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A qualitative evaluation of a Local Professional Network programme "Baby Teeth *DO* Matter"

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Objective: The objective of this study was to use a qualitative approach to examine the perceptions of dentists who led a health promotion programme entitled "Baby Teeth *DO* Matter". ***Basic research design:*** Semi-structured interviews were undertaken with a variety of participants in a health promotional programme facilitated by a shadow Local Professional Network. These were then recorded and transcribed verbatim. The transcripts were line numbered and subjected to thematic analysis to develop a coding frame. Overarching themes were developed from the coded transcripts by organising them into clusters based on the similarity of their meaning and checked against the coded extracts and the raw data. ***Clinical setting:*** General Dental Practice. ***Participants:*** General Dental Practitioners. ***Interventions:*** A Greater Manchester-wide prevention programme entitled "Baby teeth *DO* Matter". ***Main outcome measures:*** To determine the perceptions of involved clinicians and whether "clinically owned and clinically led" services add value. ***Results:*** Eight codes were generated: "Success of the project", "Down-stream to up-stream", "Importance of clinically led and clinically owned", "Keeping the approach simple", "Importance of networking", "Importance of Dental Public Health", "Importance of task and finish" and "Threats to the future of the Local Professional Network". These were organised into three over-arching themes. ***Conclusions:*** "Clinically Led and Clinically Owned" projects appear to empower local practitioners and add value. They encourage community-facing practitioners, build capacity and develop personal skills; - all in accordance with the fundamental principles of the Ottawa Charter. Distributed leadership was seen to be effective and Dental Public Health input, "Task and Finishing", resources and clarity of communication were all considered to be of critical importance.

Key words: *health promotion, children, preschool, prevention, dental general practice*

Background

New powers and responsibilities for health improvement enshrined in the Health and Social Care Act (Department of Health, DH, 2012a) for England have caused a shift in the way that services are delivered. In medicine, Clinical Commissioning Groups have been mandated by the NHS England (NCB) to improve the quality of primary medical care. This is concomitant with the recommendation of Darzi's Next Stage Review (2008) and calls from independent bodies about the importance of leadership in clinical care (The King's Fund, 2012). In dentistry, Securing Excellence in Commissioning NHS Dental Services (NHS Commissioning Board, 2013) sets out the principles of a "*clinically led and clinically owned*" service. An important component in the delivery of these objectives is the establishment of Local Professional Networks (LPNs) to provide strong leadership and effective service planning, quality improvement and engagement.

In 2011, the Board of NHS Greater Manchester (NHS GM) identified dentistry as one of its priority areas for 2012/13 and established a shadow LPN in the summer of 2012. The aim was to test the added value of putting local clinicians at the heart of future commissioning decisions to improve dental services and the dental health of the population in Greater Manchester. Four local general dental practitioners (GDPs) were co-opted onto the shadow LPN planning group early in 2012, in addition to a Consultant in Dental Public Health and the Associate Director of Primary Care for NHS Greater Manchester.

Oral health of five year old children in Greater Manchester is amongst the worst in the country (Figure 1) and no measureable year-on-year improvement has been made at a population level. Results from the NHS Dental Epidemiological Programme also reveal disease severity for three-year-olds in Greater Manchester was similar to the national profile at age five (North West Public Health Observatory, 2009) (Figure 1); caries experience across the conurbation was approximately 20% and 40% for consented three-year-olds and five-year-olds respectively. In addition, half of the estimated 181,300 children under five years of age in Greater Manchester had not accessed NHS General Dental Services during 2011-2012 (Table 1).

Following on from its inauguration and as a result of these headline statistics, the GM shadow LPN decided that a key priority was to develop a practice based initiative for under five year old children to encourage attendance and deliver a simple oral health prevention message. The programme was entitled "Baby Teeth *DO* Matter" and was in line with The Public Health Outcomes Framework for Local Authorities (Department of Health, 2012b). It incentivised local General Dental Practitioners (GDPs) to:

1. Identify children under five years old who hadn't attended for routine dental care
2. Deliver a simple evidence-based oral health message based on Delivering Better Oral Health (DH and BASCD, 2009)
3. Encourage regular attendance.

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Table 1. Access to services for children under five years of age across Greater Manchester (2011-2012)

	Total number	*Accessed care in 2 years*	*Not accessed care in 2 years*
Children under three years of age	108,780	44,600	64,180
Children aged three and four years of age	75,520	51,354	24,166
All children	184,300	95,954	88,346

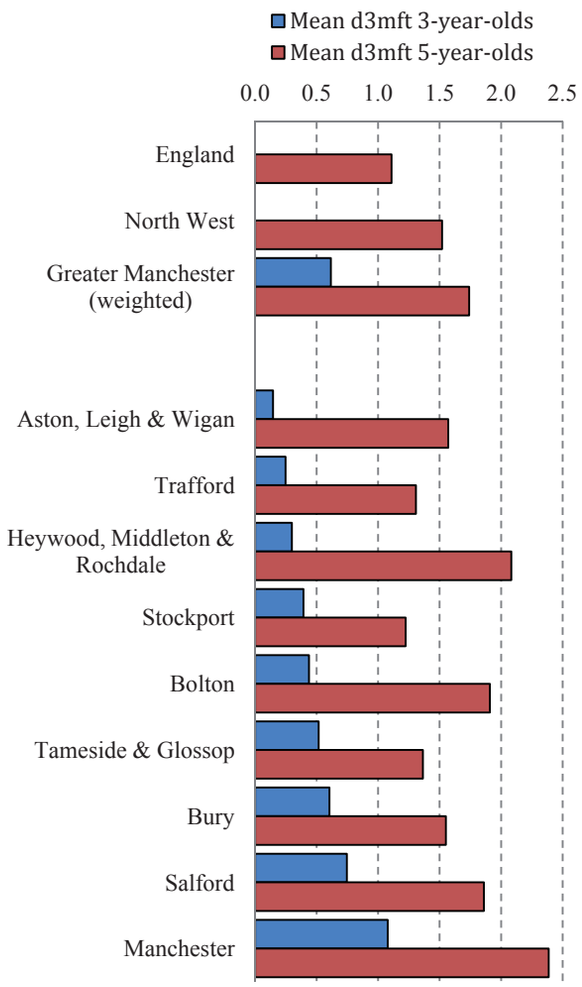

Figure 1. *Levels of disease severity (mean $d_3$mft) amongst three-year-olds (2010/11) and five-year-olds (2007/08) across Greater Manchester and for comparison, England and the North West*

The philosophy behind the initiative was to encourage dental practices to become community facing, and promote a tooth-friendly routine for life, based on two key messages "*Brush a child's teeth before bed, with a pea-sized blob of 'family fluoride' toothpaste (a smear for under threes)*" and "*Best not to give your child anything to eat or drink during the last hour before bed-time, except unsweetened milk or water*". This was in line with earlier work undertaken across Greater Manchester to develop a targeted health promotion programme (Davies and Bridgman, 2011).

Participating dental practices were supported with leaflets, posters and stickers (Figure 2). Local clinicians on the LPN also developed a Service Level Agreement (SLA) under the guidance of the GM Lead Dental Commissioners, to provide a financial incentive to participate. This meant that participating practices received £25 for the first appointment (one Unit of Dental Activity) along with any additional payment for restorations and then a further £75 in adjusted Units of Dental Activity, should the child return for a follow-up appointment after three months. In addition, every child under five years who received a free toothbrush and adult toothpaste.

A key aspect of the programme was to ensure local GDPs were involved at every stage of the planning and running of the programme; the NHS GM shadow LPN had developed the programme and a second tier of local clinicians was engaged to address the latter. These were called "*clinical champions*" and their role was to oversee the initiative in their locality, sign-up new practices, help participating practices to become community-facing and liaise with Oral Health Improvement Teams and local Dental Commissioners. Analogous to the developments in medicine, "*clinical champions*" and the clinicians on the shadow LPN were encouraged to become "*clinical leaders*" and to take the initiative at all stages of the programme.

Concomitant to Phase I of "Baby Teeth *DO* Matter", a paediatric sub-group had also been formed to enable the shadow LPN to work with primary and secondary care clinicians to develop clinical care pathways for young children. This initiative subsequently became Phase II of the "Baby Teeth *DO* Matter" programme and resulted in a booklet entitled "*Good Practice Guidelines for the management of 3-4 year old children in primary care*". The booklet provided advice and guidance for busy NHS practices on proactive prevention and local treatment to reduce referrals for care under General Anaesthesia. Care pathways were provided for young children presenting with or without symptoms (Figure 3a,b).

Within two months, 195 of 477 practices across Greater Manchester had signed up to Phase I of the programme (41%) and 3,453 children had accessed care for the first time. Links had been made with local doctors, Sure-Start Children Centres, nurseries and schools. Local GDPs worked with their Oral Health Improvement Teams and a few took the initiative to involve the local media which produced newspaper articles and local radio broadcasts. The booklet for Phase II of the programme was distributed to all of the 477 practices across Greater Manchester and was launched at a Ministerial visit by Earl Howe, the Parliamentary Under-Secretary of State for Health.

The aim of this research project was to qualitatively explore the role of "*clinical leadership*" in the context of the GM shadow LPN and Phase I and II of "Baby Teeth *DO* Matter" to understand the impact that empowering local clinicians played in the development and running of the programme.

Figure 2. *Leaflet for the participating dentists to distribute*

Method

The study was given ethical approval by the University of Manchester Ethics Committee (Ref: 12057). Local clinicians who had been involved in the planning and running of the "Baby Teeth *DO* Matter" programme were contacted by e-mail and invited to participate.

A set of opening questions was developed for the semi-structured interviews from existing research on leadership (Hoffman *et al.*, 2011; Judge *et al.*, 2004) and the NHS leadership framework (NHS Leadership Academy, 2011). In accordance with Carter and Henderson's guidance (2007), these were open-ended questions and investigated the views and experiences of participating GDPs in the "Baby Teeth *DO* Matter" programme and the shadow LPN more broadly. The topic guide was developed further in parallel with the interviews to facilitate constant comparison analysis.

The interviews were recorded digitally and were transcribed verbatim by one researcher, PRB, into documents for thematic analysis to develop a coding frame (Braun and Clarke, 2006). The researchers immersed themselves in the data by initially reading and re-reading the transcriptions before generating codes. Overarching themes were developed from the coded transcripts by organising them into clusters based on the similarity of their meaning (Braun and Clarke, 2006). These were then checked against the coded extracts and the raw data to ensure that they formed a coherent pattern and were representative

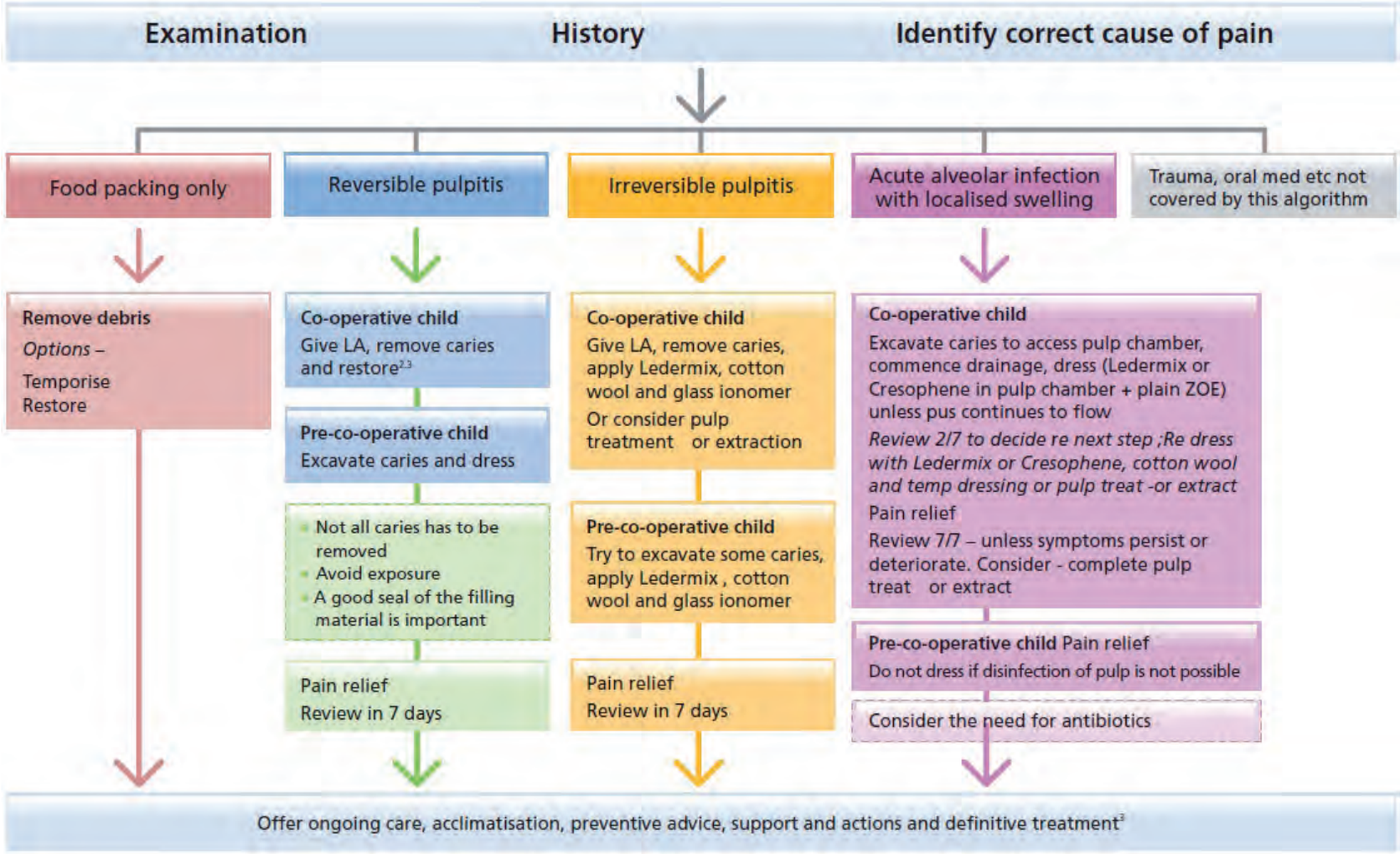

Figure 3a. *Care pathways for under-five-year-olds with pain or discomfort*

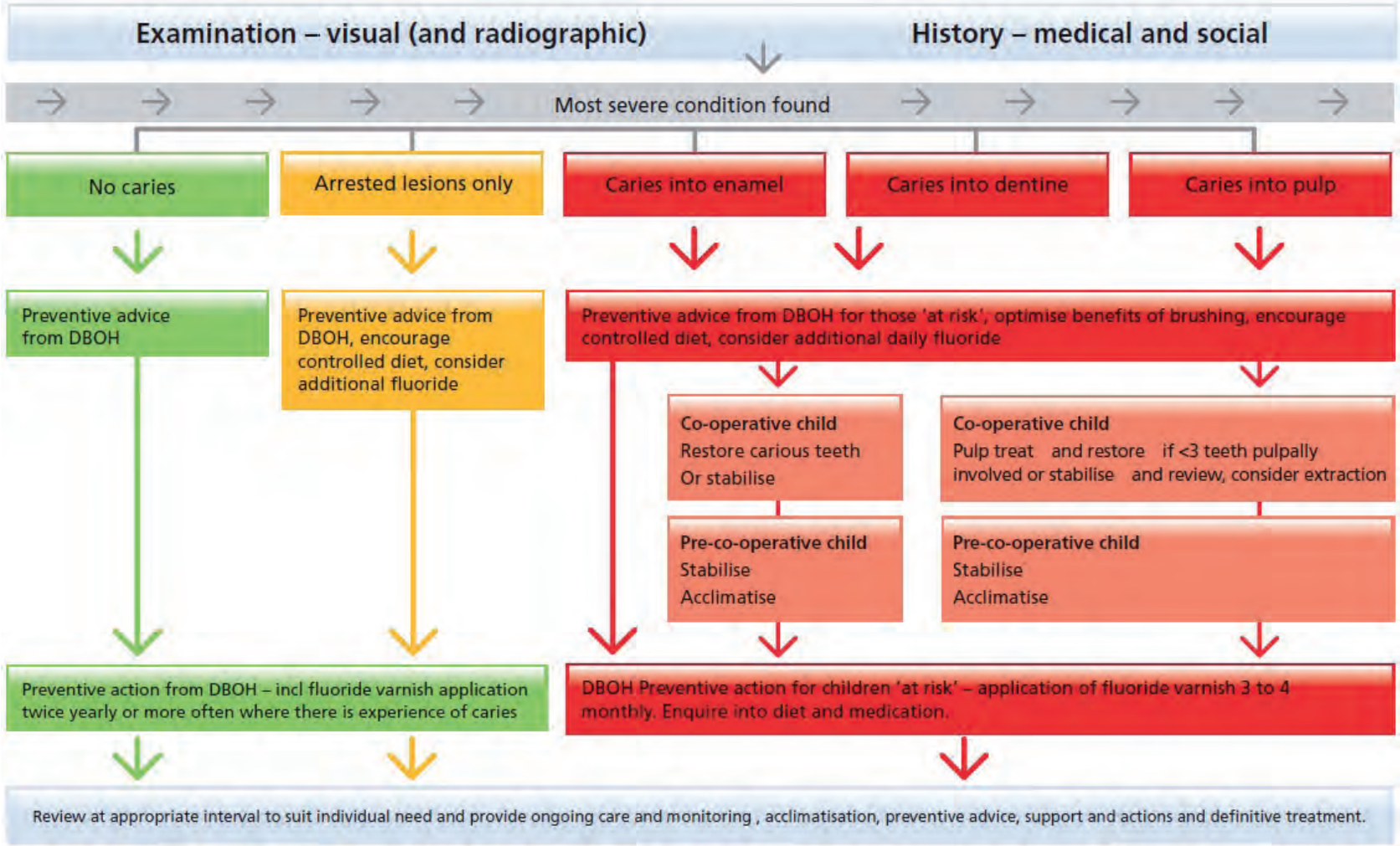

Figure 3b. *Care pathways for under-five-year-olds with no symptoms*

of what the participants were trying to convey. The coding process was undertaken manually. Specific examples were selected to create clear definitions for the coding frame. Representative quotes for each theme are given in the results, with any associated hesitations and repetitions removed for clarity. It was determined in advance that the interviews would continue until saturation had been reached (Smith, 2008). The saturation point was assessed by the transcriber when no new information was generated from the analyses.

The transcriber had no working knowledge about LPNs before the project started; the shadow LPN being a new organisational structure. The LPN members were aware during the project that the evaluation would be undertaken by the named transcriber, but this did appear to impact on their attitudes or responses collected.

Results

All of the participating clinicians on the shadow LPN were interviewed and two of the clinical champions (n=6). Eight codes under three themes were generated.

Theme 1: Impact

Code 1: Success of the project

All of the participants stated that the "Baby Teeth *DO* Matter" programme had been successful:

> ….I think it's been a success in how many children we've….seen….[1]
>
> ….the momentum it's got going….the clinical champions and other dentists that have been involved have said to me, "This is the first time I feel that my ideas have been listened to"…. [3]

Code 2: Down-stream to up-stream

A key finding was how involvement in the programme had shifted the perspective of the GDPs:

> ….general dental practitioners have never really had an opportunity to go out into the community and use their own initiative of how to actually bring patients in.… [1]
>
> ….taking them away from that heads down in the surgery with a patient, for a lot of them to actually step back and look at the bigger picture of it….[3]
>
> ….because you're stuck in your own four walls…. you don't really get a bigger picture of everything….[5]

Theme 2: Components of success

Code 3: Importance of "Clinically Led and Clinically Owned"

The idea of a locally led programme was widely viewed positively:

> ….having a general practitioner involved is important because that's what my bread and butter is, that is what I'm doing day by day….[1]
>
> ….they know what's happening on the ground level, they know what's possible and what's not possible what will work and what won't work… [2]
>
> ….we knew that other GDPs could do it too, and I think that meant everyone was enthusiastic and said, "Oh yeah, this is do-able"….[3]

Code 4: Keeping the approach simple

Given the broad geographic and organisational scope of the programme, all of the participants felt that the messages had to be simple:

> ….when you've got simple messages, simple ideas, simple models if you go out and deliver it's a lot more effective and efficient….[2]
>
> ….I think one of the strongest things was just the literature… ….just the message of using a family-friendly toothpaste and avoiding anything for an hour before bed….[6]

Code 5: Importance of networking

The structure used in the programme was based on "Securing Excellence in Commissioning Primary Care" (NHS Commissioning Board, 2012) and proved to be an important component of its success:

> ….I think it's been a success in using general practitioners and them radiating it out to other practitioners and getting them involved….[1]
>
> ….if you've got someone ringing a practice, someone you know locally leading it, and seeing dentists on the LPN being enthusiastic about it and getting involved. I think that makes a massive difference, definitely….[3]

Code 6: Importance of Dental Public Health

Dental Public Health input was also considered to be important:

> ….it's not to say we know everything, that's why we need the advice of the Dental Public Health Consultants and we also need a commissioner to say this is how this will work, this is the financial model here….[2]
>
> ….clinicians being involved, and, actually, their ideas falling on fertile ground being picked up by clever commissioners, clever public health people….[3]

Code 7: Importance of task and finish

Task and finish resources were also critical:

> ….admin was a very important role….we need posters, we need banners, we need this…. ….just go and deal with it….[2]

Theme 3: The Future

Code 8: Threats to the future of the Local Professional Network

A significant concern amongst the clinicians after the programme had been delivered was whether the LPN would be allowed to continue its work going forward, or whether it would be re-organised by the emerging new NHS structures:

> ….different bodies and parties with separate agendas all wanting to maybe take over that or infiltrate….[2]
>
> ….outside agencies dictating or selecting…. ….LPN being selected or picked, panels chosen, people who know nothing about dentistry….[3]
>
> ….the cynic in me….[thinks]….that they're going to come along with their own agenda and say this is what we're doing; well done, by the way, for that year….[5]

Table 2. Maxwell's dimensions of health care quality (1984)

Dimensions of health care quality
1. Access to services
2. Relevance to need for the whole community
3. Effectiveness for individual patients
4. Equity (fairness)
5. Social acceptability
6. Efficiency and economy

Discussion

The key principles in "Securing Excellence in Commissioning Primary Care" and "Securing Excellence in Commissioning NHS Dental Services" (NHS Commissioning Board, 2012; 2013) are to re-orientate services so that they become focused on outcomes and patients, with an emphasis on quality. Maxwell's dimensions of health care quality (1984, Table 2) provides a useful set of domains to judge quality and it appears that the "Baby Teeth *DO* Matter" programme delivered on access, relevance to need, social acceptability and equity.

Following an analysis of the project forms returned by each participating GDP, over three and a half thousand children who had not accessed dental services before received a free toothbrush and toothpaste and were given two simple evidence-based messages to promote a healthy routine for life. Whilst increased access and clinical activity are only surrogate measures to determine the effectiveness of the programme, the importance of empowering local clinicians and creating "community-facing" clinicians was demonstrated. As such, it addressed four of the five key health promotion domains in the World Health Organization's Ottawa Charter (1986): "*reorientating health services towards prevention*", "*creating supportive environments*", "*strengthening community action*" and "*developing personal skills*". The development of empowered clinicians who want to make a difference to their local community cannot be under-estimated, given their potential to create momentum for local change and influence peers. In addition, linking local clinicians to their oral health team counter-parts in the community provides a "*joined-up*" approach and ensures consistency in the oral health message being delivered at all stages of prevention, from primary to tertiary approaches. Given the lack of evidence on the effectiveness of oral health education (Kay and Locker, 1998), the involvement of all the relevant clinical stakeholders in delivering simple evidence-based messages to parents and children appears critical if both access and disease severity metrics are to be improved for this younger age group (Davies and Bridgman, 2011). It is also important to target areas of high need to reduce health inequalities.

One of the potential criticisms of "Baby Teeth *DO* Matter" is the use of financial incentives to drive the programme forward and encourage adoption. However, Mills and Batchelor (2011) argue that quality is key to the long-term success of health care and that failure to incentivise quality has been a weakness in the commissioning of dental services (Steele, 2009). Using Units of Dental Activity to pay GDPs for clinical activity of this kind would appear to be sensible to re-orientate health services towards prevention, where possible (WHO, 1986). It also enabled children to be seen early, before the disease has started, as evidence from the North-West of England suggests that three in every four children who present with disease succumb to further disease, compared to only one in four children who initially present with no disease (Milsom *et al.*, 2008). Using Units of Dental Activity to reward GDPs for actively recruiting young patients at an early age and maximising the potential for prevention would appear to extol Donabedian's view of care "*the kind of care which is expected to maximize an inclusive measure of patient welfare*" (Donabedian, 1988).

Critical to the success of the programme was the Dental Public Health input and the "*task and finish*" resource. The former is required to provide a strategic approach to establishing and developing a clinically led LPN. It also brought a consistent approach to the delivery of evidence-based prevention and an understanding of the levers within the NHS that can influence change. As highlighted in "Securing Excellence in Commissioning NHS Dental Services" (NHS Commissioning Board, 2013) "*the partnership with dental public health is crucial to delivering the vision for NHS dental services*". The LPN must also be properly funded; "Baby Teeth *DO* Matter" could not have been delivered without good project management and access to resources. Another key aspect that arose from the results of the evaluation was the importance of keeping the approach and messages simple and also ensuring good communication through the "*command and control structure*". This will be a challenge to LPNs in the future as they seek to strategically lead their local clinicians who have a broad range of clinical interests.

Conclusion

"Clinically Led and Clinically Owned" projects create and empower community-facing practitioners. They also build capacity and develop personal skills in line with the fundamental principles of the Ottawa Charter. Critical for success in programmes of this nature are: Dental Public Health input; clarity of communication within the network; and, the necessary resources to support both clinicians and the project management costs.

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