

**How to Establish Good Oral Hygiene Patterns in
Children with a Learning Disability?**

A Critical Realist Review of the Literature.

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1. Abstract

Objectives: To explore the oral hygiene patterns of children with a learning disability and the implications for nursing practice. This aims to explore historical data as well as current and up to date information in establishing good oral hygiene patterns in children with a learning disability.

Background: It is widely recognised and a growing concern within society that people with learning disabilities are less likely to have their health needs fully met in comparison to the rest of the general population. Many children with learning disabilities have poorer oral health than those without disabilities which can cause not only physical problems, but can potentially have a wider reaching impact, affecting general health, self-esteem and overall quality of life. Exploring literature has led to the discovery that there is a distinct shortage in research behind the accessibility barriers and the need for treatment services for children with a learning disability.

Method: This dissertation utilised the principles of critical realism in order to fully understand the topic and surrounding literature, exploring a wide range of literature from websites, journals and online databases. The focus of the dissertation was to develop recommendations to practice and answer the proposed question.

Findings: The analysis of the literature highlights significant data findings and best practice guidelines relating to specific issues such as visiting the Dentist, mouth care advice and overcoming specific problems relating to oral healthcare; this has been sub-categorised into information aimed at parents/carers, dentists and resources designed for children.

Conclusion: This review has identified recommendations which if applied to future practice, can improve the oral hygiene of children with learning disabilities.

2. Introduction and Background

It is geographically recognised that the health needs of people with a learning disability (LD) are more often compromised than the greater population (Whittaker and McIntosh, 2000; Powrie, 2001; Evenhuis et al., 2001; Hogg et al., 2001; Lennox et al., 2001; Thorpe et al., 2001; World Health Organisation, 2001; Powrie, 2003). Children with learning disabilities are frequent healthcare consumers and due to modern advancement in technologies, enhanced nutrition alongside new-age medicines, life expectancies are steadily increasing; subsequently opening a window of challenges and opportunities for healthcare services and professionals (Bigby, 2004). For this reason, we must ensure new-age strategies are put into place to ensure every child's needs are met in the diverse range of services throughout the UK, but is there really enough being done? Reports suggest otherwise, the BBC news (2016) reported a 9.6% rise in dental caries since 2012, a highly preventable disease. Various studies from across the world (Desai, 2001; Jokic et al., 2007; O'Leary et al., 2007) have examined the dental status of children with LD and discovered significant oral health needs compared with the wider population; severity of disability, sensory and motor impairments may result in great limitations in oral hygiene performance. The significance of oral health may not be grasped by children, subsequently leading to refusal in co-operating with oral health practices. Responsibilities may be directed to primary carers, many of whom do not requisite the knowledge in recognising the importance of oral hygiene. Over the past number of years it has been identified that children with LD experience considerably more tooth decay (Shaw et al., 1986; Nunn and Murray, 1987; Francis et al., 1991; Kendall, 1992; Cumella et al., 2000) untreated dental caries and periodontal disease, increasing susceptibility to prolonged dental treatment and teeth extraction. Oral health is fundamental for children with a LD; failure to address this may negatively impact self-esteem which has also been linked to psychological wellbeing and satisfaction (Locker et al., 2000; Persson et al., 2009).

Recent progression in UK healthcare policies (DOH 2003, 2004, 2007a, 2007b, 2007c) including Valuing People (DOH, 2001b) and Valuing Peoples Oral Health (DOH, 2007b) strive to advocate for the needs and aspirations of people with learning disabilities, highlighting the significance of choice, rights and inclusion in relation to healthcare. Valuing People (DOH, 2001b) identified the primary objective of the NHS is to “enable people with learning disabilities to access a health service designed around their individual needs, with fast and convenient care delivered to a high standard, and with additional support where necessary.” Valuing People’s Oral Health (DOH, 2007b) believe children and adults with disabilities have an equal right to oral healthcare that is responsive to their specific needs; oral healthcare should be an integral part of holistic care packages and primary carers should be the main care providers, however the question still arises as to whether enough is being done. It is a sad realisation that healthcare systems have failed to focus or prioritise meeting their needs (Power, 2009). Alongside an increase in life expectancy, fewer children will reside in long stay institutions with the implication of the Health and Social Care Act (2008), demanding the need for an increase in health services made available to children. Community transition may also impact on oral health due to an increased availability of food and drinks that can cause dental decay (Stanfield et al., 2003). Dentistry research (Turner et al., 2008) suggests ageing increases an individual’s susceptibility to reduced levels of oral health. If a child’s access to oral healthcare is to be assured as they move through their teenage years to adulthood, transitioning to other oral health specialists skilled in their management must be integrated into care, yet this literature review identified limited information on this subject.

Oral health presents even greater implications related to quality of life for groups where needs are still not met at acceptable standards. Promoting inclusion and working in collaboration with service users in practice is a fundamental aspect of care required to strengthen accountability. There is a

distinct shortage in research investigating the reason behind accessibility barriers, the superficial need for treatment services and the direct impact this has for children with learning disabilities. In recent years, there has been a growing emphasis on encouraging service users to offer their views on the services they receive, however within dentistry there is a clear deficiency in research including the voice of people with LD as Lowe (1992) discovered they are more likely to be viewed as passive recipients rather than active participators. Children are commonly excluded from research which concerns them, Marshman et al. (2007) reported only 13% of research was conducted with children and research is usually carried out 'on' them, rather than 'with' them (Whelan et al., 2010). Researchers inappropriately viewed children as 'mini-adults' (Marshman et al., 2007), carers and parents were often regarded as proxies rather than taking into account the child's own opinions. The oral health of many children with learning disabilities depends largely on their carer's knowledge, attitudes and practices about looking after teeth and going to the Dentist, yet Cumella et al. (2008) discovered many carers harboured negative feelings on the subject and would welcome training on practical ways of supporting children.

Scully et al. (2007) indicates the barriers that people with learning disabilities must overcome in order for their needs to be fully met, these are subcategorised below:

Barriers with reference to the individual

Difficulty complying with instructions, lack of ability in carrying out oral self-care (Bollard, 2002), difficulties arising from anxieties, fears or past traumatic experiences (Hennequin et al., 2000; Emerson et al., 2001), remaining still throughout the treatment process (Russell, 1992) and access difficulties including transportation to and from dentist surgeries (O'Donnell, 1985). Dougall and Fiske (2008a) consider assess barriers to comprise of four key areas, access to the building, dental surgery, dental chair and mouth.

Barriers with reference to the Dental Profession

Dental practices within the UK are required to comply with the Disability Discrimination Act (Qureshi and Scambler, 2008) however contributing factors to these health-inequalities include poor communication alongside a lack of communication skills (Sentel, 2007), high staff turnover impacting the continuity of care as trusting relationships are unable to form (Pratelli, 1998), ineffective training due to the changing needs of service users (Gallagher and Fiske, 2007), restricted funding (Edwards and Merry, 2002) and the lack of information received about treatment.

Barriers with reference to Society

The main societal barrier is the lack of social awareness of the issue, the lack of positive attitudes towards oral health promotion (Owens et al., 2011), the inadequate support for research (Scully et al., 2007) and the deficiency in specialised oral healthcare facilities (Rouleau et al., 2009) striving to meet service user needs.

Barriers with reference to the Government

Predominant issues include the Government failing to prioritise dentistry within the NHS which may potentially leading to privatisation (Rawlinson, 2001), lack of resources within oral health services (Dougall and Fiske, 2008a) and the lacking ability to integrate policies such as Valuing People (DOH, 2001b) into practice.

3. Aims and Objectives

Aim

To critically evaluate evidence and best practice guidelines for children with a learning disability in relation to their oral health needs.

Objectives

1. To explore a range of current and historical data in relation to the chosen subject.
2. To gain an understanding on the data produced by dentists and the data aimed at parents or carers of children with a learning disability; outlining how to effectively overcome barriers in relation to their oral healthcare needs.
3. To identify resources aimed at children with learning disabilities and how they address these are adapted to meet the needs of children.
4. To summarise the literature and provide recommendations for future practice as a Learning Disability Nurse.

4. Methodology

This section summarises the methodology chosen, the rationale for selecting the critical review method and its suitability for exploring the oral health of children with learning disabilities.

Evidence based practice is an essential part of healthcare practice which echoes throughout each field of nursing to improve the care process and patient outcomes. Healthcare practitioners must be committed to defending their practice, providing a rationale for actions using the best possible evidence (Aveyard and Sharp, 2013). Literature reviews provide clear evidence, enabling the researcher collate a range of applicable literature to focus on aspects relevant to the chosen topic (Cronin et al., 2008). The two main categories of a literature reviews are systematic and critical reviews.

Critical reviews have been recognised for their significance within research in healthcare as they incorporate a wide range of literature from healthcare provision and social intervention into one subject which is relevant to current practice (Aveyard, 2010). As highlighted by Cross and Macgregor (2010), a critical review does not systematically review literature; it aims to generate discussions around the identified themes and reflect on the ideologies that support them. This contrasts to a systematic review where the objective is to establish the effectiveness of a specific intervention, assuming the existence of a “closed system” (Edgley et al., 2014), where all research participants are expected to respond in comparable ways to a specific intervention.

Undertaking this research as a systematic review would restrict the findings significantly as variables cannot be accessed in a variety of broad methods which a critical review permits. This dissertation did not establish the significance of a nursing intervention or neutralise individual experiences, instead it utilised the “freedom of exploration” highlighted by Bates and Stickley (2013) by approaching the data with a broad scope, allowing the findings to dictate the direction of the critical review dissertation,

fundamental in determining its success. Critical reviews can however be subjected to criticism as they may not be able to answer the presented question in a way other methods are able to. Unlike systematic reviews, studies and sourced information used for the findings are not critically appraised when sourced (Dixon-Woods and Fitzpatrick, 2001) which may question the reliability of the research findings, it is important the researcher critiques the ethics and value of the research before including this in the dissertation.

4.1 Critical Realism

In order to address the current theme, this dissertation adopts the principles of a critical realist review outlined by Edgley et al (2014) in order to explore the establishment of good oral hygiene patterns under the identified themes. This approach is relevant for a number of reasons. Edgley et al. (2014) states that a critical realism approach should be adopted when exploring interventions that are social in their nature as it applies social science theory to healthcare research. The critical review lends itself to exploring the reasons behind why something occurs in the method which it does, and to examining the ideological framework in which it does occur (Edgley et al., 2014). The researcher did not determine the effects of a specific nursing intervention on the target population; it explores various methods of establishing good oral hygiene patterns in children with a LD; exploring a range of perspectives, developing ideas and presenting recommendations with an application to current nursing practice.

The critical review categorises this information into three main themes; information produced by dentists, information aimed at parents/carers and resources designed for children. The question for the critical review is 'How to establish good oral hygiene patterns in children with a learning disability'; discussion on the range of data discovered is highlighted in the following chapter.

Appendix 1 outlines the search criteria and strategies used to search for literature.

5. Information produced by Dentists

Valuing people with learning disabilities means listening to them, treating them with dignity, and involving them in person-centred planning about their oral healthcare needs. This correlates with the aims of Special Care Dentistry (SCD) and guidance within their commissioning tool that “care should be provided by the right person, in the right environment” (BSDOH, 2007). SCD aim to provide two key aims, including:

1. A patient led service, aiming to provide and maintain optimum oral health
2. Integrated front line care, which is organised around the needs around the vulnerable child or adult, rather than professional boundaries.

(BSDOH, 2007)

There is evidence that dentists could provide better healthcare to people with a learning disability (Christensen et al., 2005). A report published by the Academic Unit of Dental Public Health at the University of Sheffield discovered that although the children’s dental service was fantastic, carers labelled the service as being ‘very understaffed’. Some carers disliked the lack of choice of treatment and services for people with learning disabilities whilst stating ‘our experience with most dentists is that they do not feel competent or comfortable when dealing with disabled people which in our view is tantamount to discrimination’ (Hall, Marshman and Owens, 2011). ‘A philosophy of lifelong prevention of dental disease should be adopted by all dentists’ (Oral Health Strategy, 2004). The dental profession are responsible

in raising awareness of the requirement for early and consistent contact with dental services for children with learning disabilities, involving parents and the of other health-care professionals involved with the child.

Every child is entitled to accessible dental care and should have an annual check-up, many dental practices are comfortable in treating adults and children with PMLD in their surgery. The Disability Discrimination Act (1995) states that services should make changes if a disabled person needs it, however accessibility may prove an issue (Dougall & Fiske, 2008a) as there are many dental practices which are only accessible via staircases and provide not alternative options. Penchansky and Thomas (1981) expand on these dimensions of access, stating they comprise of five other dimensions including availability of services in the area, acceptability and level of satisfaction expressed by the service user, how the service accommodate the individual e.g. flexibility when making appointments, appropriate to needs which ensures the child is obtaining what they require and affordability, the cost of the service and ability to pay for it.

The British Dental Journal (Owens, Dyer and Mistry, 2010) states that dentists must apply a 'bottom-up approach' to children's dental services, ensuring that planning starts with the person, discovering their needs and preferences, and then fitting service delivery around the person, rather than utilizing the current method of service delivery where the child has to 'fit' to the service. This requires listening to children with learning disabilities, their parents and primary carer's to identify what they would like from services and attempting to facilitate choice. If the British Dental Journal were to implement this model of access as a commissioning tool for new dentistry contracts this would help to ensure these barriers were reduced, respecting children's rights and independence, facilitating choice and inclusion for both children and carer's whilst optimising quality care delivery. Information on local dental services must be made available in an accessible format to the wider public, specifically children in rural segments of the population. Regular contact

enables the Dentist to monitor their condition and familiarise themselves with the child's behaviour changes which may indicate oral health discrepancies. One of the requirements for effective partnership working is mutual trust which becomes of pivotal importance when working with patients (Fugelli, 2001), this can be achieved through frequent visits where the child can familiarise themselves with the dental team and their practice. Dentists and dental care professionals should never underestimate the ability of children with learning disabilities to communicate and to express their needs for information about their care. Chernin (2008) discovered that children can be seen as powerful consumers, their study identified children's familiarity with brands and preferences may have implications for oral health promotion initiatives using tooth brushing clubs and distribution of toothpaste packs.

Training

If dental services are to respond in a local community setting, it is important that teams are trained in disability awareness and confident in their care delivery (Wilson, 1991). Educating dentists and their dental team is fundamental to ensure they can adequately provide mainstream care to children with learning disabilities, recognising the emotional and psychological concerns of the child and their family which must be addressed to ensure appropriate standards of care. Many undergraduate programmes are exploring how they provide education and training in special care dentistry for dental students and the wider dental team such as Dental Nurses, Therapists and Hygienists. (Gallagher and Scambler, 2012). Higher levels of training would enhance capacity and staff abilities within a diverse range of services to practice with confidence. Within the School of Clinical Dentistry in Sheffield there has already been a move towards amending the undergraduate curriculum (Hall, Marshman and Owens, 2011). Literature such as "Paediatric Dentistry- a Clinical Approach" (Koch and Poulsen, 2009), listing a range of disabilities and the oral health considerations associated with them should be an encouraged read for all dentistry students and

professionals. As specialists in this field of care deliver teaching and training of undergraduates, postgraduates and the wider dental team, this should enable diverse care to be mainstreamed over time, in line with the strategy and policy recommendations for children with disabilities (Gallagher and Fiske, 2007; DOH, 2007b).

Oral health programs

Dentists must deliver oral health programs as part of a holistic approach which must be embedded in every individual care plan (DOH, 2007b). These programs should be shared between dental trusts and based on the best available research and evaluation; supporting children's oral hygiene needs and aiding communication between the family and primary carers (BSDOH, 2000).

Recommendations and clinical advice has been made available from a range of dentistry professional's across the UK. Brooker and Nicol (2003) suggest that when considering the practicalities of oral hygiene for this client group, it is important to use the principles of oral hygiene that apply to any child. Colgate (2016) have produced an article highlighting the dental healthcare requirements for children with learning disabilities stating that an infant's care routine begins as early as when they arrive home from hospital by wiping gums with a wet gauze pad. Once teeth have protruded, they should be brushed at least twice a day with a soft toothbrush and flossed daily. As children with a LD may not be able to rinse or may gag easily, fluoride rinse should be used for children over 6 years to improve their defence against tooth decay. Dentistry professionals at Oral B (2014) suggest once an infant turns one they should attend their first appointment, enabling the Dentist to check the condition of the child's teeth and for the child to become familiar with the dental surgery. The Dentist should be visited every six months between 3 and 5 years of age as check-ups enable the early detection of tooth decay or abnormalities in teeth. The fundamental aspects of any oral healthcare plan are highlighted in Appendix 2.

Fluoride toothpaste

High concentration fluoride toothpaste provides better enamel protection from tooth decay in children (Austin et al., 2010; Ren et al., 2011). Valuing Peoples Oral Health (DOH, 2007b) state that dentists are responsible for the provision of fluoride toothpaste with advice and encouragement for its use, alongside the professional application of fluoride varnish three to four times yearly. The Department of Health (2007a) suggest that brushing twice daily with fluoride toothpaste can reduce both gum disease and dental decay. Children under three years should use a toothpaste containing no less than 1,000 ppmF (parts per million fluoride); Oral B (2014) suggest that fluoride brushing should start at age two and once the child turns 6 they should be using a toothpaste with up to 1500 ppmF. Bellis (2008) suggests fluoride toothpaste should be treated as a medicine and be kept out of reach of children to avoid any eating or licking from the tube. It has been advised no more than a pea-sized amount of toothpaste should be applied for children aged 3-6 (Bellis, 2008; Oral B, 2014) and that a smear of toothpaste should be pushed into the bristles of the brush to avoid excess swallowing of the toothpaste. Toothpastes must also be low abrasive in nature (Macdonald et al., 2010) as highly abrasive toothpaste can strip the tooth's enamel. Hundreds of branded toothpastes containing 1,000-1,500 ppmF have been listed by the Department of Health (2007a) such as Macleans Fresh Mint, Aquafresh 12 Hour Protection and Sensodyne Complete Protection.

Tooth Brushing

In order to protect newly erupted teeth, Oral B (2014) advise only to use tooth brushes made of soft bristles which are intended for a baby's mouth. Once they have passed this development stage, the Oral Health Foundation (2016) recommend a toothbrush with a small to medium head size with soft bristles. In order to avoid "baby bottle tooth decay" which may occur in babies fed with milk, sugared mashes and juices. The bottle should be taken away from children once it has finished and they should not be put to bed with it (Oral B, 2014). They also suggest discouraging the child from sucking

on their thumb or pacifier before the age of three, ensuring this does not turn into a habit causing problems for healthy development of the mouth and teeth. Brushing with fluoride should occur twice daily (Bellis, 2008; DOH, 2007a; Brooker and Nicol, 2003), every morning and evening with an emphasis in brushing before bed. Children with learning disabilities may resist tooth brushing, Bellis (2008) suggests using a finger at first to massage the gums with fluoride toothpaste. Children may find it comforting to bite on the toothbrush to assist in the teething process. Unless a child's manual dexterity has developed enough to allow them to clean teeth carefully themselves, constant assistance and supervision should be made available. Toothbrushes can be modified with special handgrips to assist those people who have limited manual dexterity, e.g. bicycle handle or a rubber ball, encouraging independence from a young age. A rotating or oscillating electric toothbrush may be suitable for some children as a small head size may assist brushing in harder to reach areas. This may prove beneficial as they can be a novelty which may encourage brushing (Oral Health Foundation, 2016). However it has been discovered that neither manual nor electric powered toothbrushes are more effective than the other (Bellis, 2008). Spitting out excess toothpaste is preferable, rinsing after tooth brushing should be discouraged as this could enable concentrated fluoride from the toothpaste to become diluted therefore reduce its preventative effects. Teeth must not be brushed immediately after eating or drinking acidic food or drinks (Bartlett et al., 2011) or after vomiting (Milosevic, 1999; Bartlett et al., 2013) for children who vomit frequently. Plaque disclosing tablets can help to identify areas which have been missed (DOH, 2007a). As the surfaces of milk molars are susceptible to tooth decay, Oral B (2014) suggest using dental floss to thoroughly clean these areas. Chlorhexidine gel or mouthwash may also improve gum health by reducing plaque and bacteria build-up over a short period of time, this should be recommended by a dental professional (Bellis, 2008) however should not be used as an alternative to tooth brushing or over a consistent period of time.

Tooth Brushing Technique

The technique of tooth brushing is often more effective than the type of toothbrush itself. The Dentist or dental team can offer advice and practical guidance on brushing and general mouth care (Oral Health Foundation, 2016). There is no correct or incorrect method to brushing teeth, the main objective is to remove plaque build-up, primarily responsible for both gum disease and dental decay. Bellis (2008) states that brushing should be undertaken in a circular motion, directed at the area where the teeth and the gums meet. Each surface should be cleaned including the outside of teeth, the inside of teeth and the biting surfaces to ensure all plaque has been removed. Purchasing a toothbrush with a built in timer or alternatively a manual timer can prove valuable to indicate two minutes, which could be presented as an incentive to teeth brushing (Bellis, 2008).

Medication

Many children rely on medication to keep their condition under control, however certain medications prescribed contain sugar or cause a dry mouth which subsequently may cause tooth decay or an overgrowth of gum tissue (Colgate, 2016); therefore the dental team must be notified to ensure they take extra precautions if necessary. Clinical teams are advised to check the BNF to determine whether sugar free alternatives are available. Where a sugar free version is available the Dentist should write to the patient's general medical practitioner with an explanation, requesting a prescription to a sugar free version (DOH, 2007a).

Diet

The Department of Health (2007a) believe healthier eating advice should routinely be given to children and parents to promote good oral health and hygiene. Colgate (2016) suggest serving healthy, balanced and nutritious meals whilst restricting sugary or starchy foods enables baby teeth to develop properly, limiting exposure to the decay that causes acid attacks. 'Sweet treat' foods such as fizzy drinks and sugary foods should be restricted

to mealtimes and consumed in moderation (Oral Health Foundation, 2016) with no more than one acidic drink per day (Bartlett et al., 2011). Snacks containing sugar such as bread, cheese and fresh fruit should not be eaten between meals (Bellis, 2008). Colgate (2016) suggest brushing teeth after mealtimes or rinsing with water can help neutralise the acids from sugary foods. Department of Health (2007a) suggest avoiding sugar-containing foods and drinks at bedtime with no more than 30g of added sugar for children consumed per day.

Erosion

90% of dental caries are preventable; tooth erosion may be asymptomatic until it has reached an advanced stage (Faculty of Dental Surgery, 2015). Therefore it is vital children visit the Dentist regularly. Erosion may be caused by intrinsic acids such as vomiting, gastric reflux or extrinsic acids in the diet (Bellis, 2008). As suggested by the Department of Health (2007a) the dental team must perform a sensitive investigation of general health and diet as well as tooth brushing behaviours to identify the sources of erosion. They must provide specific advice tailored for each child or primary carer to manage tooth erosion and professionally apply fissure sealants to all susceptible pits and fissures (DOH, 2007b). If dentists discover tooth erosion is severe, using dentine bonding agents (Sundaram et al., 2007) and sealants (Wagehaupt, Tauböck and Attin, 2013) is advised. Dentists must facilitate parents and carers when seeking medical advice for management of Gastro Oesophageal Reflux Disease (GORD), as there is evidence that anti-reflux medication reduces enamel loss from gastric erosion (Wilder-Smith et al., 2009).

General Anaesthetic

There is still a need for General Anaesthetic (GA) for some children with learning disabilities to treat pain, dental disease and severe erosion. Anaesthetic should only be used as last resort when all other avenues have been explored (Department of Health, 2000). There are many other methods

to reduce anxiety before treatment such as good communication, visits to meet the practice team (Oral Health Foundation, 2016) and resources made available for children.

Oral health is an important aspect of overall health and wellbeing and its benefits should never be underestimated; oral health empowers children with disabilities, providing confidence which enables them to reach their full potential (DOH, 2007b). In paediatric dentistry, the child undergoes the treatment therefore dental professionals must ensure they consider their perspectives and expectations when decision-making about their care (Marshman and Hall, 2008). Dentists are held accountable for their effective communication with patients to maximise the impact of their advice, ensuring it is supportive and enables a review and maintenance of behaviour change (DOH, 2007a). Appendix 3 outlines the key responsibilities of dental teams when promoting behaviour change.

Phobias of dental treatment and hospitals are common amongst people with learning disabilities (Gordon et al., 1998). Dental teams must empower children with learning disabilities in order to increase their involvement in the decision-making process, to support their choices and to reduce anxiety about treatment (Hammel, 2003). Appointments should be organised for an appropriate time of day (Scully et al., 2007), aiming to minimise disruption both to the child, the family and the healthcare professionals (BSDOH, 2001). Dentists must understand like any child there may be an unwillingness to cooperate throughout treatment; interventions which integrate desensitization techniques alongside home visits may be essential to achieve this. Clear explanations to patients, consistent approaches with the use of communication aids e.g. Makaton, alongside continuity of the experienced dental team can help overcome these anxieties (BSDOH, 2001).

Many dental services struggle with the challenges of planning, organising and delivering an effective service for children with learning disabilities. The

British Dental Association (2008) have produced a 'Case-Mix Toolkit' currently being piloted across dental services in England and Wales. This toolkit measures patient complexity by incorporating a system of identifiable criteria applied to a weighted scoring system, providing an overall 'complexity score' for each service user. The toolkit does not include scores for the complexity of the dental care, but rather time and patient management which should therefore explain the time involve and thus the cost of their management (Gallagher and Scambler, 2012).

The toolkit measures:

- Ability to communicate
- Ability to co-operate
- Medical status
- Oral risk factors
- Access to oral care
- Legal and ethical barriers to care

This toolkit provides considerable data for the commissioners, understanding various factors (such as the length of time required for treatment, number of staff required) therefore allowing each service to deliver person-centred treatment to each child in a way that demonstrates value for money (British Dental Association, 2008).

Positive links between educational establishments and dental services are also essential in promoting the oral health of children with learning disabilities. Services must integrate a diverse range of 'Partners in Oral Health', co-ordinating at a multi-agency level to ensure consistent oral health education is delivered and appropriate resources are provided when necessary (DOH, 2007b). Further information on these partners in oral health are listed in Appendix 4. A preventative oral health strategy for children with learning disabilities will reduce the need for treatment of periodontal disease and dental decay, reduce oral health inequalities, promote the welfare of

children, enhance the early detection of oral cancer and ensure a better experience of care.

6. Data aimed at parents/carers

The dental profession cannot be held fully accountable for the responsibility of developing good oral hygiene for children with a LD, a combined approach involving the child, the parents, carers and dental professionals must be integrated. Lack of parental awareness is a major contributing factor for poor dental attendance in children with learning disabilities (Lo et al., 1991), becoming more unlikely than children without learning disabilities to have had a dental check-up in the previous year (Office for National Statistics, 1999). Cumella et al. (2000) find that 89% of carers regarded the condition of the child's teeth as important with some accounts of service users stating "I couldn't talk, I'd feel embarrassed if I did not have nice teeth" and "its pride and I don't want to lose my pride...I'd go mad".

The key to a healthy mouth begins at infancy level with a supportive environment initiated from the continuing care of parents and carers responsible for their teeth brushing, maintaining a healthy diet and ensuring regular contact with local dental services, however they often lack the appropriate skills to maintain oral health (BSDOH, 2001; Tiller et al., 2001) with their knowledge and practice generally deemed to be inadequate (Bowsher, Boyle and Griffiths, 1999; Hunter et al., 1996; Longhurst, 1998). A child unable to express pain or discomfort may exhibit changes in their behaviours including unwillingness to co-operate with staff or participate in usual activities, disturbed sleep patterns, irritability and a loss of appetite. Parents, carers and dental professionals must be aware of sudden changes in behaviour in children who have difficulty in expressing their needs, eliminating oral pain as a potential factor for behaviour change. Parents also

play a significant role in initiating dental treatment whether routine or emergency.

Parents/carers must be involved in the early implementation of preventive practices including good dietary habits, appropriate fluoride therapy, fissure sealants and effective oral hygiene (Royal College of Surgeons, 1999) with appropriate information on caries/periodontal health. (BSDOH, 2001). Oral B (2014) highlight that parents/carers should supervise cleaning and assist when necessary to correct children's moves and ensure they are targeting the hard to reach places where the majority of plaque builds up. The Faculty of Dental surgery (2015) at the Royal College of Surgeons in England provide recommendations and prevention guidance on how parents and carers can maintain children's oral health. Parents should introduce drinking from free-flow cups when children are approximately 6 months old and stop bottle feeding from 12 months. Unless otherwise instructed by a health professional, children over 12 months of age should drink nothing other than water throughout the night. They must be registered with a Dentist as soon as the first teeth appear and visit regularly, as often as they recommend, enabling tooth decay to be diagnosed early so that appropriate treatment can be instigated, preventing the need for multiple tooth extractions required under general anaesthetic. If children develop tooth decay, they must be diagnosed early so that appropriate treatment can be instigated promptly. Referral to a Specialist Dentist should also be readily available when appropriate, this will help to prevent the need for multiple tooth extractions under general anaesthetic.

Bellis (2008) produced a range of information aimed at parents or carers of children with learning disabilities which should be adapted into each individual routine. Firstly, parents must encourage the child to undertake any brushing within their capabilities as having someone to assist them can be an invasive process which may be upsetting for the child. Always explain the process and if you do have problems with brushing ask the dental team for

advice. Adequate head support is required for comfortable brushing for both the child and the carer/parent, which may entail the person being sat up in a chair, their wheelchair or bed. If the parent/carer is struggling to carry out the procedure they may discover it is easier to brush a child's teeth when they are at their most relaxed e.g. watching TV. An adequate brushing routine carried out each time ensures no parts of the mouth can be missed, however if there is any refusal to co-operate it may be suitable to brush a different area of the mouth each day. A thorough brush of every surface of teeth once every two days is more effective than an inadequate brush everyday as many of the surfaces of the teeth can be consistently avoided or missed. In these circumstances a tooth-brushing chart should be used by carers/parents which would ensure no teeth are missed. Carers must use latex free gloves when assisting children with tooth brushing and replace them after each individual (Bellis, 2008).

PAMIS (2011) provide a description of the problems which parent/carers of children with Profound and Multiple Learning Disabilities (PMLD) are likely to encounter, offering tips and advice which enable these issues to be overcome. They include:

Brushing Techniques

Brushing when facing forwards limits both vision and access as many children 'bow' their heads down during brushing, resulting in the carer/parent bending or twisting over the individual. Therefore, parents/carers should ideally be positioned behind the child and slightly to one side, providing more accessibility and vision into the mouth whilst allowing them to gently assist in supporting the head. They may be required to gently draw back the lips and cheeks comfortably in order to gain access to the teeth and gums, taking extra precautions to avoid loose teeth when brushing (Bellis, 2008). The toothbrush head should be angled at 45°, pointing towards the roots of the teeth. The tufts of the brush should be positioned where the teeth and gums meet. Parents/carers should rotate in a circular motion gently around the

necks of the teeth, brushing no more than three teeth at a time whilst ensuring all areas including the biting surfaces are coated (PAMIS, 2011). Although some parents/carers of children with PMLD may discover a softer brush is sufficient, 'superbrushes' are now made available where bristles are angled on both sides, cleaning all three surfaces of the teeth at the same time. A flannel or gauze-square wrapped around the parents/carers finger can be used to gently retract the tongue if the child is thrusting or biting the toothbrush; this may take perseverance and patience however it helps to begin brushing from the back teeth. If co-operation is minimal, activities for distraction such as music and videos may be helpful (PAMIS, 2011).

Excessive salivation or drooling

Dysphagia, poor lip closure and poor control of the head may cause saliva to accumulate in the mouth, resulting in drooling. Supporting the person's head so that it is in an upright position is often the most effective method to reduce drooling. Saliva plays a fundamental role in protecting the teeth and gums as well as assisting the swallowing of food, therefore parents/carers must ensure the balance is right as this could consequently lead to the child choking. Dentists can offer advice on a toothbrushing routine, ensuring plaque and bacteria do not accumulate as this could potentially cause chest infections or bad breath (PAMIS, 2011). On the other hand, Dentists must be made aware of a child is suffering from dry mouth. This is often the result of medications, therefore parents/carers must liaise with doctors or the dental team concerning the potential side effects of prescribed drugs, especially medications to control epilepsy (PAMIS, 2011).

Bruxism

Bruxism is the grinding, clenching or gnashing of teeth which could result in abnormal wear on teeth, oral-facial pain, headaches, tooth sensitivity and tooth loss. Parents/carers must make the dental team aware of any bruxism; they can undertake a dental check to ensure there are no underlying

problems and carry out a behavioural assessment to establish appropriate behavioural interventions (PAMIS, 2011).

Sugar-free medication

Parents/carers are advised to discuss with pharmacists if sugar free versions of over the counter liquid medications are available. Where sugar free alternatives are not available, they should be advised where possible to try to administer medication at mealtimes (DOH, 2007a). Children with PMLD are more likely to be prescribed medication in syrup form, due to swallowing difficulties or dislike of tablets (Manley et al., 1994). Parents/carers may discover plaque-disclosing tablets are particularly beneficial when monitoring the success of their cleaning techniques (Gates, 2003; Lange et al., 2000).

Well performed preventive programmes, incorporating a range of techniques discussed can prevent the progression of periodontal destruction in children with a LD. To ensure this can be delivered, parents and carers must be provided with information on the range of local services and how these can be accessed (Frenkel, 1999), made available in a range of formats which enable support of patients by their carers or other healthcare workers (Glassman and Miller, 2009).

Valuing People's Oral Health recognises that good practice allows for parents and carers to receive appropriate training and the provision of information about local services made available (DOH, 2007b). Guidelines within community settings often do not routinely include oral care, training is often carried out 'job shadowing' however managers are beginning to recognise the value of oral care standards in relation to good practice (Glassman et al., 1994). It is crucial that parents and carers receive the appropriate information and guidance to help support and maintain a child's oral health (Dougall and Fiske, 2008b), as failure to do so could potentially result in further experienced barriers in relation to oral healthcare. Encouraging them to recognise the importance of oral hygiene within a person-centred

approach should assist their competence in providing and promoting support. This may be presented for carers as a training package, a series of workshops and refresher courses to undertake regularly to assess their capacity (Hall, Marshman and Owens, 2011). Training programmes should identify that poor standards of oral hygiene can be a serious health threat (Eadie and Schou, 1992) and should address the responsibilities of every grade of staff member and the shift patterns (Boyle, 1992). Providing training alone is not sufficient to promote behaviour change and the attitudes and values of carers may also need to be addressed (Frenkel, 1999).

Yesudian, Hall and Marshman (2012) uncovered in their study at a school for children with learning disabilities that children admitted to not brushing their teeth as often as they should. Although some considered their own responsibilities for maintaining oral hygiene, parents play a central role and must do everything in their power to ensure their oral health is sustained on a daily basis. Health Visitors are a fundamental point of contact for parents of babies and toddlers and are in an ideal position to offer preventive dental advice at the early stages of child development (Jackson, 1979). The use of focus groups including parents of children with a LD may also provide valuable insights into parent issues or perceptions (Slack-Smith et al., 2010) providing participants the opportunity to share experiences which can be beneficial in service planning and training.

7. Data designed for children

There are almost a third of five-year-olds in England suffering from tooth decay, the average child with decay has at least three teeth affected (Public Health England, 2013). Approximately 46,500 children under 19 were admitted to hospital for a primary diagnosis of dental caries in 2013–2014. These figures were highest in the five-to-nine-year-old age category, which demonstrated a 14% increase between 2010–2011 and 2013–2014, from

22,574 to 25,812. The second highest admissions in 2013–14 were for tonsillitis, with approximately 11,500 cases, which shows dental caries by far being the most common reason for children aged between five and nine to be admitted to hospital (Health and Social Care Information Centre, 2013). This process is not only distressing for parents and carers, but costly for the NHS, with £30 million spent on hospital based tooth extractions for children aged 18 years and under in 2012–2013¹³ (DOH, 2013; Faculty of Dental Surgery, 2015). Poor oral health may inhibit social integration and affect learning capacity in children with learning disabilities (Rawlinson, 2001; Tiller et al., 2001); pain resulting from such neglect may also provoke challenging and self-injurious behaviour (Rawlinson, 2001; Gates et al., 2000). There is potential that poor oral health could lead to low self-esteem and negative body image in later years (BSDOH, 2001).

Childsmile Scotland (NHS Scotland, 2011) is a highly successful national programme aimed at nurseries, schools and dental practices improving the oral health in children and reducing dental health inequalities since 2001. Through the initiative, children in nursery and primary schools are supervised daily when tooth-brushing; dentists provide twice-yearly fluoride varnish applications and families are offered advice on oral hygiene and diet, along with help to register children with an NHS Dentist. The programme saved the Scottish Government over £6 million in children's dental treatment between 2001–2002 and 2009–2010 (Scottish Government Press Release, 2013) which far outweighs the costs of £1.8 million per year; mainly owing to fewer tooth extractions, fillings and general anaesthetic (Faculty of Dental Surgery, 2015). The Welsh government modelled the Scottish Initiative and launched the Designed to Smile (2009) programme, which predominantly aimed to raise parental awareness of tooth-brushing and oral health in general (Trubey and Chestnutt, 2011). 1,509 schools and nurseries are currently taking part in the programme, with 91,290 children taking part in the supervised tooth brushing programme and over 222,217 home packs have been distributed across Wales (Morgan, 2015). There is currently a lack of Government

Initiatives and National Health Programmes targeting children with or without learning disabilities in England. A number of local authorities have aimed to address these inequalities such as the Smile4life program (Lancashire County Council, 2016) and Building Brighter Smiles (Bradford District Care NHS Foundation Trust, 2015), however there are no reports to determine the effectiveness or the financial cost savings of these initiatives.

Resources

In the past, book resources such as “Going to the Dentist” have helped to explain the routine experiences for children and adults with learning disabilities (Makaton Vocabulary Development Project, 1999). These books provide photographs, words and Makaton signs/symbols which can be used to help prepare the individual for their dental visit and to aid communication throughout their visit. (BSDOH, 2001). The use of “Talking Mats” (Talking Mats, 2013) has increased dramatically over recent years, they enhance children or adults with communication difficulties capacity to communicate effectively and to express their opinions on things which matter to them. There are now used for many children with and without communication difficulties who have found it enjoyable and easy to use, recent research has showed it improves the quality and quantity of information gained (BSDOH, 2001).

Monkey Wellbeing

Helen Sadler (Sadler, 2015b) is the founder of Monkey Wellbeing who published the ‘Monkey Goes to Hospital’ storybook series commissioned by the Royal Alexandra Children’s Hospital in Brighton. Helen has published books on ‘Monkey’s Family visit the Dentist’ (Sadler, 2015a) and ‘Monkey’s Guide to Healthy Teeth’ (Sadler, 2015b); realistic, photographically-based children’s storybooks to help prepare children for the Dentist. The four fundamental qualities of Monkey Wellbeing are preparation, education, reassurance and support (Monkey Wellbeing, 2016).

The Monkey's Guide to Healthy Teeth resource is colourful, interactive and has been described as "a really fun and useful tool to reinforce positive, healthy teeth hygiene" (Sadler, 2015b). The resource introduces a 'about your teeth' section, highlighting that you only get two sets of teeth with the use of eye-catching alliteration such as 'terrific teeth' and 'cool canines'. It provides opportunity for children to personalise the book with information about their Dentist and space to draw what he or she looks like. Quotes from children such as "What colour is your toothbrush?" and "If you don't brush your teeth they fall out like my Dad's!" are implemented to reinforce positive behaviours, with an interactive section for children to count the number of toothbrushes on the page. "Top tips" section outlines fundamental information on how to keep teeth healthy e.g. give your tongue a scrub and drink water in between meals, with tick boxes for the child to establish the activities they adhere to. Questions arise later in the booklet from the 'about your teeth' section as a fun method to examine children's knowledge, parents/carers roles are also emphasised in a 'don't forget' section. There are various opportunities to draw, colour (colouring in pencils are provided) and design throughout the resource; children are encouraged to colour the plaque attacking teeth, join the dots, complete the word search, draw their 'super toothy smile' and link healthy foods to teeth displaying either a happy or sad expression. The resource provides a step-by-step guide on how to clean your teeth and what you will need, accompanied with an interactive 'terrific teeth cleaning chart' (Appendix 5) to tick the morning and evening boxes after they cleaned their teeth each day. A personalised certificate is provided within the resource (Appendix 6) with stickers, enabling parents/carers to positively reinforce their behaviours after following the correct routine (Sadler, 2015b). A monkey hand puppet can be purchased from the Monkey Wellbeing (2016) website to accompany storytelling which can encourage role-play and generate discussion. 'Monkey's Family Visits the Dentist' incorporates a range of practices similar to a Monkey's Guide to Healthy Teeth'. This resource illustrates a visit the Monkey has to the family

Dentist alongside his sister, familiarising children with the surgery, equipment and the process of having their teeth checked (Sadler, 2015a).

Action for kids

Action for Kids (2016) are a registered charity providing various support to children with learning disabilities; Sarah Cate (Cate, 2015) is a Dental Nurse and oral health promoter for the charity who delivers talks and life skill workshops to children across the UK. Sarah illustrates the effective methods of planning delivery and evaluation methods in her published article 'healthy smiles are for everyone'; recommendations to ensure the success of an oral health promotion workshop are listed below:

- To ensure best practice when educating and presenting the information, practical demonstrations are fundamental and visual learning is crucial for children with learning disabilities; resources may include a PowerPoint Presentation, toothbrush, pictures and handouts.
- A 'Mouth Model' is a practical tool which should be available, this enables the educator to demonstrate the correct method of brushing and for the child to practice their brushing techniques.
- Body language, tone and pitch of voice must be considered; language must be appropriate for the audience as dental jargon can impact children's understanding. Children must be able to see and hear the educator, children with visual impairments must be seated towards the front.
- When planning the workshop, the size of the room must be taken into account alongside the children's learning/physical disabilities to ensure the learning outcomes are met and that feedback opportunities are provided.
- The educator must ensure a break is planned during the workshop to benefit children's concentration levels.

- Question and answer sessions are an effective method of establishing what children already know and what they are unsure of.

Cate (2015).

8. Application to Practice

All parents play a major role in establishing good oral hygiene patterns, some parents find this a burden which may result in it being overlooked. Our job as Registered Learning Disability Nurses is to promote oral hygiene, support the routine and address these issues when children access health services e.g. respite care. Rawlinson's (2001) study has identified the need for Community Learning Disability Nurses to work alongside carers and specialist dental services to monitor and facilitate the oral health of children with learning disabilities.

The best evidence for clinically effective oral care has previously been systematically reviewed and made available (Bowsher, 1999), however implementation depends on proper assessment to initiate interventions and evaluate progress. Nurses must evaluate and assess oral health status on admission or initial referral (DOH, 2001a) as early assessment interventions reduce the incidence of infection and oral complications (Ministry of Health, 2004). This includes identifying risk factors, status of oral structures and documenting oral care for evaluation at later stages. Tools in nursing practice have commonly been reported as problematic (Perry, 2009); we must ensure assessment tools in oral care are consistent to improve reliability and validity but this will only occur with staff education is provided (Malkin, 2009). Daily assessments enable us to identify risk factors and status of oral structures, familiarity with the oral cavity's structures will enable nurses to recognise any abnormalities including voice changes in response to infection or dryness and visual assessments of a child's ability to swallow (Malkin, 2009). Dehydration, mouth breathing and oxygen therapy mean frequency of oral care should be

increased to maintain children's comfort and reduce further risk (Cooley, 2002). Nurses should record systematic observations and the status of the structures in children's daily records (Xavier, 2000). A reassessment should be undertaken if there are changes to the child's medication or condition. Nutrition is one of the key skills highlighted in the nurse's essential skills clusters, implying we must influence every patient's nutritional welfare (NMC, 2007). As oral problems may lead to reduced dietary intake and increase the possibility of malnutrition, assessing factors which influence children's nutritional status are primary objectives for improving care (World Health Organisation, 2007).

There are significant national health inequalities regarding children's dental hygiene, however we must reflect and consider how as Learning Disability Nurses we can begin to tackle this by working closely with Health Services and Commissioners. Individual interactions must be reinforced by broader public health initiatives to understand and tackle the causes of poor oral health within our communities (DOH, 2007a). Promoting oral health incorporates health education for children and their parents/carers; establishing contacts whilst providing children and their families' information and support, enabling them to make healthier lifestyle choices. Nurses must highlight the significance of a population approach to health rather than just an individual approach which includes developing personal skills, creating supportive environments, strengthening community action and re-orientating health services (WHO, 1986). We must create opportunities to provide oral health with carers and family members to maximise the delivery of messages; we are often a small workforce within most teams however we must ensure best use of our resources by building staff skills and expertise appropriately (Levers, 2015). Social networking at a professional level enables nurses to share perspectives and disseminate information in practice; raising awareness on campaigns and initiatives within the workforce such as National Smile Month (Oral Health Foundation, 2016). Action must occur on all levels; residential, community and respite care environments should

develop policies with health enhancing low sugar diets which promote regular effective and oral hygiene methods. We must participate in community groups and develop the personal skills of children with learning disabilities and their parents/carers (Gallagher and Scambler, 2012). Nurses must liaise with Community Dentist Services for children who are unable to access mainstream services. We must ensure parents are signposted to local NHS dental services if their child is not registered with a Dentist at school entry. We must investigate and develop an understanding of each child's current oral health status and their registration with a local dental practice; generating a health action plan if necessary. Nurses are responsible for the use of creative resources or undertaking sophisticated measures e.g. behaviour modification or gentle teaching to reduce any child's resentment to teeth brushing (Gates et al., 2000).

Factors influencing changes in the population including lower mortality rates of children with complex and multiple disabilities, increased life expectancy of adults with disabilities and the increasing prevalence of disability among some ethnic minority groups may impact the provision of dental services and oral healthcare for these groups (DOH, 2007b). We as professionals must creatively address children's needs; disseminating information and supporting parents/carers at every given opportunity now and in the future.

9. Conclusion

The literature review set out to answer the proposed question "How to Establish Good Oral Hygiene Patterns in Children with a Learning Disability." This began by highlighting the key issues associated with poor dental health in children, the barriers associated with access to dental care are intensified for children with a LD as services fail to adapt their support mechanisms to creatively address their needs effectively. To enable children to receive the adequate support, practice guidelines were understood and highlighted in

the literature by the researcher; these recommendations should be planned, altered and utilised by dental professionals, parents, carers and other healthcare professionals involved in the delivery of care. This review has identified recommendations which if applied to future practice, can improve the oral hygiene of children with learning disabilities. The challenge ahead of Learning Disability Nurses may appear to be huge due to the number of children affected by oral health inequalities; however we are well positioned to lead an integrated approach to oral health, incorporating the proposed resources in practice and making a difference to the health of children's lives. We must ensure children feel their health needs are being addressed in a diverse range of services and throughout their journey into adulthood.

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11. Appendices

Appendix 1

The table below outlines the search terms used to search for the Literature outlined in the Dissertation.

<u>Category A</u>	<u>Category B</u>	<u>Category C</u>	<u>Category D</u>
Oral Hygiene	Children	Learning Disability	Dentist
Oral Hygiene Patterns	Child	Learning Disabilities	Dental Team
Oral Health	Young Adult	Intellectual Disability	Carers
Mouth Care	Adolescence	Intellectual Disabilities	Parents
Dental Caries	Young Person	Special Needs	Professionals
	Special Needs		Nurse
			RNLD

Searching for the relevant data was a process which consisted of:

1. Various meetings with my dissertation supervisor and personal tutor to discuss the chosen topic and how to effectively search for literature.
2. Attending a conference in London related to Health Promotion in Children with Learning Disabilities and how this can be done effectively; here I was given advice and guidance from Helen Sadler.
3. An in-depth search on the University of Nottingham's electronic library for relevant articles and surrounding literature.
4. An internet search on Google search engine and Google Scholar to highlight some initial findings.
5. Once some initial documentation had been gathered through internet search engines, online databases gathered a range of literature from databases including:

- Cumulative Index to Nursing and Allied Health Literature (CINAHL)
- British Nursing Index (BNI)
- MEDLINE
- Applied Social Sciences Index and Abstracts (ASSIA)

Literature was examined and condensed to literature from the United Kingdom, however relevant literature on themes such as accessibility and the manifestation of Dental Disease were included.

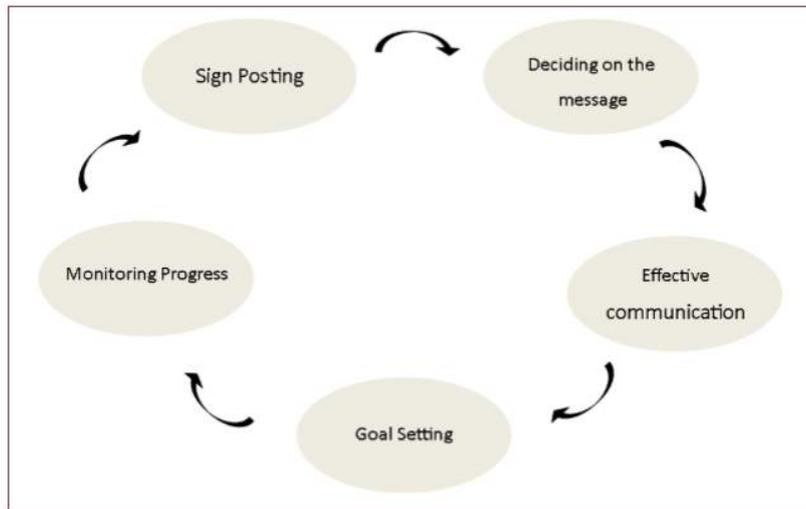
Appendix 2

Every oral healthcare plan should include:

- The oral side effects of any medication currently being taken, medical aspects that may influence dental management e.g. steroids, diabetic routine and medical risk factors for sedation and general anaesthetic.
- The persons current dental status, for example; access to the mouth, dental condition, existing problems, habits e.g. grinding teeth, cooperation in performing oral hygiene, diet e.g. food supplements.
- Previous dental treatment and the management strategies used e.g. sedation, general anaesthetic.
- The level of support/assistance required. The person's own manual dexterity.
- A carer assessment including current oral hygiene techniques applied, equipment used e.g. toothbrush, the number of carers required, a best interest policy and how it is carried implemented.

Retrieved from Bellis (2008)

Appendix 3



Role of Dental Teams in Promoting Behaviour Change retrieved from DOH (2007a)

Appendix 4 - Partners in Oral Health

Health Professionals

- i. Midwives
- ii. Health Visitors
- iii. District and Practice Nurses
- iv. Dieticians
- v. Specialist Nurse Practitioners
- vi. Pharmacists
- vii. School Nurse Advisors
- viii. Speech and Language Therapists
- ix. Doctors
- x. Hospice Staff
- xi. Learning Disability Nurses

Children and Education Services

- i. Childminders

- ii. Pre-school and Nursery Staff
- iii. Teachers
- iv. School Governors
- v. Parent and Teacher Associations
- vi. Catering Staff

Social Care Professionals

- i. Carers
- ii. Catering staff in Residential care establishments and day-care centres
- iii. Learning Disability teams
- iv.

Voluntary sector

- i. National and local support groups for disabled children

Retrieved from Department of Health (2007a)

Appendix 5

Monkey wellbeing

Terrific Teeth Cleaning Chart!

Tick the morning and evening boxes after you've cleaned your teeth **EVERY DAY!**

Clean your teeth for 2 minutes at night and any other time in the day leaving at least one hour after eating

You will need

Toothbrush & Toothpaste

Brush for two minutes twice a day!

Use your **Monkey pen!**
www.monkeywellbeing.com

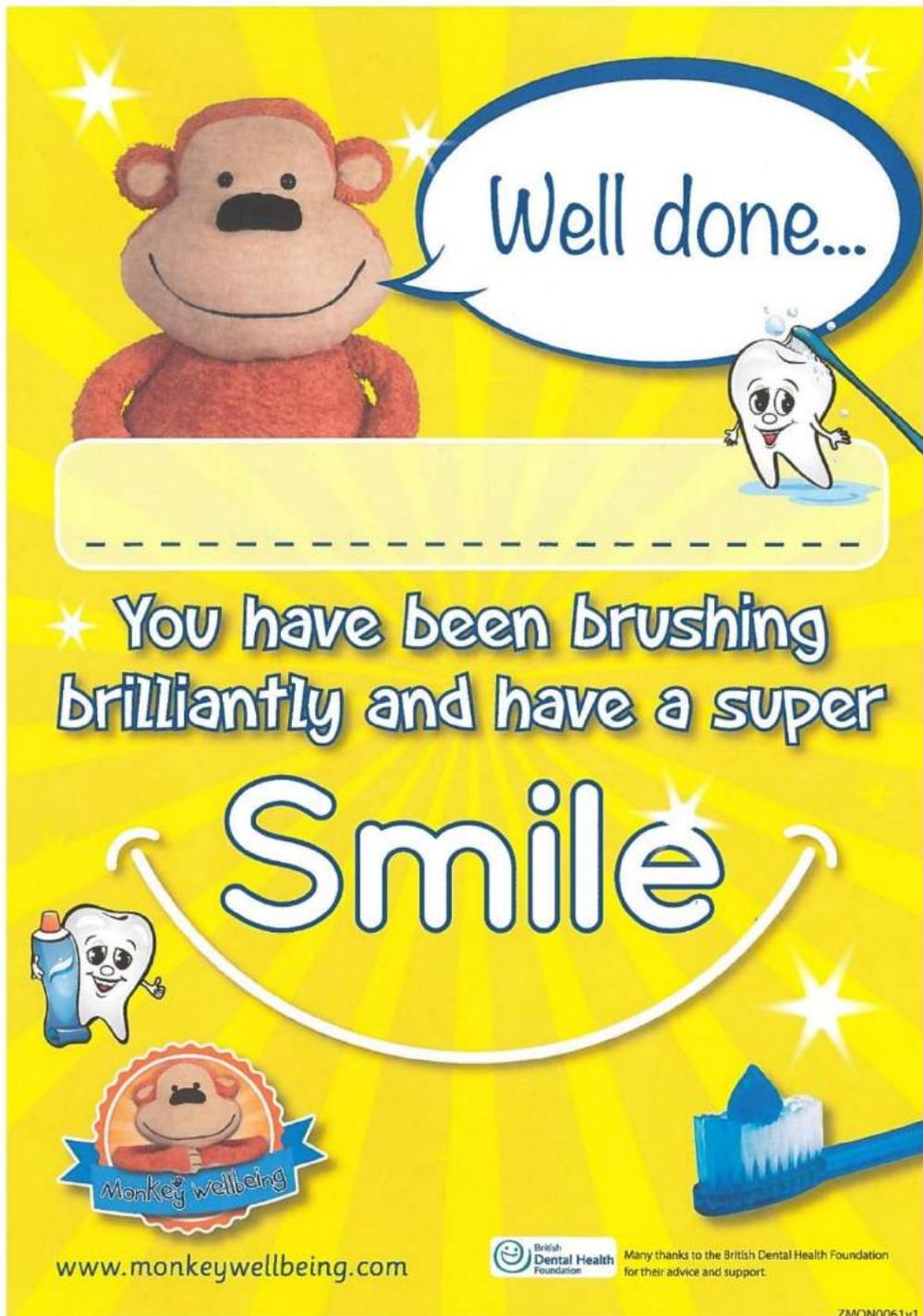
British Dental Health Foundation
Many thanks to the British Dental Health Foundation for their advice and support.

ZMON0060v1

Monday	<input type="checkbox"/>	<input type="checkbox"/>
Tuesday	<input type="checkbox"/>	<input type="checkbox"/>
Wednesday	<input type="checkbox"/>	<input type="checkbox"/>
Thursday	<input type="checkbox"/>	<input type="checkbox"/>
Friday	<input type="checkbox"/>	<input type="checkbox"/>
Saturday	<input type="checkbox"/>	<input type="checkbox"/>
Sunday	<input type="checkbox"/>	<input type="checkbox"/>

Retrieved from Monkeys Guide to Healthy Teeth (Sadler, 2015b)

Appendix 6



Retrieved from *Monkeys Guide to Healthy Teeth* (Sadler, 2015b)