The Strong Smiles Oral Health Promotion Program – phase 2 evaluation

Sustaining the Strong Smiles program across selected North and Mid North Coast Preschools. 2012

NSW Health

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Date: October 2012

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ACKNOWLEDGEMENTS

The authors would like to sincerely thank:

- The staff from participating early childhood/preschool centres for running the program
- The staff who set aside time to fill in surveys and take part in interviews
- The children who have participated in the Strong Smiles program
- Mid North Coast staff and program facilitators
- Laurel Rogers, Donna Lloyd and Trish Davis for providing ongoing support to the program

ABBREVIATIONS

Healthy Child Initiative - HCI

New South Wales – NSW

Aboriginal Health Impact Statement – AHIS

SUMMARY

The Strong Smiles Program was developed in 2007 to address the higher rates of dental caries in Aboriginal children on the North Coast of NSW. The program targets children, aged 3-5 years old and aims to promote and sustain positive oral hygiene practices within the early childhood/preschool setting. It encourages consumption of fruit and vegetables, discourages consumption of energy dense nutrient poor ('junk') foods, encourages water consumption and decreased sweet drinks consumption.

The program consists of five weekly one-hour sessions. Sessions are conducted in the morning and linked to the morning break. Resources such as readers, songs, games and dramatic play are used. Each weekly session targets a different theme:

- Session 1 Sometimes foods/everyday foods
- Session 2 Strong smiles
- Session 3 Water
- Session 4 Getting teeth checked and correct tooth brushing techniques
- Session 5 Correct tooth brushing techniques

The format for each session is the same. Each week the program starts with a group story, followed by tongue and mouth exercises, a song and small group games based activities. The session ends with a fruit and vegetable taste testing.

In 2010, seven early childhood/preschool centres took part in an evaluation to measure the sustainability of the Strong Smiles program within the early childhood/preschool setting. In 2011 three preschools from the Mid North Coast were added to this evaluation. Qualitative and quantitative research methodologies were used to elicit information related to the research questions.

The evaluation was designed to assess what impact if any, the following factors had on program maintenance:

- Access to the resource kit
- Attending a training session versus not attending training and following a manual as the primary guide.
- Program facilitators – Preschool staff versus external facilitators.

The evaluation also focused on the impact of the program on early childhood /preschool practices.

During 2010 and 2011 740 children from far North and mid North Coast have been exposed to the program. In the centres that have been involved in the evaluation process on the Far North Coast, all have implemented the program annually since 2010.

Results from the evaluation demonstrate that overall, program strategies work well together to deliver key nutrition and oral health messages within the preschool setting. The program appears to be well liked by the majority of Preschool staff and children who have been

involved in the rollout. Early childhood/preschool workers have commented that it is flexible and easy to use with the content delivered in a fun and interactive way. All these factors help sustain the program and it has been shown that the program has had a positive impact on oral health practices within the early childhood/preschool setting.

We found that within participating centres a full kit is not an essential component to program delivery. However, certain resources are necessary such as the tooth puppet, big toothbrush and books. Early childhood workers found it easy to use the manual and implement the program. This included one centre in which workers did not get any training and still implemented the program. The evaluation has identified a desire by preschools to establish stronger networks with local health district dental health clinics.

As a result of this phase two evaluation, the following recommendations are made:

- Provide resources electronically to enable centres to download and print as needed, in a format that meets their individual needs. For example, the flipchart could be printed and bound like a big book, or as A3 poster cards. Books could be printed in A4 version so that children could sit and look through by themselves.
- The kit is to be streamlined to only include the tooth puppet and large toothbrush. This would reduce the cost associated with program rollout. An additional suggestion could be that a spare kit is kept in a central location for local loaning for centres situated within low socio economic geographic locations.
- Discuss with the Healthy Children's Initiative (HCI) team at both the local and state level, how the program objectives and resources could be incorporated into the broader HCI rollout.
- Provide centres with the manual and offer ad-hoc support to individual preschools if they experience difficulties implementing, as an alternative to ongoing group training for Preschool centres. Alternatively, or additionally, develop electronic training modules which could be uploaded to a website or downloaded onto a disc, which could help support implementation issues. The development of facilitator *You Tube* modules to support training and program implementation could also be beneficial for this process.
- Provide a more comprehensive training program regarding early childhood pedagogy if staff who are involved in program implementation are not Preschool trained.
- Initiate discussions with higher education institutions that deliver early childhood training such as Southern Cross University and North Coast TAFE to showcase and promote the Strong Smiles program amongst early childhood students.
- Improve links between early childhood/preschool centres and local health district dental health clinics and services.

INTRODUCTION

Background – the strong smiles program

The Strong Smiles Program originally known as the 'Eat Together Play Together Strong Smiles' program was developed in 2007 to address the higher rates of dental caries in Aboriginal children on the North Coast of NSW. The program targets children aged 3-5 years old in the early childhood/preschool setting. While the program predominantly targets Aboriginal children in the early childhood setting, it is also suitable for non-Aboriginal children. The five week program uses resources such as readers, songs, games and dramatic play to raise awareness of the five NSW key health messages for a healthy mouth[1].

- Eat well
- Drink well
- Clean well
- Play well and;
- Stay well

The program aims to:

- Promote and sustain positive oral hygiene practices within the early childhood/preschool setting
- Encourage the consumption of fruit and vegetables and discourage regular consumption of energy dense foods
- Encourage the consumption of water and decrease the consumption of sugar – sweetened drinks

The program consists of weekly one-hour sessions. Sessions are conducted in the morning and linked to the morning break. Each weekly session targets a different theme:

- Session 1 Sometimes foods/everyday foods
- Session 2 Strong smiles
- Session 3 Water
- Session 4 Getting teeth checked and correct tooth brushing techniques
- Session 5 Correct tooth brushing techniques

The format for each session is the same. Each week the program starts with a group story, followed by tongue and mouth exercises, a song and small group games based activities. The session ends with a fruit and vegetable tasting.

To increase the program's usability across other classroom activities, an early childhood consultant provided educational expertise in resource and program development and based the development of the program resources on key literacy and numeracy learning outcomes.

To communicate and reinforce key health messages, encourage classroom interaction, and make the learning of positive oral health practices fun, age appropriate flipcharts and big readers were developed and a variety of props were included such as a teddy bear (Toothy Teddy), a soft toy mouse (Tilda the Mouse), a dentist's patient puppet (Annie), plastic food, shopping trolleys, a tooth puppet and a big toothbrush to excite, engage.

Phase 1- Piloting the Strong Smiles program: evaluation & recommendations

In 2007, the Strong Smiles program was piloted and evaluated within a local transition to school centre attached to Goonellabah Public School. This initial evaluation reviewed the program's effectiveness regarding program content and delivery. Twenty two (22) children and two early childhood staff participated in this initial evaluation process. Both qualitative and quantitative research methods were used.

Evaluation results identified a range of strategies that if adopted, would improve program design. Recommendations included;

- Train early childhood/preschool teachers as the program facilitators with Aboriginal health workers in a support role.
- Revise the manual to include teaching aids and lesson plans for activities.
- Structure the games and activities by providing more detailed game rules in the manual.

The most important change identified in this initial evaluation related to program delivery and supported the training of early childhood/preschool teachers to facilitate the program. This was in direct contrast to the pilot implementation process whereby external health workers were trained and delivered the program in the centre and the early childhood staff took on the role of support staff.

With a view to improve program delivery, all of the recommendations made regarding program design and delivery were adopted. The next phase of the evaluation process was then to assess the effectiveness of the implementation strategies adopted, their influence on program maintenance and the influence, if any, of the program on early childhood/preschool practices. The evaluation targeted:

- Program delivery and facilitation
- Preschool practices
- Resource accessibility
- Training and its relevance to program sustainability

Phase Two- rollout of the Strong Smiles program – a review of the process

An expression of interest was sent to all early childhood/preschool centres across the North Coast area inviting them to participate in a Strong Smiles training workshop. Only those early childhood/preschool centres who agreed to run at least one program within the year and agreed to participate in the evaluation process were accepted into the training.

Priority was given to early childhood/preschool centres with at least 25% Aboriginal enrolment. When this allocation was exhausted, places were offered to preschools with less than 25% Aboriginal enrolment. On the day of the training, 10 centres were represented with 13 early childhood workers in attendance. The training process itself was evaluated[2] (Appendix 1).

It was anticipated that all Aboriginal identified early childhood/preschool centres would be offered a resource kit. The kit comprised of all the props as well as the books, readers and flip charts needed to conduct program activities (See Table 1). It was not anticipated that the program would be so popular with non-Aboriginal early childhood/preschool centres. As the project funding was Aboriginal identified, it was not possible to provide non-Aboriginal preschools with complete kits. However, it was agreed to provide these early childhood/preschool centres with a book pack instead which included the book resources used within the program (shaded area in Table 1). The research team could then assess whether having a complete kit influenced program sustainability.

Table 1

Resource Kit items	
Strong Smiles Manual	Goggles for Children x 4
Strong Smiles Flipchart	Medical Caps for children x 10
Big Book – Dental Book	Dental Puppet (Annie)
Big Book – Handa's Surprise	Lunchbox
Big Book – Natural Habits	Miniature Trolley x 4
Big Book – Toothy Teddy and Tilda Go Shopping	Pillow case bag
Big Book – What's in your Lunchbox?	Wooden birthday cake
Big Tub to keep kit items in	Water bottle
Cash register	Play money
Clip boards x 4	Shaving cream
Dental Coat for child x 4	Teeth model
Dental masks for Children x 10	Tilda Mouse
Dental Mirror x 2	Toothbrush for tooth model
Gloves x 6 pairs	Toothy Teddy
Plastic food items (Including every day and sometimes food)	

During the Phase 2 planning process, an additional request was received to pilot the program in Aboriginal specific centres across the Mid North Coast area however, instead of early childhood workers facilitating the program, local Aboriginal health workers would visit the early childhood/preschool centres and be responsible for program implementation. Both early childhood/preschools centres and workers agreed to contribute to the evaluation process and so it was decided to support this rollout and include it in the Phase 2 evaluation process. Only the results relevant to this study from the Mid North Coast were included in this study.

As a result, the second evaluation phase was designed to collect information on the program regarding:

- Program rollout: number of early childhood/preschool centres running the program, number of children participating, number of programs implemented annually.
- Impact of resources: whether having a full resource kit impacts on program delivery
- Training and its relevance to program sustainability: is it necessary to train early childhood/preschool staff in program implementation or is the revised manual sufficient to guide program implementation?

- Program delivery and facilitation: are program maintenance and sustability dependent on who facilitates the program within the early childhood/preschool setting?
- Preschool practices: has program implementation impacted on existing practices within the early childhood/preschool setting?
- Additional strategies that could be adopted to improve and support program sustainability.

Participants

On the Far North Coast, seven of the ten (10) centres that attended the training workshop agreed to participate in the rollout evaluation with six centres actually participating in the evaluation process, representing eleven (11) workers. One additional centre asked to participate and was included in the rollout after the evaluation had commenced. This centre had not received training and only received a book pack. Of the seven centres who participated in the evaluation process, only three had received kits. The other four centres received book packs.

On the Mid North Coast four preschools participated in the rollout of the program. Three centres actually participated in the evaluation process. Three early childhood workers and three health workers provided feedback. On the Mid North Coast kits were loaned to centres for the duration of the program.

Methods

Qualitative and quantitative research methodologies were used to elicit information related to the research questions. Data was collected differently on the Far North and Mid North Coast. On the Far North Coast, our priority was the sustainability of the revised program. On the Mid North Coast the priority was to evaluate the facilitation of the program and compare the outcomes with Phase 1 data.

Far North Coast

In the Phase 1 program evaluation the program was piloted in one centre and facilitated by two Aboriginal health workers. Information on program impact was collected through a pre implementation survey and post implementation interview. Before early childhood/preschool centres began program delivery, they were asked to complete a pre-program survey. The survey was posted to the centre directors and then mailed back to the research lead. Questions related to oral health practices already established within the centre (See Appendix 3).

Post implementation interviews included open ended questions and provided an opportunity for staff to provide feedback in relation to program implementation and whether the program influenced existing oral health practices within the centre (See Appendix 4). Six face to face interviews and one telephone interview were conducted. Interviews were digitally recorded

and transcribed by the research lead. Answers to open questions were analysed thematically. Standard process data was collected on the:

- number of preschools that had conducted the program
- number of children reached during rollout
- number of times program had been run in each early childhood/preschool setting

A Negligible Risk Ethics registration and an Aboriginal Health Impact Statement (AHIS) were submitted and approved in February 2010 prior to the commencement of the implementation process.

Mid North Coast

Including the Mid North Coast into Phase 2 provided data that enabled comparison to a rollout not facilitated by early childhood workers. Session evaluations were conducted with both early childhood and health workers involved in the implementation (See Appendix 2). Data relating to implementation issues only has been included in this report.

Results

Program rollout

Far North Coast

Three hundred and thirty six (336) children experienced the program in 2010. An additional 337 children were exposed to the program in 2011. At the time of this report the 2012 implementation was underway.

Mid North Coast

Sixty seven children experienced the program.

The following is a thematic analysis of the qualitative data collected relating to:

- Resource accessibility
- Training and its relevance to program maintenance
- Program delivery and facilitation
- Early childhood/preschool practices

Resource accessibility: the impact of a full resource kit on program implementation.

Far North Coast

Workers in the three centres that received kits commented that they appreciated having the kits and having access allowed them to use the resources over a range of activities during the day/year.

"*The good thing was being able to draw on such a range of resources at any time and pull them into our program…and they loved…the resources like all…the little dress ups and…that information sharing was really good, some had lots of knowledge about it and some had very little knowledge…I think it took some of the…apprehension away from visiting dentists…they*

were actually able to…sort of draw on that in a preschool environment where they felt safe and get more used to it…and that was the beauty of the program…we didn't have to go "oh god we haven't got that so we can't do that" it was really good, we could actually go "oh like today all the children had been talking, or somebody had been to the dentist or something like that" so we could pull in what we needed that was the beauty of it, it was really good to be able to do that…it was fabulous what's in that kit." (Centre B)

"I'd like to say thank you for supplying all the resources…it's good to have it there, just something to start with you know…instead of you having to make everything yourself which is just so time consuming…when there's so much other stuff going on and so if you have to make it yourself it's really down the bottom…of things to do, so I really um appreciate it…no it's very simple to follow." (Centre G)

Generally, centres borrowed, improvised or bought resources to support program implementation. One centre borrowed the more expensive kit items such as Annie the dental puppet from another nearby centre.

"*One of the preschools…we're friends with one of the teachers and we're like 'we know you've got the full kit, give us some of it, we want to have a turn' (laughter)…So we did, they shared with us and that…was fine, I just went what are you up to this week, you're not up to the same thing as me so hand some stuff (laughter)…and I mean a lot of the preschools are like that, a lot of the directors…talk to each other and attend meetings fairly regularly and…I knew that (preschool mentioned) had it so I just went 'ok come on, cough it up.' (laughter)." (Centre A)*

One centre was able to use alternatives such as pocket mirrors and plastic mirrors from the dentist instead of the cocktail stirrers that were in the kits supplied. Baskets or bags were used instead of shopping trolleys. Most centres already had play food. Four centres purchased a tooth puppet which included the big toothbrush and shaving cream to support implementation. One centre actually purchased additional items such as, play food, a mouse, teddy and a big tub to store it all in to support program rollout and planned to create their own kit and add items as the budget allowed.

"We had some hospital stuff here so we sort of just substituted…we put out the gloves…masks…little pocket mirrors, I photocopied the teeth…chart and we talked about that...but it was good because some of the children…actually went and had dental visits so we could talk about that and one of them actually brought back a little plastic…mirror, if we could get some of them that would be great." (Centre A)

Three centres also commented that the Annie puppet was useful however she was not an essential part of the kit and the preschools were able to substitute other things for the puppet.

Training and its relevance to program sustainability: is it necessary to train early childhood/preschool staff in program implementation or is the revised manual a sufficient resource to guide program implementation?

Far North Coast

Data was collected regarding the manual and its role in program implementation. Five workers made unprompted positive comments regarding the manual, its ease of use and comprehensive instructions.

"We sort of put our own touches to it…the manual was really good. I found that really … useful." (Centre F)

"Very easy to follow…no problem whatsoever, very well laid out…I just adapted the activities to suit." (Centre G)

"It was…really flexible and adaptable…it probably just took me a little bit of organising in the morning…it was just a little bit of planning." (Centre A)

Preschool Centre staff reported that they thought that training was not necessary on the whole as the manual was comprehensive enough to allow most Preschool staff to run the program to suit their centre. One worker stated that *'it was difficult to find time for training and that it often had to occur on the weekend which ate into family time'*. One worker said that *'it was good how [research lead] came out and visited them after and asked questions regarding the program a couple of times and made phone contact'*. They found this process beneficial and recommended that this process should be continued.

One centre that participated in the rollout and evaluation process did not receive or participate in the Strong Smiles training. The only resources received were the manual and a book pack. The worker connected to this centre ran the program completely from the manual and did not have any problems implementing or adapting the program to suit the needs of the children.

"I…just adapted it to…my setting…some of the activities that you suggested doing in small groups we couldn't do that because…we didn't have the extra staff available…sometimes I did it in the whole group and sometimes…I did it just as a table activity…I kept the sessions about half an hour forty minutes at the most, because that's all they manage…there's twenty five children in a group so we, we really can't do much longer than that so…adjusted the time slot." (Centre G)

Program delivery and facilitation: is there a difference to how well the program is maintained and sustained dependent on who facilitates the program within the early childhood/preschool setting?

Far North Coast

All seven centres on the Far North Coast stated that they would continue with the program strategies for 2012 and thought that the program was a great asset to their centre and fitted in well with the curriculum.

"I would like to do it every year…with the new group coming in so, so that they get that opportunity as well." (Centre G)

"I'd like to keep it as an integral part of my midterm work…because I do my body, myself and all that, that's part of…it's a unit of work…and I'd definitely like to keep going with it...I think it's a really valuable addition to our…healthy body, healthy self um program…the unit of work that we run here. I think it's great, I really like it. I've done two years so I like being able to incorporate it. I think the more you can get it out there in the community the better, the more people, the more kids that you can empower with brushing their teeth, giving them good skills in brushing their teeth.…the more that we can make people really aware of what is required to have good um dental health I think it's…very important…and the water and all that sort of stuff, you know how water rinses your mouth…keeping all those strategies going…enormously important water…I really like it and as I said it's the second year with it so you know I encourage it…very much I hope you have great success with it and get it more…into main stream situations I think it would be fantastic really" (Centre H)

"Thank you for all those resources and the program it was great to get something that you could just use, you didn't have to go off and make your own stuff and organise anything it was just all done." (Centre C)

Mid North Coast

The Mid North Coast implementation process highlighted issues with program implementation when people, other than experienced child care workers, delivered program content.

'Age of the group is 3-5yrs…the preschool staff requested (worker named) and I present the session which we did. Our presentation was OK at best. We felt very uncomfortable doing this presentation. To present this program you need a very good working knowledge of the program which we did not have. A one day training twelve months ago which did not include lesson presentations is not enough training and (worker named) did not attend this training which did not help me. The two hour training held in (town named) last month to support this program did not prepare us enough to undertake this session and all other presentations. To present to this age group this level of program content where there are challenging behaviours…you need to be an experienced early childcare teacher. And that is the preschool teachers not us.' (Comment from MNC health worker)

'The kids were not interested and it did not hold their attention. I put that down to our inexperience with teaching early intervention due to a lack of experience with teaching techniques but we tried.' (Comment from MNC health worker)

'Early childhood staff, more confident in doing the program by themselves, using the kit.' (Comment from MNC health worker)

Preschool practices: has running the program impacted on existing practices within the early childhood/preschool setting?

Far North Coast

Prior to *Strong Smiles* program implementation, six centres stated they had a current and active food policy on food brought from home and one centre stated they did not have a policy. As a result of the *Strong Smiles* program, two centres thought they needed to update their policy and one centre was actually in the process of updating their policy to include oral health. The other centre would wait and update before their next accreditation. After implementing the program, one centre wanted to include water as the preferred drink into the food policy.

"We didn't have one…it made us develop one…we thought oh we haven't got a policy…we better do one…we knew we didn't have one…we'd talked about it for a while beforehand…we were saying we have to do one. So it sort of made us do one you know?" (Centre B)

"*Our food policy is in the process of being updated and after running the program our plan is to include a dental policy."* (Centre G)

When asked prior to Strong Smiles implementation if centres collected, cut up and shared fruit and vegetables for morning tea, four centres stated they followed this practice, three centres did not.

"No we prefer children to eat fruit from their own lunch box…preschool assists to cut/slice fruit as required but supports children using teeth to bite larger pieces (strengthen teeth/jaws) wherever possible." (Centre B)

When asked the same question after running the program, one centre had adopted the practice of sharing fruit and vegetables for morning tea as a result of the program.

"It was a good way to try and get children to…try a broader range of fruit and vegies, not just the ones they had been having in their lunch boxes, a good variety and then their peers would be trying it...we should do that again next year." (Centre B)

One centre commented that they did not adopt the practice as they have fruit and vegetable weeks where everyone brought extra fruit and vegetables in to share. Once centre commented that with the cost of fruit and vegetables, the centre could not afford to purchase on a regular basis.

"Probably do it along similar lines the only issue I had with it was our budget didn't stretch to so many um tasting sessions so we just had a couple and I tried asking parents to contribute and that was just a total waste of time, I don't like asking for money all the time…only a few of them remembered…it's a great idea but we had to cut it back." (Centre C)

Prior to Strong Smiles implementation, six centres allowed children to access water during the day. When asked the same question after running the program every centre provided access to water for the children to drink during the day.

"We've got bubblers outside which is good. And we always encourage water…actually I think they're a lot better in the last year or so…as far as bringing in the choice of drink, a lot more now come with water." (Centre B)

Prior to Strong Smiles program implementation, five centres did not practice tongue and mouth exercises. One centre said they would try and encourage this after doing the workshop. When asked the same question after running the program three centres had incorporated tongue and mouth exercises into their preschool program. However, implementation was inconsistent. One centre said that they did exercise sometimes but not a lot. One centre did the exercises when the teachers remembered.

One of the workers said that the exercises prompted her to get little speech tongue cards out and they used them as well. Another worker said that the children liked the exercises while two other workers said that it was good for the children's speech.

'Kids loved this one, we are going to take photos of the children, laminate them and put up on wall'. (Centre B)

When asked if program implementation influenced the number of healthy food suggestions provided to families and children during class time, the program did not appear to influence the number directly. However, program implementation did encourage one worker to order additional book resources to support discussions/activities in the classroom relating to staying healthy and going to the dentist, whereas another worker had added cooking sessions into program activities.

As a result of the program, two centres had planned visits to local dental centres. All centres stated that they would like to have dental visits in the future. Two centres stated they would like to have an excursion to the dental clinic but that when they enquired they were told it was not done anymore.

"I wanted…a visit to the local dentist but um, apparently they don't do that anymore so that was really disappointing…'cause I really wanted them to see the real thing and the tools and everything…they're too busy they said." (Centre G)

One worker stated that because of the difficulty in organising dental visits, this was even more reason to implement the Strong Smiles program at their centre on a regular basis.

"Years ago we used to have visits from the dentists…but they're not really all that keen anymore so it was good to have, that's actually the only program we've actually had…in the area, for a long time. So it was good to have something like that." (Centre F)

Four workers said that they had set up dental corners at their centres as a result of running the program. One worker had not set up a dental corner because they did not have the right props but is currently collecting the props and was planning to establish one in the future.

"That worked really well, that's still very popular now…we've expanded it into a bit of doctors corner as well…we do activities in the morning and they go there and they all put their hats and their goggles and their gloves and they love doing that and they get the big teeth out…We also…there's like a map of the teeth of the mouth…so we've made lots of photocopies…they…tick…I think it's made it a lot more fun…they know what to expect…I think they'll be trying to tell the dentist what to do… it's a good introduction…I think it has certainly increased their confidence." (Centre H)

"*A couple went to the dentist pretty well straight after we set up the dental corner…they seemed really fine and came in and talked about it, they didn't seem scared, we reckon it was because of playing in the dental corner*" (Centre C)

Additional strategies that could be adopted to improve and support program sustainability.

Far North Coast

Suggestions to improve the revised program were minimal. The comments/suggestions that were made related generally to the resources.

"I know this is money wise, but the only thing that I would find helpful is if there was little pamphlets, just a little bit of snippets out of the workshop for the parents…the simpler the better if it's too much writing they don't want to read it anyway." (Centre F)

Issues were raised regarding the flipchart and its use. Three respondents stated that it was difficult to use because of its size and the actual binding was not strong enough to withstand constant use. One respondent stated that the colour coding on the flipchart did not correspond with the manual.

"I probably found the most fiddly was that flip chart because I was always dropping it and…our binder come off at some stage or half came off." (Centre B)

"Even with the easel board we couldn't hold the page up and flip it over, possibly if the rings were used we could have actually flipped it over but because it couldn't flip you had to fold it right back and not see the back of the page, it was tricky." (Centre D)

Mid North Coast

"No, the kids were not interested and it did not hold their attention. I put that down to our inexperience with teaching early intervention due to a lack of experience in teaching techniques but we tried". (Mid North Coast worker)

Suggestions to improve resource use included:

Far North Coast

Flipchart

- A3 laminated sheets in a pack and just get out what you need. It could even be on a ring binder so you could clip them out or in a big sleeve.
- Using curtain rings to secure the pages
- Changing to a big book layout.

One worker raised the issue of the Tilda the mouse three times in her comments. The worker felt that the mouse character was not appropriate especially when dealing with food concepts.

"*You've just got get rid of that mouse…the mouse is really bad…everyone knows you shouldn't have a mouse scampering around on…the food it's just not the right thing...You can have anything else, you could have like another smaller teddy or…a rabbit or anything 'cause that mouse is just so wrong…that's my only criticism…I love the program, I love the whole concept everything's great the only thing I really struggle with is that…mouse…rodents and food just don't go."* (Centre H)

The merit/gold star awards board did not appear to be used on a regular basis. Only two workers used the merit/gold star system but not at the centre. They made one up for each child to take home and keep track of when they have brushed their teeth. For the others it was something they did not tend to do as it is too much work to keep going.

"I downloaded a star…chart for um when you brush your teeth and I laminate that and send it home with the children and…in the newsletter I, I tell the parents we're doing the Strong Smile…and then give them this chart to put up on the wall so they can tick their…box every time they clean their teeth…I think that could be…a recommendation that you might want to put in that kit." (Centre H)

Mid North Coast

Songs

- Use only the Eat Together Play Together song.

"*Music poor quality, didn't evoke enthusiasm. Keep trying."* (Mid North Coast worker)

Discussion

As planned, Phase 1 and 2 evaluation outcomes provided the team with different information relating to the Strong Smiles program. Phase 1 focussed on the piloting of the program with emphasis on content and program delivery. Phase 2 evaluation was more about exploring sustainability issues relating to the program. However, results from both phases reinforced the popularity of the program, with both centre staff and children. Phase 1 and 2 results demonstrated that overall, program strategies work well together to deliver key nutrition and oral health messages. In the centres that have been involved in the evaluation process on the Far North Coast, all have implemented the program annually since 2010.

Phase two evaluation could have delivered stronger results with the inclusion of more targeted questioning. For example, regarding program implementation, more exact information would have been collected if we had asked more questions specifically relating to training. The information we collected focussed on whether they experienced any difficulties during implementation or when using the manual, and from that information we made certain assumptions.

Resource Accessibility:

Far North Coast

There is no evidence that those that received a full kit were able to run the program with more success than those that did not receive a full kit. It appears that those centres that did not receive a kit could adapt kit items, borrow or improvise. This could have been influenced by the fact that skilled early childhood workers delivered the program. Early childhood workers have experience in adapting resources to suit children's needs. They are also used to working within tight budgetary constraints and have strong workplace networks, which foster sharing of resources.

The four centres that did not receive a kit invested in the tooth puppet and big toothbrush, as these were seen as essential to program delivery. All centres that participated in the rollout were able to run the program effectively with whatever resources they had access to. Having the full kit made it easier to incorporate program strategies into yearly programming however, it was not imperative to program implementation.

Program sustainability appeared to be more likely with skilled centre staff delivering the program. This could be related to the fact that early childhood workers are in a better position to incorporate program strategies in yearly planning and adapt the program to meet the needs of their students.

The issues relating to Tilda the mouse came from one adult that identified with Tilda through adult eyes. There is not enough evidence to suggest that using a toy mouse has a negative effect on program delivery.

Mid North Coast

The Mid North Coast centres borrowed kits for the duration of the program and then returned them to the health worker once the program was completed so that another centre could have access to it. This could be an alternative to providing individual kits and would enable more centres to have access to the full kits. This would establish a link between the centre and local Aboriginal health workers which could provide additional health related opportunities. However, this alternative raise issues with coordination, supervision and infection control issues relating to kit maintenance.

Training and its relevance to program sustainability

Far North Coast

Data relating to training and its added benefits to program sustainability is limited primarily due to the questioning employed. In hindsight a question specifically relating to the training would have improved results. We only have feedback from one centre suggesting that the manual was comprehensive enough for early child care practitioners to deliver the program effectively without training. This data is at face value. As we did not observe the delivery of the program in this centre, it is difficult to confirm whether the program was run in the same manner as delivered following training. Having said that, during post interview discussions with this centre, there appeared to be no difference in the way the worker ran the program to the other centres. Additional data would need to be collected before training was completely removed from program rollout. The data suggests that early childhood workers could successfully run the program from the manual as long as enough time was taken to read through and fully understand the purpose of each session. An alternative to ongoing group training could be to provide ad-hoc implementation support to individual preschools when/if they experience difficulties or to develop electronic training modules which could be uploaded to a website or downloaded onto a disc.

Mid North Coast

The Mid North Coast data suggested that intensive training regarding early childhood pedagogy of non-qualified educational practitioners is essential for effective program delivery. This does not suggest that only early childhood workers can run the program. The data collected clearly identified that if the program is to be rolled out using practitioners that are not early childhood trained, more intensive training is needed, regarding relating to and teaching young children, and a closer relationship with centre staff needs to be nurtured and developed. The results of this study highlight that the preferred option for efficient and sustained program implementation is to provide training to early childhood staff to facilitate the program.

Preschool practices:

Far North Coast

The program appears to have some influence over centre practices. Three of the seven centres updated their policies as a result of being involved with the program. One centre

stated that they would update before their next accreditation. Since running the Strong Smiles program four centres had established dental health corners with a further one centre planning to do so once resources were sourced.

Centres did express the benefits related to dental health visits and/or excursions to dental health clinics. All stated that these services are no longer available to their centres although two centres did manage to make contact with a dental health nurse and arrange a centre visit. The data suggests that the Strong Smiles program fills a void in relation to dental health practice in early childhood.

Additional strategies that could be adopted to improve program sustainability

Far North Coast

A key outcome from Phase 1 evaluation was to develop a flipchart. During Phase 2 evaluation comments were raised regarding the size and construction of the flip chart. While all staff liked the flipchart they stated that they had difficulty using it due to its size and the way it was constructed. Providing all resources electronically would eliminate this problem as centres could print out and use the resource as a big book, flipchart or A3 laminated sheets as suggested by one respondent. One respondent raised the inappropriateness of having a mouse involved in a program that targets food.

Conclusion

Far North Coast

This evaluation has shown that the Strong Smiles program is a sustainable oral health program suitable for the early childhood/preschool setting. This is evident in the fact that the program continues to be rolled out within all seven centres since the initial implementation in 2010.

Six hundred and seventy three (673) children from across Far North Coast early childhood/preschool centres have been exposed to the program over two years (2010-11). The program is well liked by both staff and students. Staff commented that it is flexible, easy to use with the content delivered in a fun and interactive way. All of these factors help sustain the program and help support program rollout. Continued rollout improves opportunities to have a long term positive impact on oral health practices in the early childhood/preschool setting.

The results showed that a full kit is not essential to deliver program objectives within the participating centres. However, certain resources are necessary such as the tooth puppet, big toothbrush and books. Within the early childhood setting there did not appear to be a problem with resource sharing or substituting resources. We assume this is to do with their teaching expertise and their ability to network within their profession. Having said that, the full kit was greatly appreciated and well received by the centres. Further refining of resource construction and kit contents can be done following this evaluation.

The format of resources especially the flipchart and use of Tilda the mouse needs to be addressed at the Preschool level. Providing electronic copies of the resources will allow Centre staff to print and adapt resources to better meet needs of their children. Early childhood workers found it easy to use the manual and implement the program. This included one centre in which workers did not get any training and still implemented the program.

Mid North Coast

Sixty seven children experienced the program in the Mid North Coast. Data suggests that comprehensive training is essential for workers who are implementing the program and who are not early childhood trained. It is evident from the data collected during this evaluation that early childhood staff are the preferred people to deliver the program.

Far North Coast and Mid North Coast

There is some evidence to suggest from this evaluation that the program has the ability to support organisational change within the early childhood/preschool setting regarding oral health practices. All centres commented that they would prefer a stronger connection with their local dental health clinics.

As a result, the following recommendations are made:

- Provide resources electronically to enable centres to download and print them as needed and in a format that meets their individual needs. For example, the flipchart could be printed and bound like a big book, or as A3 poster cards. Books could be printed in A4 version so that the children could sit and look through by themselves.
- Streamline the kit to only include the tooth puppet and large toothbrush. This would reduce the cost associated with program rollout.
- Keep a spare kit in a central location for local loaning for centres situated within low socio economic geographic locations.
- Discussions to be held with the Healthy Children's Initiative (HCI) team at both the local and state level, to investigate how the program objectives and resources could be incorporated into the broader HCI rollout.
- Develop electronic training modules which could be uploaded to a website or downloaded onto a disc. The development of facilitator *on line video* modules to support training and program implementation could be beneficial for this process.
- Conduct a more comprehensive training program regarding teaching young children for those staff, who are involved in program implementation and who are not preschool trained.
- Initiate discussions with higher education institutions that deliver early childhood training such as Southern Cross University and North Coast TAFE to showcase and promote the Strong Smiles program amongst early childhood students.
- Initiate further discussions with local health district dental health clinics regarding links between early childhood/preschool centres and district oral health services.
- Include specific questions about training and using the manual in future evaluation.

References

1. Centre for Oral Health Strategy New South Wales. NSW messages for a healthy mouth. Gladesville, NSW: Centre for Oral Health Strategy NSW; 2007. [cited May 2007]. 23 p. ISBN: 987-1-74187-076-3. Available from: http://www.health.nsw.gov.au/pubs/2007/pdf/healthy_mouth.pdf.
2. Hughes D. Strong Smiles Training Day: 20 November 2009 at YWCA Goonellabah. Lismore: North Coast Area Health Service; 2009. 4 p.

Appendix 1 – Strong Smiles Training Day Evaluation

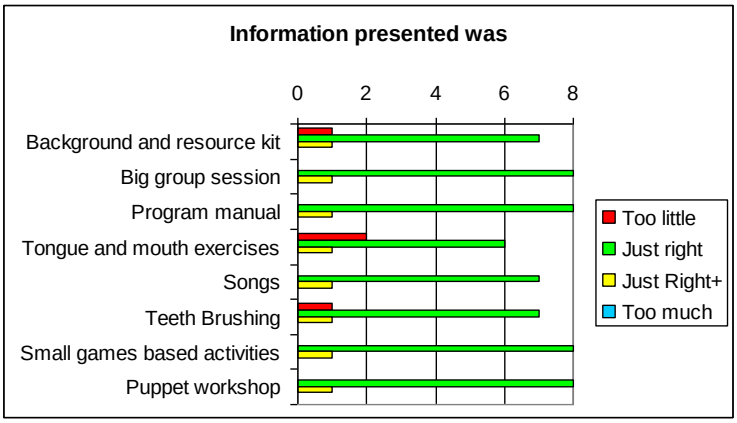
Strong Smiles Training Day
20 November 2009 at YWCA Goonellabah

Thirteen (13) Early Childhood workers were trained and came from ten (10) different early childcare centres including: Bangalow Community Children's Centre, Eden Creek/Fairymount Preschool Inc, Lismore Preschool Kindergarten, Clunes Community Preschool, Casino West Preschool, St Mary's Casino Preschool, Goonellabah Transition Program, Jarjum Aboriginal Centre, Rainbow Children's Centre and Sandhills Child care.

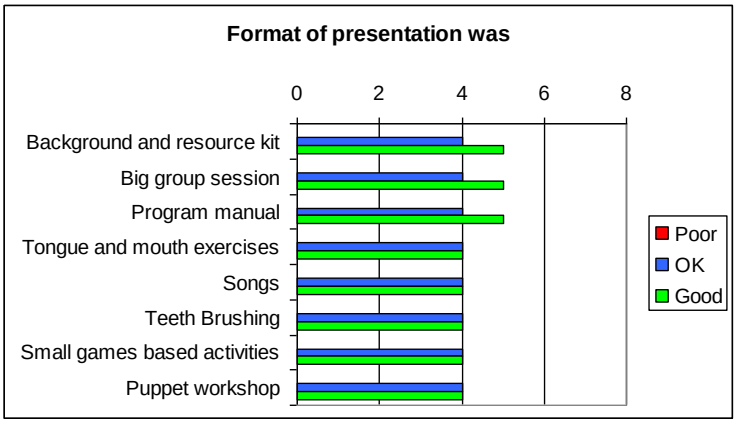
We had nine (9) respondents to the evaluation form as four (4) left early.

Overall they found the training day very enjoyable (5) with one (1) saying it was enjoyable. Three (3) didn't answer this question.

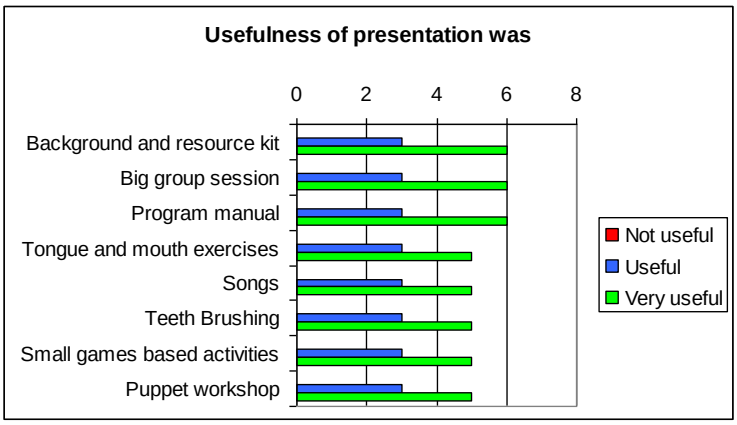
When asked to rate how the information was presented their responses were as follows:



When asked to rate the format of the presentation their responses were as follows:



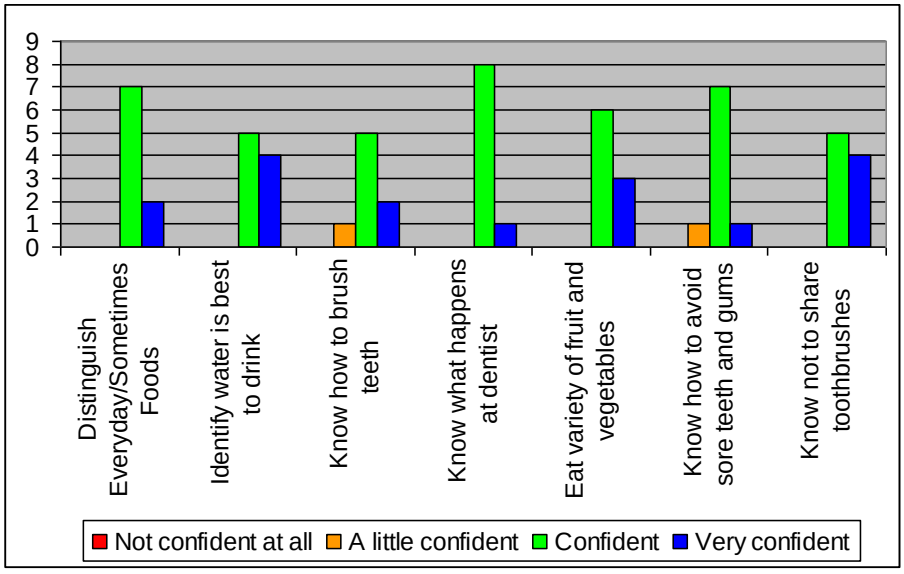
When asked to rate the usefulness of the presentation their responses were as follows:



When asked if they had any other suggestions on how the training could be improved their responses were as follows:

- I found the workshop to be excellent and could easily see how it would work within the classroom
- No – it was natural, personal, relevant and fun
- No – it was great thankyou

When asked how confident they felt that once you've run the program in your centre the children will be able to do the following their responses were:



Comments made regarding what sort of things would make implementation hard or easy were:

- Quick access to pack or resources. Clear time line
- Length of sessions, would be too long for the age group of my children. I would do more sessions but shorter time
- Not sure, think it would be well received if staff are keen to implement it. Their enthusiasm would be essential and we have changes in staff often so communication would be essential
- I think it has enough flexibility to be incorporated in many areas of the preschool syllabus
- The program would be spread over longer period…
- Like the strategies could be broken down if needed i.e. not necessary to do each full session at one time
- Blackline masters for children to use
- Small preschool teeth (plastic)

When asked if they liked the layout all respondents said they did

When asked whether the manual was easy to read seven (7) said it was, one (1) said it wasn't and one (1) didn't respond. Comments were:

- Like the session plan overview as quick check
- A lot of information (comment from person who said it wasn't easy to read)

When asked whether the information was easy to understand nine (9) said it was. Comments were:

- Need to have time to read through several times!

When asked if the colour coding was useful seven (7) said it was with two (2) saying they didn't know. Comments were:

- I was a little confused at times about the colour coding
- But a little confusing with colour

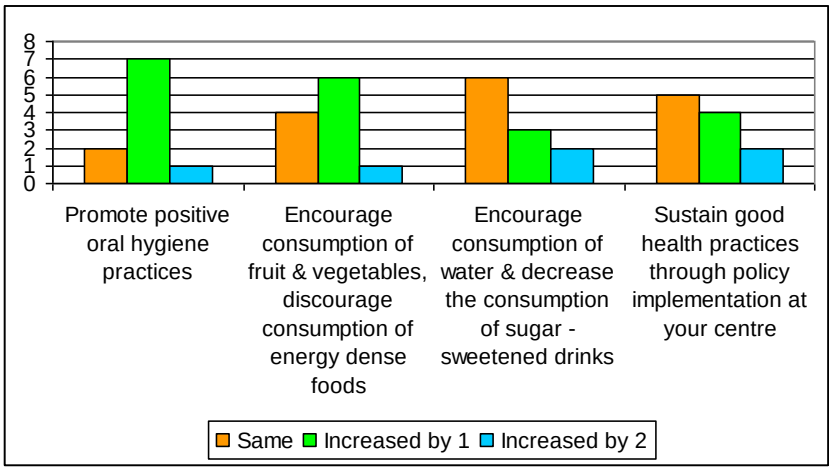
N.B. After training a fault in the manual was discovered that some of the information had been colour coded wrong so could have added to the confusion.

When asked if they thought they could pick up the manual and be confident to run the program sessions from it eight (8) people said they would be with one (1) saying they didn't know

Final comments made were as follows:

- Session plan from page 12 was very clear and easy to follow
- Excellent manual and workshop
- Fantastic
- Would like maybe 2/3 questions to ask on the back of A3 pages in flip chart

An evaluation form was given out asking them to rate how confident they were to implement the following strategies pre the training and then again at the end of the training.



LESSON LEARNED FROM THE TRAINING

The training was enjoyed by all who attended. They liked the fact that it was interactive and that the facilitators blended in with the attendees.

We need to build on the training for background & resource kit, tongue & mouth exercises and teeth brushing as a minority thought we didn't cover them enough although most said the training was just right.

The program was seen as being flexible so that if they needed to do some of the sessions one day then the rest on another that it wouldn't water it down by doing that.

Overall they thought the manual was user friendly although we didn't give them much time to go through it so that could have contributed to the couple of comments re the colour coding being confusing. Once I came back into the office and started working on putting instructions on the back of the flipchart as per feedback received at training, I realised that I hadn't put all the instructions into the right colour so that would have also contributed to it being harder to follow.

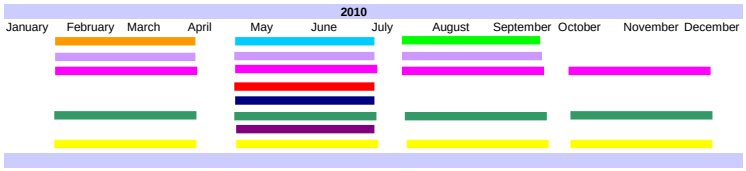
The session plan was seen as being really useful and comments received were that they were going to use it as a prompt for what to do next by putting it up on the wall. One thought I had regarding that feedback was that we could maybe add a laminated session plan to the kit.

That the flipchart needed some instructions on the back of the pages like in our old flipchart. This would make it easier to use when the teachers were going through the flipchart.

It was also suggested that we have blackline masters in the kit. These are things like worksheets and colouring in pages that can be given to children to work on in addition to other program activities. These would reinforce key concepts to the children e.g. one blackline master could have a picture of a plate on it and the children are asked to draw in the food.
Below are times when the preschools have stated they would be willing to run the program. Some of those that went to the training are not represented here and some of those mentioned here did not attend the training.

Terms that early childhood settings have said they would run Strong Smiles

Preschools	
Bangalow Community Children's Centre	Term 1
Eden Creek/Fairymount Preschool Inc	Term 3
Lismore Preschool	Term 2
Clunes Community Preschool	Term 2
Casino West Preschool	Term 2
St Mary's Casino Preschool	Terms 1,2 and 3
Goonellabah Transition Program	All terms
Jarjum Aboriginal Centre	All terms
Rainbow Childrens Centre	Whenever required
Goonellabah Preschool	Term 2



Appendix 2 – Daily Evaluation Sheet

Eat Together Play Together Program
Health Worker / ECC Staff Session Evaluation Sheet

Name of Early Childhood Centre: **Date:**

Session 1:

- Number of Health Workers:
- Number of ECC staff:
- Number of children attending session:

Activity	**Yes/No**	**Kids Enjoyment**	**Comments (What worked what didn't in your opinion and could anything be improved in the following sessions)**
Introduction – Why foods are important. Using the flipchart (blue)	Yes No	☹ 😐 ☺	
Teddy & Tilda go shopping – Big Book	Yes No	☹ 😐 ☺	
Shopping Trolley Pillow Case Game (if you didn't see it did the kids comment)	Yes No	☹ 😐 ☺	
Review of previous week (not needed for Session 1)	Yes No	☹ 😐 ☺	
Strong Mouth, Strong Tongues, Strong Words exercises	Yes No	☹ 😐 ☺	
Eat together Play together song	Yes No	☹ 😐 ☺	
Fruit & Veg Tasting	Yes No	☹ 😐 ☺	

2. Was the language appropriate for the needs of the children?

3. Was there anything you thought didn't work well?

4. Did the kids relate to the facilitators? (Please Circle One)

Not at all----------Not really ----------A little ----------Fairly well ----------Really well

5. Anything else you want to add either from the Health worker or ECC staff point of view?

Please keep this evaluation until you have all five sessions and then,

mail to: Trish Davis, Health Promotion PO Box 126, Port Macquarie NSW 2444

or

scan and **email** to > trish.davis@ncahs.health.nsw.gov.au

or

fax to Trish Davis on 02 65882837

Thanks for your assistance.

Appendix 3 – Pre Program Director Interview

Start of Year Director Interview

Preschool …….. Interviewer……Date:……

Why do you want the Eat Together Play Together program to run at your preschool?

Do you currently promote ways of increasing dental health to parents? How?

Do you currently promote ways of improving children's healthy food intake to parents? How?

Do you have a policy regarding dental care at your preschool? If yes, obtain a copy.

Do you have a current and active preschool policy on food brought from home? Yes/ no Date of policy / / If no, what is your opinion about such a policy for your preschool?
Does the policy restrict any food or drinks yes/ no If yes, list restrictions
If yes, what do you do if parents pack food that does not meet the criteria in the policy? Obtain a copy

Is fruit and veg collected and cut for morning tea?

Does your preschool have dental hygiene or dental care visits for children?

How do children currently access drinking water?
(Do they have to ask for water or can they help themselves?)

Do you practice chewing exercises?

Do you provide healthy food suggestions during class? What?

Thank you for your time

Appendix 4 – Post Program Director Interview

End of year Director Interview

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1. Was it necessary to have a full resource kit?

2. Now that you are experienced do you think we should train people, have the manual with support if issues arise or is just the manual sufficient?

3. Is the manual a sufficient resource to run the program?

4. What are your perceptions of your parent-volunteers' reaction to the project;

5. Do you intend to continue with any strategies of the program next year?
   Are there any barriers to your preschool doing this?

6. Do you have a current and active preschool policy on food brought from home? yes/ no
   Date of policy / / If no, what is your opinion about such a policy for your preschool? Does the policy restrict any food or drinks yes/ no If yes, list restrictions…….. If yes, what do you do if parents pack food that does not meet the criteria in the policy?

7. How many planned dental health sessions do you schedule per term?

8. Do you have an active and current access-to-drinking water policy?
   a. yes/ no . Date of policy / / How do children currently access drinking water?
      Interviewer to draw water points on map

9. Will you use the policies next year? How will you communicate the policies to the parents?

10. How would you rate you staffs knowledge of teaching dental hygiene and dental care?
    1= minimal 2 = low 3= average 4 = good 5 = excellent

Thank you for your time