as beakers, toothbrushes, toothpaste etc, can have an important role in both gaining parents interest and in branding the service as parent-friendly. Many of the cases reviewed also illustrate how a carefully integrated mix of ‘promotional’ tools (leaflets, posters, videos, direct mail etc) can form a vital component of any campaign both in terms of raising awareness and encouraging involvement of key stakeholders as well as lay target groups. Furthermore, there is also evidence that engagement can be enhanced when key stakeholders are actively consulted during their development, as it can engender a sense of ownership, involvement and personal investment in the campaign and its goals. Addressing financial cost or ‘price’ is a feature of many of the interventions reviewed, but arguably it is less important in the Scottish context, where services are delivered free at point of contact. However, measures to overcome other ‘costs’, for example by bringing the service to the user (e.g. to the school or home) may be of some value. This also links with the idea of ‘place’, overcoming dental anxiety by creating more ‘friendly’ services and service environments, where people feel more comfortable attending. The review findings suggest that referral source can be every bit as important as the service setting in helping to allay anxieties. Consequently,
there is real value in engaging familiar and trusted intermediaries as service ambassadors and gatekeepers.

**Competition:** Elements of competition across target groups are illustrated in Section 1.1. Parents and professionals alike have to balance competing demands and priorities, for example time pressures and varied expectations, which in turn will affect salience of oral health and quality of engagement with interventions. This is also significant for engaging secondary target groups, and in particular primary care professionals. Where non-oral health professionals have a role in service delivery, for example, health visitors and midwives promoting the benefits of child oral health and referring or encouraging attendance, particular care needs to be taken to develop ways of operating that recognise their existing work remits and priorities. This kind of thinking is important in ensuring that key approaches such as briefing and training events reflect staff availability, and that service protocols and procedures are specifically designed to fit with prevailing service structures and practices. Similarly, a new child dental service may be seen to be competing for the time and attention of existing patients and it is crucial that existing dental service providers (and potential partners) are consulted as part of the development process, and where appropriate have an active input into its delivery.

### 6.2 Implications for study aims and research questions

The review had two broad aims: to inform the content of the Stage 2 qualitative research by providing stimulus material and insights to help guide the topics and themes for enquiry; and to contribute to answering the study’s overarching research questions. Five broad research questions were set. Four of these are discussed here, while a fifth - ‘what are the main facilitators and barriers to engagement with service uptake?’ - is reviewed at the beginning of each topic section (Sections 3.1, 4.1 and 5.1) and summarised in Appendix 2.

1. **Which family members hold the most influence over the children’s oral and general health?**

   The case studies generally identify the mother as the primary caregiver. However, as the breastfeeding campaign case studies illustrate, the primary carer’s lay-support network is critical (i.e. the baby’s father, mother’s friends and parents etc). It is also apparent that targeting younger, first time mothers can yield positive returns and that this can help establish habitual behaviour which may also extend to future children.

2. **How best to promote a programme as the routine dental or health service available from birth?**

   It is evident from the various topics and campaigns examined that promotion must be tailored both to fit with the prevailing service structure and to reflect the situation and needs of the target population. While a particular communication approach or free incentive item may prove highly successful in one country, it does not necessarily follow that the same approach will prove fully transferable to the UK context given different cultures and health care structures. In the UK the immunisation service has been very successful in marketing itself as a routine service, using a combination of free and paid publicity to raise the profile of immunisation and highlight the benefits it brings and the range of diseases it addressed. This success is in part due to the programme’s longevity and its ability to normalise participation by establishing a consistent service approach. Stage two of the research will investigate how this
might be achieved within the area of child oral health, where particular emphasis will be placed on examining how the values and trust established by existing organisations and professional groups might benefit Childsmile, and by exploring how greater consistency might be brought to the service content and profile.

3. **How best to market a programme to meet the needs of expectant mothers, families with newborn and/or young children?**

Again, this depends on the service and the target group needs. Lessons drawn from the case studies, particularly in the field of vaccination, suggests that consistent messaging from multiple sources (media, publications, health professionals, allied professions, lay-support etc) can prove more effective than relying on a single source, as multiple sources can have a reinforcing effect as well as a broader reach. However, infant oral health may be rarely, if ever, mentioned by trusted sources. Ways therefore need to be found of integrating oral health messages and information giving as a normal part of early-years health care, by for example, combining verbal messages and written information in post- and prenatal classes, and routine child health checks. Particular attention will be given to examining timing issues and the types of message and intensity appropriate at different stages.

In addition, it is also important not to forget the oral health needs of the mother, especially as pregnancy has been reported to cause worsening of gum diseases. While midwives and other professionals involved at the prenatal stage are often time restricted, they may be more open to raising oral health with the mother if they can see some timely benefits for the mother herself. Again, this is an issue which will be explored in the next stage.

Finally, the use of incentives in the form of free toothbrushes, colouring sheets, calendars etc may also prove useful, particularly as they provide a means of delivering support messages and information in a non-stigmatising way. This type of activity can also help to normalise enrolment as a desirable status, making parents more likely to seek out participation. Examples of materials will be taken into the next stage of research as prompts to explore the possible benefits of this type of approach with parents.

4. **How best to market a programme to facilitate the registration of babies and young children?**

While services such as vaccination are available to all in the UK, some programmes identified (e.g. the Nevada Immunization Coalition) are restricted to specific groups based on priority and need. Similar systems may be less acceptable or desirable in Scotland, especially as the primary target group for Childsmile may already feel socially stigmatised. However, connecting oral health checks or advice sessions to an established service, such as immunisation or routine health checks may be useful. At the moment the medical history of the child is updated for fluoride varnish sessions and it may prove beneficial to develop a further link between the immunisation record and registration for oral health services. Again, this type of linkage can be explored further in Stage 2.
7. References


**Additional information (not in the text)**

Dental Health Foundation Publications, Ireland:

http://www.dentalhealth.ie/publications/index.tmpl?_max=20&_neRIDdatarq=find_all

Australian Dental Association:

Australian Dental Association Dentistry for Adolescents The adolescent years – 12 to 18 year olds July 2006 ADA Dental Health Week http://www.toothdoctor.net.au/pdf_files/12-18_year.pdf (an article about teenagers oral health which was produced along side the oral health week)


Oral Health Education Unit, Hong Kong:


Every Child by Two, USA:

Nation-wide organisation promoting timely immunisation by two years including addressing structural issues. Website incorporates areas for parents and advocates, including lay and academic information, and access to resources such as a colouring book with messages for children, parents and grandparents.

http://www.ecbt.org/index.cfm
Appendices
### Appendix 1. Summaries of campaign case studies

#### Oral health campaigns

<table>
<thead>
<tr>
<th>Text section</th>
<th>Campaign title</th>
<th>Target audience</th>
<th>Intervention strategy and aim(s)</th>
<th>Approach characteristics</th>
<th>Outcome</th>
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| 3.2.1 (i)    | Healthy Teeth, Happy Children       | Vietnamese urban preschool children                  | Seven year community-based oral health promotion programme  
**Aim:** to raise general understanding of oral health                                                                 | • Clearly defined target group (ethnic community)  
• Key worker from shared cultural and ethnic background  
• 1-1 counselling and educational video  
• Long-term support                                                                 | Significantly less use of sleep-time and daytime bottles reported by mothers who came for more than one counselling session  
Children in the programme had significantly less prevalence of caries compared to those not enrolled                                                      |
| 3.2.1 (ii)   | Beakers for Bottles                | South Asian families and carers of children over six months old | Five day awareness raising campaign at local health centre  
**Aim:** to change behaviour (from using bottle to beaker) and to raise awareness of decay caused by bottle use | • Local  
• Clearly defined target group (ethnic community)  
• Exchange (beakers)  
• Additional oral health information  
• Language issues addressed (print materials, translator available)  
• A single, well defined and community specific message  
• Single week focus | 135 families attended and gave positive feedback  
No reported concrete evaluation                                                                                                           |

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1. 3.2.1 Community engagement campaigns  
2. 3.2.2 School-based programmes  
3. 3.2.3 Public awareness  
4. 3.2.4 Professional engagement
| 3.2.2 (i) | St. David’s Dental Program (Central Texas, USA) | Low income children in schools | Ongoing free mobile dental van service  
**Aim**: to provide free oral health information, screening and treatment to those children in need | • Range of services (screening, treatment and oral health preventive information)  
• Removed many of the access barriers from oral health (time, lack of transport to dentist) as well as removing cost of treatment  
• Strong links with school  
• High return rates of consent forms by offering incentives to teachers with 100% return rates and teachers offering in class room incentives for children returning forms  
• Use of opt out for first low risk screening enhances engagement and allows assessment of population oral health | 132,791 screenings for oral health treatment needs and 38,634 encounters for sealants or treatment have been carried out. |
| 3.2.2 (ii) | Love Teeth with Your Kids Programme (Hong Kong, China) | All children (focus 5-6 year-olds) | Ongoing school-based tooth brushing and oral health promotion programme  
**Aim**: to promote daily self-care habits in the children and to establish a habit of daily supplementary tooth brushing for children by parents at home every night | • Range of bilingual (English and Chinese) education materials provided for use in the class room  
• Involves teachers in the programme | Ongoing evaluation |
| 3.2.2 (iia) | Brighter Smiles for the New Generation (Hong Kong, China) | Parents of 0-6 year olds | Ongoing health promotion at Maternal and Child Health Centres and early year schools  
**Aim**: raise awareness of oral health, tooth brushing and dental decay | • Range of professionals involved (health workers and teachers)  
• Support / resources for professionals  
• Materials (e.g. story books)  
• Long term  
• Clear evaluation structure | Ongoing evaluation |
| 3.2.2 (iii) | Tooth Tutor program (Vermont, USA) | All children not registered with a dentist | Ongoing school-based multi-pronged approach  
**Aim:** to increase children’s understanding of oral health and increase access to oral health services  
- Multi-pronged approach; media campaign, telephone helpline, oral health schools education programme, dentist recruitment and retention efforts and improved access to services  
- Trained staff - ‘Tooth Tutors’ - take oral health messages into schools and identify those in greatest need and act as a link between target groups and dental services  
- Linked with established state health insurance programme | Evaluation yet to be published |
|---|---|---|---|---|
| 3.2.2 (iv) | Mighty Mouth School’s Programme (Ireland) | All 5-6 year olds | Ongoing school-based oral health programme  
**Aim:** to inform children and parents about good dental care, dental services for children and the role of tooth-friendly foods and drinks, ensure supervised regular effective tooth brushing with fluoride toothpaste  
- A range of products including four colouring cards, some of which were available as posters  
- Detailed resource pack including guides for parents and teachers  
- Links with school curriculum  
- Partnership between oral health promoters and schools | RCT showed that all children increased their use of fluoride toothpaste. Findings also indicated increased oral health-related quality of life, self-esteem and knowledge and attitudes relating to their oral health. The staff feedback was also positive |
| 3.2.3 (i) | Australian Oral Health Week | National public awareness | Ongoing annual national media campaign  
**Aim:** to inform the general public, and specific target groups of the importance of oral health and risk factors  
- Use of web site, with interactive sections for parents, teachers and children, e.g. Boot Camp  
- Coordinated and funded by the Australian Dental Association  
- Target population (changes annually) | No evaluation was found |
| 3.2.4 (i) | Dental Health Institute of Ireland | Children, parents and professionals Element:: professional training | On going multi-pronged approach | • Professional development  
• Includes producing general health promotion, policy setting, professional training and running school-based programmes | The lobbying activity of the DHI is not evaluated  
Training courses evaluated positively. |
|---|---|---|---|---|---|
| 3.2.4 (ii) | Smile Alabama! Initiative (USA) | Dentists in Alabama | 3 year multidimensional, strategically planned dental outreach initiative  
**Aim:** improve oral health care services for Medicaid-eligible children by increasing the number of participating dentists | • Composed of 4 specific components: claims processing, dental reimbursement, providing education and recruitment, and recipient education  
• Specific interventions were implemented for each component  
• Long term | Increased geographic coverage by service |
| 3.2.4 (iii) | Healthy Smile, Happy Child (Manitoba, Canada) | Element:: Service providers working with young children and families (non-dental) | A community development prevention initiative  
**Aim:** enable professionals to incorporate key early childhood oral health promotion messages into daily practise | • Increasing professional understanding on the importance of preventing early childhood dental decay | A 16% increase overall in the proportion of correct answer from the pre-workshop questionnaire to the post-questionnaire. Specifically, 83% believed that a first dental visit should occur by the first birthday (compared to 36% pre-workshop, p<0.001), and 86% thought a mother with untreated decay placed the child at risk (compared to 45% pre-workshop, p<0.001) |
<table>
<thead>
<tr>
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| 4.2.1        | ABC Immunization Calendar computer program (St Louis, USA) | Parents of babies aged from 0 to one (n=321) | Short term individually tailored calendars promoting immunization from 2 urban public health centres | • Clearly defined target group (low socio-economic group)  
• Use of an electronic photo and personalised calendar as incentive  
• Further months could only be received by returning to the health centre as scheduled | 82% of the intervention group were immunised at the end of the 9 month enrolment period, compared with 65% of the control group (P < .001) and by the age of two the higher rate was still present (66% vs. 47%, P < .001) |
| 4.2.2        | Immunise Australia Programme (Australia) | - Mothers of children 0-5 years  
- Service providers  
- Family and friends | Initial campaign with service providers to improve service delivery  
Multi-faceted community education campaigns aimed at parents and families.  
Aim: to increase proportion of children fully immunised according to the recommended schedule.  
To raise awareness of the benefits of full immunisation and address relative risks among parents. | • Formative research to identify key targets and exchange elements  
• Extensive campaign with service providers to enhance delivery and support parents in programme engagement  
• Mass media campaign incorporating TV and women’s magazine adverts and posters in health care settings  
• Additional components such as awareness days telephone info line, booklet distribution, and public relations activities  
• Advertising, public relations and education strategies in 13 spoken languages  
• Subsequent successful programme promoting second MMR in schools | High advertisement recognition (80%) and message recall.  
Increased reported domestic discussion, improved knowledge of correct ages, and raised perceived seriousness of the diseases (e.g. whooping cough from 49% to 69%).  
Following the measles campaign, 96% of the target age group received the second MMR immunisation.  
Levels of full age-appropriate childhood immunisation consistently increased (e.g. children 12 months of age fully immunised for age rose from 76% to 85% by the end of year following the campaign). |
| 4.2.3 | Pneumococcal vaccine (England) | Babies from 4 months old | Launch of a new vaccine (Pneumococcal meningitis vaccine) which was incorporated into the existing childhood immunisation schedule  
**Aim:** to introduce a new vaccine to parents  
- Included a ‘catch up’ campaign for children up to two years who have already started their immunisations. They were contacted by their local GP over a few months to arrange for vaccination | Further analysis in 2008 indicated that the uptake of the vaccination was poor in England (89.1% across England’s Primary Care Trusts (PCTs), compared to 96.4% in Scotland and 94.9% in Wales) |
| 4.2.4 | Measles, Mumps & Rubella catch-up campaign (England) | Parents and carers of unvaccinated children | Information campaign  
**Aim:** to increase uptake of MMR and of the ‘catch up’ campaign  
- Publicising a national ‘catch up’ campaign through English PCTs and GPs  
- Different levels of priority were identified ranging from children who have never had the vaccination to teenagers leaving school  
- Media coverage, posters and information targeted at parents and professionals | Catch-up campaign boosted uptake rates |
| 4.2.5 | Nevada Immunisation Coalition (United States) | Parents’ and carers of unvaccinated children | A multifaceted community and policy action group.  
**Aim:** to increase uptake of vaccination through providing free services, increasing awareness and changing policy  
- Nevada Infant Immunization Week (NIIW)  
- School based awareness events  
- Free vaccination events  
- Media campaigns | Certain areas of the coalition are evaluated |
### Breastfeeding campaigns

<table>
<thead>
<tr>
<th>Text section</th>
<th>Campaign name</th>
<th>Target audience</th>
<th>Intervention campaign strategy and aims</th>
<th>Approach characteristics</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.2.1</td>
<td>Best Fed Baby, Lanarkshire</td>
<td>Pregnant women and new breastfeeding mothers</td>
<td>A pilot scheme, incorporating incentives&lt;br&gt;Aim: to provide a practical incentive for pregnant mums to eat healthily whilst pregnant and breastfeed their babies once born</td>
<td>• Monthly incentives £50 vouchers for the local supermarket ASDA&lt;br&gt;• Offered for 6 months antenatally to 3 months postnatally, provided the mother breastfed</td>
<td>100% uptake reported in 2004 involving 800 mothers. Corresponding increase in self-reported breastfeeding (from 12% to 30%) and a marked decrease in low birth weight babies (11% to 6%).</td>
</tr>
<tr>
<td>5.2.2</td>
<td>Be A Star, Lancashire</td>
<td>Young mothers, the babies’ fathers and the mothers’ friends parents</td>
<td>A local media campaign&lt;br&gt;Aim: to make breastfeeding the social norm</td>
<td>• The name ‘Be A Star’ ties into the appeal of celebrity among the target group&lt;br&gt;• Good marketing mix; website and blog, posters on bus shelters and other outdoor media, and a series of radio advertisements on local commercial radio stations suitable to the target group</td>
<td>Currently being evaluated</td>
</tr>
<tr>
<td>5.2.3</td>
<td>Women Infants and Children Breastfeeding Promotion Program (USA)</td>
<td>Low-income pregnant, breastfeeding, and non-breastfeeding Professionals Policy makers</td>
<td>Wide-ranging community, staff and policy engagement&lt;br&gt;Aim: to promote and support breastfeeding and raise awareness of nutrition within low-income women</td>
<td>• Patient and family education, staff training, public awareness activities, health professional outreach, and partnerships with the community&lt;br&gt;• A breastfeeding-friendly clinic environment project as well as having a videotape component</td>
<td>Evaluations carried out in individual states. Iowa’s breastfeeding rates in hospitals went from 57.8% to 65.1% after a year and at 6 months post-birth had increased from 20% to 32%. Perceived support from professionals also increased; support from the pregnant woman’s prenatal health care provider increased from 62.4% to 83.8% and from WIC employees from 81.9% to 92.5%</td>
</tr>
</tbody>
</table>
| 5.2.4 | **Best Start, Ohio (USA)** | New mothers and staff | A professional training intervention  
**Aim:** to increase breastfeeding rates and provide lactation support | • Staff training and lactation support  
• Staff given a three hour training session: provided with information about breastfeeding in order to answer women’s questions appropriately  
• Support during the 24-hour postpartum hospital stay by lactation nurses and all low-income mothers were visited at home within the first 72 hours  
• A lactation clinic was also available for mothers with breastfeeding problems | 90 mother-infant pairs were included in each of the before-after evaluation groups; these were comparable for several demographic factors, including ethnicity, parity and type of payment for care. Rates of breastfeeding at discharge were higher for mothers who had taken part in the programme (31% vs. 15%, p<.03). Intervention was particularly effective for women under 20 years of age and over 30 years, African-American women |
| 5.2.5 | **National Breastfeeding Awareness Week (UK)** | Mothers, mothers to be, partners, and wider support network. | Multifaceted, multiagency awareness raising event  
**Aim:** to highlight breastfeeding as the healthiest feeding option | • Supported with TV and radio advertisements  
• Health professionals and other stakeholders are actively encouraged to promote the week locally, resulting in health promotion which is both national and grassroots-based | Not evaluated nationally but local campaigns have been well received |
| 5.2.6 | **UNICEF Baby Friendly Initiative (UK)** | To change individuals, hospitals and care units as well as the health-care system | An assessment and accreditation process for good practise  
**Aim:** to bring about institutional change and professional development and awareness | • Accreditation is externally assessed followed by repeat assessments every few years  
• Provides education and materials | Proportion of babies breastfed at birth increases by more than 10% on average over four years when hospitals implement the Baby Friendly standards |
### Appendix 2. Summary of barriers and facilitators to engagement with services

#### Attitudinal barriers

<table>
<thead>
<tr>
<th>Group</th>
<th>Psychosocial and cultural barriers</th>
<th>Oral health</th>
<th>Immunisation</th>
<th>Breastfeeding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-utilizing caregivers</td>
<td>Mistaken health beliefs</td>
<td>✓ Oral health not being taken seriously by parents as these teeth fall out</td>
<td>✓ Childhood diseases seen as not serious (e.g. whooping cough, measles) - risk of immunisation may be seen as higher Children too 'sick' to be vaccinated delays schedule</td>
<td>✓ Poor awareness of benefits of breastfeeding to mother's and child’s health and to bonding</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fruit juice seen as good</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of knowledge</td>
<td>Of oral health and diets, i.e. fruit juice in bottles</td>
<td>✓</td>
<td>✓ Poor knowledge of required immunisations and importance of timing Hard to remember (maybe confusing)</td>
<td>✓ Poor breastfeeding technique Inconsistent or conflicting information given by different professionals has a negative impact and can cause frustration</td>
</tr>
<tr>
<td></td>
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<td></td>
</tr>
<tr>
<td>Norms of caregiver responsibility</td>
<td>✓ Low-income caregivers may have an expectation of poor oral health as normal</td>
<td>-</td>
<td>-</td>
<td>✓ Norms of bottlefeeding in many communities and limited breastfeeding images and role models Availablely of complementary feeding</td>
</tr>
<tr>
<td>Negative personal views</td>
<td>✓ Dental fear: community beliefs or personal negative dental experiences</td>
<td>✓ Fear of upsetting their children Fear of side effects</td>
<td>-</td>
<td>✓ Perception of others having a negative attitude to breastfeeding (i.e. partners, family members and health care professionals)</td>
</tr>
<tr>
<td>Parents’ service attendance</td>
<td>✓ Parents who do not visit the dentist regularly influences attitude to a child’s dental care</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Service staff</td>
<td>Negative attitudes to service or target group</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------------------------------</td>
<td>---</td>
<td>---</td>
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</tr>
<tr>
<td></td>
<td>Child oral health / preventive care not seen as important within dentistry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lack of confidence and positive approach, e.g. if staff member does not have a positive personal experience of breastfeeding</td>
<td></td>
<td></td>
<td>Degrees of positivity vary across different professional groups</td>
</tr>
<tr>
<td></td>
<td>Perception of negative attitudes of parents</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Lack of information</td>
<td>Generalists may not know about dental services or that dental treatment for children is free</td>
<td>-</td>
<td>Poor awareness of benefits of breastfeeding to mothers’ and children’s health</td>
</tr>
</tbody>
</table>

### Structural barriers

<table>
<thead>
<tr>
<th>Group</th>
<th>Structural barriers</th>
<th>Oral health</th>
<th>Immunisation</th>
<th>Breastfeeding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-utilizing caregivers</td>
<td>Inability to access information due to language or cultural barriers</td>
<td>✓</td>
<td>✓</td>
<td>Uncertainty regarding quantity of breast milk, persistently sore and red nipples</td>
</tr>
<tr>
<td></td>
<td>Securing access to service (due to cost)</td>
<td>✓</td>
<td>✓</td>
<td>In many countries the service is not covered by public funds</td>
</tr>
<tr>
<td></td>
<td>Geographical location of service</td>
<td>✓</td>
<td>✓</td>
<td>E.g. travel costs, difficult if more than one child</td>
</tr>
<tr>
<td></td>
<td>Child care provision</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Work conflicts</td>
<td>✓</td>
<td>✓</td>
<td>Insufficiently comprehensive maternity leave policies, lack of child care at or near the workplace, rigid time schedules that do not allow nursing breaks, lack of a location providing privacy for breast-pumping, and no refrigeration facilities for pumped breast milk</td>
</tr>
<tr>
<td>Service staff</td>
<td>Lack of training or poor quality / inappropriate approaches</td>
<td>Lack of financial incentive to treat high need children</td>
<td>Oral health preventive care is not rewarded as ‘treatment’</td>
<td>Vaccine purchase cost / vaccine shortages</td>
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<td>--------------</td>
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<td>-------------------------------------------</td>
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<tr>
<td></td>
<td>✅</td>
<td>✅</td>
<td>✅</td>
<td>-</td>
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</tbody>
</table>
Facilitators

Much of the focus in the literature is on barriers. Facilitators identified tend to address removing the sorts of barriers already identified above, for example by:

- raising the knowledge levels among parents and professionals about the seriousness of the issue to health and well-being and of the benefits of the recommended actions
- enhancing aspects of service access such as location, including bringing the service to the client (e.g. school-based services and mobile educational resources – vans or ‘buses’), linking with existing routine appointments such as development screening, more flexible appointment times, and reducing ‘costs’ (including travel, loss of work etc)
- improving attitudes and quality of generalist and specialist provider support.

Culturally sensitive programmes and use of different languages are also widely identified as facilitating adoption. In addition, stage appropriate messages should be considered, e.g. while in hospital post birth, or at significant milestones in infant development.

Comprehensive formative research is of value in informing all the variables which make up the social marketing mix.

Facilitators which arguably go further than addressing barriers and are identified in the case studies include the following:

- incentives can help engagement across a range of key groups, but must be meaningful to the target group: for parents (e.g. tooth care materials, interactive colouring-in pictures or children’s books, food vouchers, calendars) and for recruitment intermediaries such as teachers and organisations (e.g. awards for recruitment success, training that will assist career development)
- reminder systems for parents and providers, which can be enhanced with personalised details (e.g. ABC calendar, direct mail out to parents)
- recruitment by trusted intermediaries, e.g. teachers, public health workers and general practitioners, and building relationships with these groups
- proactive engagement with non-oral health professionals such as teachers and nurses as ‘oral health ambassadors’ - recruiters and educators
- engagement can also be stimulated by a range of activities such as advocacy work with professional bodies and institutions, provision of information on new developments, and professional development through training (e.g. one-off workshops, accredited training)
- notification to all stakeholders, potential recruiters and service providers about details of existing services and, in particular, forthcoming campaigns and activities, enabling them to respond appropriately to parental interest and concerns
- even relatively brief awareness raising or training can have a positive impact on bringing about behaviour change among the target group
• provision of target appropriate materials, e.g. for parents and children, for secondary educators such as pre-school staff and nurses, for potential recruiters and promoters and for service providers
• partners can be identified beyond oral health and primary care, including education and commercial organisations such as supermarkets or local media, and gains can be made from pooling resources, shared knowledge of target group, and promotional opportunities
• giving feedback to service providers, including conferences and award ceremonies which also enable bringing together disparate groups and sharing of good practice
• ‘opt-out’ approaches for non-intervention stages such as screening may increase reach and enhance engagement
• recommendations for good practice from professional bodies, actively promoted and disseminated
• endorsement and involvement of professional bodies in campaigns
• the institutional environment also needs to be modified to support the behaviour change, often triggered by national codes for good practice
• substantial investment is needed, underpinned by strategic planning, and should be sustained over long periods to reach those most in need.

Finally, multiple strategies are likely to be more effective than single efforts, both in promotion of services and in service provision:

• mass media campaigns utilising a range of routes, including imaginative use of websites, supported by more local activities
• time-focussed events such as awareness weeks have a number of benefits - engagement with the community, minimising message saturation overload, and a useful agenda-setting tool - but resources need to be directed at several levels
• national events can rally support of regional and local bodies to a particular cause, whilst allowing flexibility and freedom to respond in locally sensitive ways.