Phase I Summary Document:
Revising the Fluoride Mouthrinse Program

Ad Hoc Committee for the Review of the Nova Scotia
Fluoride Mouthrinse (FMR) Program
May, 2002

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Background Information

A Ministerial announcement in January of 1997 supported the implementation of the Fluoride Mouthrinse (FMR) Program for March 1998 in all areas of Nova Scotia. At that time, a standard protocol was developed to assist with the delivery of the weekly program in schools.

A review of this program is underway to address inconsistencies and ensure best practice approaches are used. An Ad Hoc Committee of the Public Health Services Health Enhancement Core Working Group was struck in July 2001. From the outset, the work of the committee has been grounded in a community development approach by valuing and respecting the input of all stakeholder groups involved in the program. This approach is seen in the membership of the Working Group[1], with representation from the Nova Scotia Department of Health, Dalhousie University Faculty of Dentistry and Public Health dental hygienists whose work includes the fluoride mouthrinse program.

The Working Group conducted an extensive literature review and consulted with experts to obtain the most recent evidence about fluoride and fluoride mouthrinse. Believing the experiences and input of local hygienists to be crucial to the success of such a review, a survey about the program was sent to hygienists in all Public Health districts. The feedback from the hygienists, relevant literature, expert opinion and related information about the program was summarized in a discussion paper in March 2002. The discussion paper included a list of specific questions relating to each area under review.

A workshop format was developed as a way to bring all stakeholders together to discuss the issues under review, to reach consensus about what program elements needed to be changed and to decide how to best make those changes. Potential participants received a copy of the discussion paper in advance of the workshop. This allowed them to review the evidence and information about each item under review. It also meant that participants could prepare focused input around each discussion question.

With the concept of consensus as the fundamental premise[2], this workshop took place March 21-22, 2002 at Agritech in Truro. The Consensus Workshop was well attended by public health hygienists from each health district, fluoride mouthrinse program volunteers, dentists, teachers, school administrators and representatives from the Nova Scotia Department of Health. With careful planning, well-informed participants, expert facilitation, and a theme of valuing stakeholder input through consensus, the workshop proved to be a success.[3] Consensus was reached on all issues up for review and the participants made recommendations for future action. Feedback from the workshop participants attest to the success of this approach:

[1] Members of the Ad Hoc Committee of the Public Health Services Health Enhancement Core Working Group are listed in Appendix 1.
[2] The definition of consensus as used by the committee is outlined in Appendix 2.
[3] The schedule for the Consensus Workshop can be found in Appendix 3.

"It (the workshop) gave us all we needed to move forward with the recommendations in the four areas outlined in the discussion paper."

"I was pleased with how all partners in the workshop were respected for their experience and information."

"Wasn't sure what it was going to accomplish, if anything. But it did- great ideas and direction for the program".

Phase I summary document map

This current paper links the background information from the discussion paper with the results from the Consensus Workshop. Both provide essential information and recommendations for revising the FMR Program.

To facilitate discussion, issues under review in the FMR Program have been divided into six categories:

1. Risk assessment and screening criteria
2. Monitoring and evaluation
3. Consent
4. Staff training and development
5. Volunteers
6. Community support and participation

Relevant literature, expert advice, FMR manual information and feedback from local public health hygienists is included in each category, if possible, under the heading **background information**. The **workshop results** for each category are then outlined. Each workshop question is followed by a summary of participant recommendations and feedback. It is clear that the FMR Volunteer and Hygienist Manuals will need to be revised to reflect changes in the program. Suggestions made at the Workshop about manual changes are included as a subgroup within each of the six categories.

1. Risk assessment and screening criteria for FMR Program

Selecting an acceptable risk assessment process and screening criterion for eligibility is the first step to revise the FMR Program.

Background information: risk assessment and screening

1a) Literature and expert opinion

According to a recent CDC report[4], to develop and apply effective cavity reduction strategies means that you need to **target high-risk groups**. Expert advice[5] also suggests focusing on high-risk areas and high-risk children. This implies that the FMR program should not be carried out in all areas.

Identifying the high-risk target group is difficult because there are many factors to consider. No single factor has been shown to be the best predictor of high risk. GROUPS at greater risk for caries include people:

- Of low socioeconomic status (SES)
- With low levels of parental education
- Who do not seek regular dental care
- Without dental insurance
- Without access to dental services
- Who are members of minority groups
- Who are new immigrants

PEOPLE can be at high risk for caries even if they are not within these groups. Individual factors that could increase the risk include:

- A history of cavities in older siblings,
- Exposed root surfaces
- High levels of infection with cariogenic bacteria
- Poor oral hygiene
- Malformed enamel or dentin
- Reduced saliva flow
- Low salivary buffering capacity
- Wearing of space maintainers, orthodontic appliances, dental prostheses.

The risk goes up if these factors are combined with poor diet. The risk goes down with adequate exposure to fluoride.

The presence of smooth surface decay is the best criterion for offering the FMR program as, unlike pit and fissure caries, smooth surface caries not prevented in the way that smooth surface caries are prevented by topical fluoride. Children should be screened once every year or once every 2 years. Screened children with

[4] CDC, MMWR (2001) Recommendations for Using Fluoride to Prevent and Control Dental Caries in the United States, August, 2001/50 (RR14);1-42

[5] Dr Ismail, personal communication, October 18, 2001

decay or fillings on any permanent or primary smooth tooth surfaces should be part of the program.

1b) Possible steps for risk assessment and screening criteria

Step 1: Determine Eligibility for FMR
The literature and experts consulted support a school approach for the delivery of fluoride mouthrinse. The program must target high-risk students in high-risk areas. While it is possible to select individuals in need within a school, or even to select whole communities that would benefit from fluoride mouthrinse, the preferred approach is to target schools.[6]

Determining which schools are most at-risk of dental caries requires the selection of a criterion or measurement of some oral health or health-related condition. This criterion should then be used across the province to select school populations for the FMR Program. Selection criteria for FMR eligibility can be one or more indicators. Determining DMFT (decayed + missing + filled teeth) or even DMFS (decayed + missing + filled tooth surfaces) is not helpful unless there are distinctions among each of the decayed, missing, filled components and the decayed are further distinguished as pit and fissure caries or smooth surface caries.

The indicator for high risk could be fairly broad such as socioeconomic status (SES). Low SES has been shown to be a reliable predictor of general and oral health. Dental caries studies have also supported this finding. Determining eligibility for FMR by selecting low SES has been cited as a useful approach by one of the original researchers in fluoride mouthrinse.[7] This criterion may be determined by using existing provincial information sources. The acceptance of this criterion would require that this indicator be known and understood within communities. The major difficulty predicted for this criterion is the perceived or real marginalization of the low SES schools that might occur.

The indicator recommended by Dr. Ismail[8] is an average of 2 smooth surface caries per child per school. While this indictor clearly demonstrates active caries experience, there are likely other caries experiences which fluoride mouthrinse can prevent. Where there are caries already present, there are likely to be others at the very early stages that can benefit from FMR by remineralizing to prevent the breakdown in tooth structure. An approximation of existing smooth surface caries may be possible by analyzing data available from the Children's Oral Health Program (Restorative Services). This would involve estimates of restorations and utilization of the program within each Region.

Other criteria could be considered but, to date, there is no established agreement or consensus on screening for FMR eligibility.

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[6] Horowitz, personal communication, February 14, 2002; Dr. Ismail, personal communication, October 18, 2001; CDC, 2001
[7] Horowitz, personal communication, February 14, 2002
[8] Personal communication, October 18, 2001

Step 2: Choose a Screening Protocol for FMR

The selection of an acceptable screening protocol is the second step in the updating of the province-wide FMR Program. If the eligibility criterion selected is SES or a similar health status predictor, then the screening will require the collection and analysis of that data from available sources. If the eligibility criterion selected is an intra-oral indicator, such as an average of two smooth surface caries per school, then the screening will require a standardized protocol for collecting and analyzing that data.

Oral screening refers to oral inspections of populations to estimate oral health status. Dental screenings are different from epidemiological surveys mainly by the amount of detail collected, and in the rigor of the sampling and methods used. Screenings typically involve a dentist or dental hygienist inspecting an individual's mouth using measurement tools to determine the oral health status. The measurement tools include the armamentarium as well as the preferred indicators or diagnostic criteria. The range of required equipment and instruments may be as simple as a tongue depressor with a flashlight for light source, or as comprehensive as portable chairs, light, mouth instruments, and sterilizing equipment.

One example is a screening protocol used in Ontario to identify children with restorative and preventive dental care needs[9]. Criteria for determining need for a wide range of oral problems were established. The need for topical fluoride treatment was defined as children with one or more decayed smooth surfaces. Dental hygienists performed the screening through a visual inspection using only a mirror and tongue depressor. Dental explorers or probes were not used. Data were recorded on standardized forms and entered into a computer program for analysis.

The American State and Territorial Dental Directors recommend that, if the screening procedure includes the possibility of spatter or spray, the examiner should use the same precautions that are used in the dental office, such as changing gloves and washing hands between patients.[10] If the screening procedure uses only a tongue depressor and flashlight, then latex or vinyl gloves may be worn and loose plastic gloves, like those worn by food handlers, may be placed over the exam gloves and changed after each subject, rather than washing hands and changing examination gloves. Similar to the Ontario model, the ASTDD screening approach does not include dental explorers or probes as standard equipment but suggests that they may be used to feel fissured surfaces to determine the presence of sealants. The ASTDD screening protocol includes an access to care questionnaire and a protocol for direct observation of the mouth. Both the Ontario and ASTDD have training materials and resources to assist screeners.

It is important to consider screening for the FMR program as a way to collect other useful oral health information. Consider a more comprehensive screening protocol

[9] Main, personal communication, February 15, 2002; Report No. 1 Evaluation of Ontario's Dental Screening program for Schoolchildren, 2001

[10] ASTDD, Assessing Oral Health Needs: ASTDD Seven-Step Model, 1996

using several measurements in addition to the criterion for FMR eligibility. That information can be used in planning other targeted oral health initiatives such as referral for urgently needed treatment, the need for pit and fissure sealants, the need for scaling, and health education for plaque and diet control. The efficiency of adding several indicators to that for FMR is evident. It is an essential consideration for general oral health surveillance and programming in the public health sector.

Step 3: Data management
All intraoral screening protocols require planning and development of appropriate equipment, forms and data management. The ASTDD emphasize the importance of standardized criteria, procedures, equipment, and forms as well as calibration of the examiners in all of these aspects of screening. All paper forms used to record screening data, data reduction forms to collate school data and electronic programs to analyze and store information should be standardized. Access to suitable electronic programs will be essential to maintain province-wide implementation and evaluation of the FMR program.

1c) Current FMR risk assessment and screening criteria

Hygienists gather data through an oral exam to calculate a decay score. They use the following formula to calculate the decay score.

a) Add deft (primary) and divide by total number of children. This is the primary decay score. This number shows the average number of decayed primary teeth per child.
b) Add DMFT (permanent) and divide by the total number of children. This is the permanent decay score. This shows the average number of decayed permanent teeth per child.
c) Add the primary decay score and the permanent decay score together to calculate the school decay score. This score shows the average number of decayed teeth per child at that school.

The FMR Manual lists the following criteria to be used to select schools eligible for the FMR Program.

1. For those schools with current data from grades primary to grade six, a decay score of 3.0 or higher would indicate high risk.
2. For those schools with current data from grades primary to grade 3, a primary decay score of 2.0 or higher would be an indicator of high risk.
3. If no current data is available, screening should be done with all grade 2 students. If the primary decay score were 2.0 or higher, that would indicate high risk.

The decay score data needs to have been collected within the last 2 or 3 years. In schools where there is no current data, a pre-entry screening of all Grade 2's is needed to determine the decay score. If Grade 2's are part of a split class, the

entire class should be screened. Regardless of whether an area is fluoridated, if the decay score is high, the school would still be eligible for the FMR Program. [11]

1d) Current risk assessment practices in the districts

Some schools were brought into the FMR Program by community while in other areas they were not. Other factors in a school were considered to increase risk, such as in-school food sales, cafeteria and so on. Hygienists targeted schools with the highest decay scores from the 94/95 screening. However, they also considered the politics of an area (i.e. bringing on a school in each county), when the data was going to outdate, the willingness of principals and staff to participate, the availability of volunteers and how to distribute hygienist resources equally.

In some areas, priority was given to non-fluoridated regions. Schools with the highest decay scores after screening were then given priority. Other areas did not follow the manual criteria and instead chose a combination of decay score (+2.5), a regular dental care indicator and socioeconomic status to determine risk. These criteria were used to determine the communities and schools to receive FMR.

Classrooms were brought into the program according to the criteria, from P-6, regardless of what grade the school goes to. Once a school was brought on board, the whole school, P-6, would rinse.

1e) Current screening practices in the districts

In some areas, def and DMF of control and evaluation in fluoridated and non-fluoridated schools were collected. Children were screened for obvious decay, not just smooth surface caries, including mesial, distal and occlusal surfaces. Others are screened for smooth surface decay, pit and fissure decay and fillings in primary and permanent teeth. They included extracted teeth in primary and the number of missing permanent teeth.

Hygienists collected different data, depending on the area, including regular dental care, parent notices, OHI, GI, referral for treatment, oral hygiene status, sealants, new decay, and potential caries free. Some recorded P and F sealants, occlusions and health card #'s. Equipment included chair, light, explorer and mirror OR chair, light, and mirror OR chair, light, explorer, mirror, mask, sterile table, cold sterilizer, dry heat sterilizer, and ultrasonic cleaner.

If a school was to be offered the FMP or if the data was outdated, hygienists screened all Grade 2's or all students if it was a split class. Some baseline screenings were done in 94/95. All P-3 students that consented were screened. Other areas screened all schools in 1998 and 2001 for baseline, then continued with ongoing screening. Some areas stopped screening because they were unable/told not to add more schools (lack of staff).

[11] Weekly Fluoride Mouthrinse Manual for Elementary Schools in Nova Scotia: A Training Manual for Public Health Dental Hygienists, page 6

Other issues/questions/concerns raised in the surveys
Screening techniques, data collection and equipment need to be standard across the province. This includes using common definitions for DMF, high risk, congenitally, missing extractions (caries or other) and so on.
The manual needs to include criteria for removing schools from the program.
OTHER: Needs to be a discussion of incentives for participation.

Workshop results: risk assessment and screening criteria

Workshop Question: What risk assessment and screening criteria should be used to determine who should be offered the FMR Program?

Risk assessment criteria should include a combination of **socioeconomic status (SES) and an oral screening standard.**

Socio-economic status should be determined by examining objective centralized data. SES should be considered first as the focus lens. Geographic isolation must also be considered.

Oral screening standard was suggested to be two smooth surface caries based on dmfs / DMFS, not occlussal surfaces. The suggested target group is grade 2.

Screening suggestions

- Screening should be simple, quick, accurate and comprehensive. A code system for screening could be used. A useful model exists in British Columbia.
- Some issues could be cross-references with public Health Nurses.

  Other information that should/could be collected through screening
  Sealants
  Referrals for further examination or treatment
  Urgent care (including soft tissue evaluation)
  Other issues such as: dental neglect/abuse
  Utilization of dental services and Public Health programs. For example, asking "Has your child seen a DDS in the past twelve months?"
  "Potentially" caries free
  Record new decay

Workshop Question: What changes do we need to make to the program and the FMR Manual for these risk assessment and screening practices to be standardized across the province?

- A cycle for monitoring and evaluation, with standard checks and balances, needs to be in place (see **Section 2. Monitoring and evaluation**).
- The Ad Hoc Committee must recommend a timeline for the program.
- Standardized equipment, standardized records and standardized management of all records are recommended. Perhaps a computerized system could be used.

- Standards need to be set province wide. This must include an introductory training workshop and frequent updates. (Referred this to **Section 4. Staff training, orientation and ongoing professional development**)
- Set a reasonable sample size of the screening population. Eight students (the current size) are probably not enough.

FMR Manual changes

The language in manual must be clearly defined so there is little room for misinterpretation.

The manual must reflect the revised screening and risk assessment criteria.

Related Discussion Topics

Follow-up to surgical/hospital cases. It is important to clarify WHO is responsible.

Need for epidemiological heath survey on an established time frame

Other items (referred this to **Section 6. Community support and participation through marketing and public relations**)

Other program initiatives, such as Primary registration

Early childhood (enhanced) intervention program

Tooth brushing in day cares

Strategies for public/private partnerships

2. Monitoring and evaluation

The monitoring and evaluation of the FMR Program needs to be re-examined. This means reaching consensus about issues such as:

- Ownership of the monitoring and evaluation,
- Using the data to gather a province-wide picture,
- Standardizing data collection and manual interpretation,
- Deciding when to re-evaluate,
- Identifying where more evidence is needed,
- Deciding where and when to take on a school, or take a school out of the program,
- Developing a process to identify schools according to priority,
- Including school-level evaluations by users, parents and volunteers.

Background information: monitoring and evaluation

2a) Potential for monitoring and evaluation

It is important to capture participation rates and numbers of caries through the FMR program. The efficacy of the FMR program is not a question. Research already exists about FMR. As well, it is known to be only one of the factors that contribute to reducing caries rates. There is value in monitoring and evaluating other aspects of the program, such as

- the *implementation* of a program
- the *impacts* of a program
- identifying areas for improvement or modification to assist in *program planning and delivery*.

There are inconsistencies across the province in how the FMR program is implemented. This shows the importance of monitoring and evaluating the implementation of the program over time. For example, is everyone using the same approach to screening? Do volunteers receive standard training?

It is important to monitor impacts, including stakeholder (students, parents and volunteers) satisfaction with the program, and monitor the caries rates.

It is important to identify aspects of the program that should be monitored and evaluated to provide information for ongoing program improvement at the local and provincial level. For example, a declining participation rate may indicate the need for increasing publicity/education in the schools.

There are various methods for monitoring/evaluating the FMR program. One method that has been implemented in other areas is an annual survey completed by the school principal or dental hygienist. The survey would assess whether the program is being implemented according to established standards or guidelines. The survey could assess the implementation of the various program components such as:

- procedure for identifying schools to be offered the FMR program (criteria for inclusion)
- protocol for screening/examination of caries (purpose, tools, criteria)
- delivery of the mouthrinse (preparation of solution; frequency, timing, and supervision of rinsing)
- administration of the program (recruitment & training of volunteers, consent forms)
- student participation (rates of participation within schools)
- health & safety concerns (WHIMIS reports; storage & disposal of mouthrinse)

Findings from the survey would identify areas of the program requiring follow-up or modification in order to comply with the program standards or guidelines.

2b) Current procedure for monitoring and evaluation (FMR manual)

Collect data at the beginning and at specific two-year intervals throughout the program. Evaluation should be done in selected schools to measure the general effectiveness of the program. When screening and collecting def/DMF indices, clearly separate the number of decayed teeth from extracted or filled teeth. An early indicator of the effectiveness of the FMR program is to see reductions in the numbers of decayed primary and permanent teeth. The decrease in the number of newly decayed teeth acts as an early indicator of the success of the program. The def/DMf score will not change significantly for several years due to carious lesions being restored, extracted or exfoliated.

3 easy steps to evaluate your fluoride mouthrinse program
Year 1 of program, screen:
Two Grade 2 classes (pre-entry to program data)
Two Grade 4 classes (Baseline data)
Two Grade 6 classes (baseline data)
Use the fluoride mouthrinse School Evaluation record (appendix)

Year 3 of program, screen:
Two Grade 2 classes
Two Grade 4 classes
Two Grade 6 classes

Year 5 of program, screen
Two Grade 2 classes
Two Grade 4 classes
Two Grade 6 classes

Selection of classes is done randomly and includes school children, rinsers and non-rinsers who are participating in the FMR program. To evaluate, each region must screen 100-200 children in the rinse program and 50-100 children not participating in the rinse program. Consideration must be given to enrollments.[12]

[12] FMR Manual, pages 17-18

2c) Current monitoring and evaluation practices in the districts

In some areas, all children were screened in grade 2,4,6. Hygienists collected data such as def, DMF, regular care, take home parent notices at the beginning of the FMR program in that school and at specific 2-year intervals throughout the program- 1998, 2000, 2002 (same month each year). Data from fluoridated and non-fluoridated schools was collected. The same forms and equipment were used as for screening/risk except used the FMR Program school evaluation record in manual. All children who were rinsing and not rinsing were screened.

Questions/Issues/Concerns
There needs to be uniform data collection, charting codes and colours and a standard evaluation.
Do we separate rinsers from non-rinsers when compiling data?
How do you determine if a person is a rinser or non-rinser. For example, If they rinsed for 2 years but are not rinsing anymore, are they a rinser?
How do you deal with an anticipated drop in enrollment?
The guidelines are not specific enough for evaluation.
Do we need to "clean" data, i.e., children moved or entered the system throughout the evaluation years, children who change status rinsers to non-rinsers?
Evaluation data is collected but nothing is done with it in some areas.
The guidelines in the manual are not specific enough for evaluation. Issues around this include lack of staff, lack of space and clarity of criteria such as differences in class size in control and rinsing schools.

Workshop results: monitoring and evaluation

Workshop Question: What changes should we make to the monitoring and evaluation of the FMR Program?

- Use technology to help with tracking (base it on a manual checklist)
- Data collection and monitoring tools must be easy to use and have clear definitions. People must be trained on how to use them.
- Development of tools by “experts”.
- Include other aspects of evaluation as detailed below.
- Ensure communication and a chance for discussion and feedback to the stakeholder groups about the evaluation results.

Details
There must be a 100% target (coverage)
School level participation rates, withdrawal, refusals, dropout and why?
Consent forms should be tracked and monitored.

Ensure best practice by:

- Evaluating for stakeholder satisfaction-kids, parents, volunteers, teachers, dentists, principals, hygienists.
- Evaluating for delivery of program components (7 items) and other criteria outlined in manual (re: locked, secure location).
- Evaluating for changes in attitude/knowledge transfer about oral health.
- Ensuring consistency with the Ottawa Charter regarding community involvement.

Evaluate effectiveness of:

- Cost (including volunteer costs and cost per student).
- Sponsorship/Ownership. Introduction of the FMR program to the school "champions" through partnership.
- Support/acceptance of the program by parents, volunteers and schools
- Logistics/operations (site based).
- Program management (reporting).
- Communication with stakeholders.

FMR Manual changes

New manuals (volunteer and hygienist) that are clear and concise, especially in terms of the evaluation/monitoring process. The manual must also be "dated".

Related Discussion Topics

Report evaluation results back to school and community
Provincial survey of oral health – commitment from Department of Health
Dedicate people and resources to the evaluation of the FMR program

3. Consent

Background information: consent

3a) Legal council's information about consent

Definition-When a parent consents for their child to **take part in a screening process** they should be fully informed as to what the screening will involve and why the screening is being done. Consent should be in writing. If a verbal consent is obtained it should be followed by written documentation by the person obtaining the permission.

When a parent or guardian gives consent for a child to **participate in the FMR program** the consent should clearly outline what the program consists of for their child. The consent should be in writing. If the consent is verbal, it needs to be followed by written documentation by the dental hygienist obtaining the consent.

Length**-**The consent form is valid for the life of the program if the form states that the program is from Grades P - 6. The consent form will remain valid unless the parent asks for their child to be withdrawn from the program.

Dyes**-**It is DOH legal counsel's opinion that there is no need to list the dyes contained in the mouthrinse powder flavors separately. She recommends that there be a statement on the consent in a footnote stating that coloring agents may be subject to change. If a parent is concerned about the issue of colouring they should contact the Public Health Dental Hygienist. This would alleviate the need to change the consent form each time a new flavor was added or deleted to the program.

3b) Consent issues from the districts

According to the hygienists, the issues include parents not signing the forms, not circling "yes" or "no" and leaving the allergy section incomplete. There is a question as to the literacy level of parents/guardians. How do you know if parents/guardians understand the consent forms?

Some follow up is done when forms are not returned. This includes returning unsigned or incomplete forms home for signature or by having the hygienist call the parents to complete the information.

There was a comment that the consent form is not very professional looking so it lacks credibility. Many forms are returned incomplete - poor layout of the form?

There should be a standard protocol about when a child is removed from the program due to allergies. This may be through the use of a questionnaire. There needs to be a medical update of the allergy issue. Is this a dislike to the flavour or an actual allergy with potential anaphylaxis? When is a child removed from the program? When is the flavor removed from the program?

3c) Process for feedback about consent

A process to bring forward issues related to consent (and other FMR issues) needs to be identified and communicated to all delivering the program. Currently, issues related to the forms would be brought to the Provincial Health Enhancement Core Committee, a subcommittee of the Public Health Working Group. All districts should be using a provincially approved consent form for both screening and participation in the program if the program standards are to be maintained.

Workshop results: consent

Workshop Question: What changes in procedure do we need to make around consent?

- Forms must be received in a timely manner.
- Recommend a yearly consent rather than a universal consent. This would include yearly medical updates on the child and would promote the FMR to the public each year.
- If there is a child with an allergy, discussion with parent needs to take place in order to reach a reasonable conclusion. Perhaps an individual plan of care should be developed.

Workshop Question: What changes do we need to make to the consent form?

- We need a standardized consent form that is produced and distributed provincially. This standard must be maintained.
- Recommend that someone with design skills be involved in development of standard consent. The form should be on coloured paper; written in plain language (consultant); focus tested; and should include the date it was developed/revised.
- Recommend highlighting (bold) on the consent form the question "Does your child have any allergies to food dyes or food flavouring?" (Remove specific detail on dye numbers – get legal counsel on this).
- Recommend removal of volunteer part on current consent form. Keep it simple – expectations are created. It is a consent form, not a recruitment form.

Workshop Question: What should the process be for making changes to consent?

Need to identify and implement a clear process to make changes to consent.

Workshop Question: How can we make the new consent procedures a provincial standard?

No specific answers cited in workshop flipcharts. Assume the issue of provincial standards covered generally during workshop.

4. Staff training, orientation and ongoing professional development

The review of the FMR Program should result in a standard orientation to the revised program for new and existing Public Health hygienists. The necessity for all professionals to continue learning throughout one's practice has been identified in the literature, and has long been recognized by dental hygienists[13]. Ongoing learning and professional development opportunities about fluoride mouthrinse need to be provided.

Background information: training, orientation and professional development

4a) Possible methods for professional skill development

Some ways that have been identified by hygienists as preferred methods of ongoing skill development include lecture, participation, and demonstration.[14] More recent literature [15] has supported the use of peer-based learning, practice-based education, and self-directed learning (which can include web-based education) for professional development. This builds on the philosophy of continuous quality improvement supported by many professional groups. The importance of ongoing support for developing and maintaining competence through continuing education needs to be an integral part of the FMR Program.

4b) Current district orientation practices for new hygienists

New hygienists are oriented to the FMR program by other hygienists in Public Health. New hygienists read the manual and the background research. They attend training sessions with the hygienists. New hygienists are oriented to the schools they will work in and are given an opportunity to discuss questions and concerns.

4c) Current competency practices in the districts

Hygienists attend Continuing Education courses. The impetus to maintain competency is personally driven and at the initiative of each hygienist. There are no formal maintenance procedures.

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[13] MacDonald, K. (1998). Dental hygiene education in Canada: An overview. Probe 22 (1) 18-20

[14] Young, W. (1989). The perceived continuing education needs of Saskatchewan dental hygienists. Probe 23 (2) 81-84

[15] Jennett, P.A., and Pearson, T. (1992). Educational responses to practice-based learning: Recent innovations in medicine. In Professional Ways of Knowing: New Findings on How to Improve Professional Education. San Francisco: Jossey-Bass

Workshop results: training, orientation and professional development

Workshop Question: What changes need to be made for standardizing the orientation of new hygienists to the FMR Program?

- Recommend following the protocol for training new staff hygienists as outlined in briefing document (discussion paper).
- Standards need to be set province wide. This must include an introductory training workshop and frequent updates.

FMR Manual changes:
Recommend that the revised Manual be followed in any training of new staff. Specify minimum standards in the Manual (I.E.: data collection, screening and evaluation).
Change Page 11 in the Volunteer Manual, page 23 in the Hygienist Manual. Add "topical" to the sentence "No health risk of fluoride".

Workshop Question: What changes do we need to make to ensure ongoing professional competency for FMR Program hygienists?

- Standards need to be set province wide. This must include an introductory training workshop and frequent updates.
- Recommend that there be a mechanism to ensure competency of hygienists. Provide a checklist of steps to ensure standard approach.
- Recommend that hygienists be kept current on issues related to FMR. There must be a mechanism for sharing current literature to ALL. Share new learnings at conferences etc. Link with Dalhousie on this issue.

5. Volunteers

Recruiting, training and keeping volunteers is crucial to the success of the FMR program.

Background information: volunteers

5a) Finding and recruiting volunteers according to the manual

Hygienists are instructed to select schools for the program, contact the school principal, attend staff meetings and meet with parents about the program. Once the decision is made to go ahead, hygienists are to recruit volunteers. To seek out volunteers, the manual suggests they ask the principal for names, send out consent form with the recruitment information and attend parent-teacher meetings.[16]

5b) Finding and recruiting volunteers in the districts

In all areas, volunteers are found in several ways. The section at the bottom of the consent form asks for volunteers. If more volunteers are needed, hygienists send a note home with students, make personal contacts, ask for suggestions from the principal, meet with home and school, and place notices in the school newspaper. Some teachers actually monitor the program themselves.

5c) Training volunteers in the districts

Most volunteers are trained by the hygienist at the school using the FMR Program Volunteer Manual and Review Questions. Some sessions last 1.5 hours for new volunteers and 30 minutes to 1 hour for returning volunteers. People must be trained before they can participate. Training and retraining takes place throughout the year as needed.

In some cases, when volunteers feel they do not need retraining key issues are reviewed over the phone. New recruits always have an experienced volunteer or a hygienist with them at the first rinse. Every new volunteer that attends training fills in review questions that are then kept on file.

Workshop results: volunteers

Workshop Question: What changes do we need to make to the way volunteers are recruited?

- Have a lead person to coordinate FMR in each school (teacher, volunteer, principal).
- Define what commitment/what does being a volunteer mean? What benefits are there for the volunteer?
- Use church bulletins to seek senior volunteers.

[16] FMR Manual, page 5

FMR Manual changes:
FMR manual should outline a variety of approaches to recruit volunteers (seek recommendations from voluntary school committees).
Define in the FMR Manual specific roles of coordinator, volunteers and hygienists.

Workshop Question: What changes are needed to the way volunteers are trained? How can we make the implementation of these changes standard across the province?

- Standardize a process to update FMR manual and communicate to all volunteers. Follow-up with hygienists to ensure changes are understood.
- Refresher training yearly for volunteers to be done by hygienists and to include issues of safety and any program changes.
- Volunteers required to "legally sign-off" that training has been received.

Workshop Question: Do FMR Program volunteers feel valued? Can we improve on this?

- Standardize process to recruit and retain volunteers. Give concrete examples of possible incentives. (I.E.: CPR and First Aid training, input into program changes, volunteer appreciation for FMR volunteers during Dental Health Month).
- Support networking, for example, between local hygienists and Public health Services.
- Enhance relationship with local dental societies (see **Section 6. Community support and participation**).
- Contact parents, teachers, students/volunteers first of every school year.

6. Community support and participation

The involvement and support of the larger community is important for the success of the FMR program. This support and networking not only enhances participation in the program, but can be seen as a way to target high-risk individuals for oral health care. Enhancing community support and participation will require a marketing and public relations approach.

The importance of involving people in issues that affect them is a cornerstone of the Public Health philosophy[17], and as such is extended to the FMR Program. The dental and school communities need to be integral partners in decisions made about the program.

Background information: community support and participation

6a) Current situation in the districts

Contact with the dentists can affect participation rates as some parents check with the family dentists before agreeing to participate. Support from the dentists for the FMR program varies depending on the dentist. Some dentists, when asked, tell parents the FMR Program is not necessary. Hygienists have tried writing letters to dentists and attaching the NSDA letter of support for the program. There is not a lot of connection between the dentists and the Public Health dental hygienists in some areas. Some hygienists do a presentation at local Dental Society meetings. In some areas, a letter of support goes out with the permission slip from the president of the Dental Association.

Other issues/questions/concerns
What is the expectation for background checks for volunteers and Public Health Staff involved with the FMR program?

Workshop results: community support and participation

Workshop Question: How can we enhance the local support of the larger dental community?

- Include process evaluation
- Attach appendices to the manual with public relations samples
- Work with Department of Health public relations personnel
- Work with the Dental Association to get the message out to the local dentists
- Contact president of Dental Association
- Use newsletters
- Highlight the benefits of program
- Ensure people know that fluorosis is not linked to the FMR program

[17] Canadian Public Health Association (2001) The future of public health in Canada. CPHA Digest, 25 (3) 6-10

- Hold a pep rally with the dental community
- Send a population health message about the FMR program
- Continuing Education by hygienists for private practice hygienists. This could be at a society level for credits
- Other program initiatives, such as Primary registration
- Early childhood (enhanced) intervention program

Related Discussion Topics
Use local media. Get in the papers! Dispel myths and highlight benefits.
Speak to NSDA- Steve Jennex to see about getting on Breakfast TV with volunteers and kids.
School newsletters related to the program.
Show how dental community is involved- public health, hygienists and volunteers.
Highlight program at very least during Dental Health month.
Profile all the players of the FMR program.
Information from this workshop to be used to inform the development of the FMR program
Evaluation components related to process in areas discussed.
Engage communities in process.
Network with Department of Education.
Tooth brushing in day cares
Strategies for public/private partnerships

FMR Manual changes
FMR Manual must include ways to enhance participation and support of dental community and community at large.

Conclusion

This document is meant to close the work of Phase I and serve as a framework for the work of Phase II—facilitating the process to implement the recommendations from the Consensus Workshop. It provides the background information for the process to date, as well as summarizing important research, local feedback and consensus results in key topic areas.

Work for Phase II will be completed by the representative membership of an Ad Hoc Committee for the Implementation of the Recommendations for the FMR Program. The Ad Hoc Committee will determine the most effective way to implement the recommendations from the Consensus Workshop. Subgroups may be set by the Ad Hoc Committee up to work on specific recommendations or components of recommendations as required. The Ad Hoc Committee will oversee the work of any subgroups and ensure communication and linkages between subgroups to facilitate the review process. Work of Phase II will result in a province-wide, standardized FMR Program by September 2003.

This summary document is also a useful way to keep the Health Enhancement Core Committee and the Public Health Working Group informed of the process and progress thus far. The Ad Hoc Committee is accountable to these committees for the FMR Program review.

Appendix 1: Members of the Working Group

The following is a list of the members of the Ad Hoc Committee for the Review of the Nova Scotia Fluoride Mouthrinse Program.

Heather Christian
Chair, Public Health Enhancement Core Committee
NS Department of Health

Mary-Anne Finlayson
NS Department of Health

Barb Anderson, Public Health Enhancement Core Committee Representative
Public Health Services
District Health Authorities 1, 2, 3
Bridgewater

Bernice Doucet, Dental Hygienist
Public Health Services
Districts 1, 2, 3
Bridgewater

Barbara Wyrwas
Public Health Services
District Health Authorities 7 & 8
Baddeck

Dianne Chalmers, Dental Hygienist
Public Health Services
Capital District
Dartmouth

Norma MacIntyre, Dental Hygienist
Public Health Services
District Health Authorities 4, 5, 6
Shubenacadie

Joanne Clovis
Dalhousie School of Dental Hygiene

Carl Canning, Dental Consultant to the NS Department of Health,
Public Health Services
Antigonish

Appendix 2: The consensus approach

At the workshop, we expect to reach decisions regarding the FMR program using a consensus approach.[18] **Consensus decision-making** is a process used to make sure everyone has input into a decision. Everyone's participation, sharing, listening, trust and respect are needed.

The word consensus is based on the term *to consent* or *to grant permission*. To reach consensus, people need *to give their permission* to go along with the group. During consensus, you can negotiate the terms by which you agree to give this permission. Each person has the right and obligation to make their terms known to the group.

Consensus means
- All group members contribute
- Everyone's opinions are heard and encouraged
- Differences are seen as helpful
- Everyone can paraphrase the issue
- Everyone has a chance to express feelings about the issue
- People who disagree are at least willing to try the proposed solution for a period of time
- All members share the final decision
- All members agree to take responsibility for implementing the final decision

Consensus does not mean
- An unanimous vote
- The result is everyone's first choice
- Everyone agrees
- Conflict or resistance will be overcome immediately

[18] NS Department of Education School Advisory Committee Manual, Appendix A

Appendix 3: Consensus workshop agenda

Thursday, March 21st

19:00 HRS Welcome and Orientation
19:15 HRS Learning to Work by Consensus
19:45 HRS Key Note Address (Joanne Clovis)
20:15 HRS A "Poetic" History and Table Cloth Presentation (Ad Hoc Committee)
20:30 HRS Stop and Social

Friday, March 22nd

08:30 HRS Welcome and Orientation
09:00 HRS Small Group Task
10:00 HRS BREAK
10:15 HRS Small Group Task (Continued)
11:15 HRS Small Group 1 (Risk Assessment) Presentation
12:30 HRS LUNCH
13:30 HRS Small Group 2 (Evaluation and Monitoring) Presentation
14:00 HRS Small Group Presentation (Community Participation) Presentation
14:30 HRS Small Group Presentation (Consent and Professional Competency) Presentation
15:00 HRS BREAK
15:15 HRS Closure and "What's Next?" (Heather Christian)
15:30 HRS Evaluation
15:45 HRS STOP

Appendix 4: Glossary of terms and abbreviations

Calibration - Used broadly here in reference to the standardization and development of a common procedure and protocols.

Caries- Decay. In this case, tooth decay.

Fluoride mouthrinse - A concentrated solution of fluoride to be used daily or weekly.

Working Group- Ad Hoc Committee of the Public Health Services Enhancement Core Working Group

D	Distal tooth surface
def	Decayed + extracted + filled primary teeth (or deft)
DMF	Decayed + missing + filled permanent teeth (or DMFt or DMFT)
DMFS	Decayed + missing + filled tooth surfaces
FMR	Fluoride Mouthrinse
GI	Gingival (Gingivitis) Index
M	Mesial tooth surface
O	Occlusal tooth surface
OHI	Oral Hygiene Index

Appendix 5: Background information about fluoride

Tooth decay is a chronic, infectious, transmissible disease resulting from the interplay of bacteria, fermentable carbohydrates and tooth surfaces over time. Cavities occur when bacterial byproducts like acids are produced. If left there, these can eat away at the tooth surface, reaching the dentin and pulp below. Plaque holds acid producing bacteria on the teeth.

Fluoride is concentrated in plaque and saliva. It works in three ways.
1. Fluoride slows down the loss of minerals from the enamel of the teeth (demineralization)
2. Fluoride speeds up the recovery of these minerals and participates in the formation of new mineral containing calcium, phosphate and fluoride, which results in a stronger enamel surface (remineralization)
3. Fluoride inhibits the ability of the bacteria to produce acids.

Saliva carries low levels of fluoride, lower in areas without fluoridated water. Drinking fluoridated water, brushing with fluoridated toothpaste and using other fluoride dental products can raise the fluoride concentrations in the mouth 100 to 1000 times higher than normal. Levels return to normal after 1-2 hours.

Fluoride works mainly after teeth have erupted, on the surface of teeth, and the effect depends on small amounts of fluoride being at the right place at the right time. Adults and children benefit from fluoride.

Enamel fluorosis is a change the appearance of the enamel of teeth brought about by ingesting too much fluoride during tooth development. Extremes of this condition are cosmetically objectionable. Risks for this are limited to children ages 8 and younger. When fluoride is used appropriately, fluorosis won't occur. The NSOHS found that there was a 2.1% prevalence of moderate to severe fluorosis amongst grade 6 children examined.