

REVIEW OF THE

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# SAVE OUR KIDS SMILES (SOKS) PROGRAM

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Volume 1: Report

NSW HEALTH DEPARTMENT

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# F oreword

**Publicly funded child oral health services in NSW are available free to around 1.5 million children. Services are coordinated by the 17 Area Health Services and delivered by hundreds of oral health professionals in clinics located in schools, hospitals and community health centres. Policy support and strategic direction is provided by Oral Health Branch, NSW Health Department.**

Prior to 1996, these services were primarily attended by school-aged children on a demand basis. To enable more children to more equitably access public oral health services, and with a focus on targeting those most in need, NSW Health introduced the Save Our Kids Smiles (SOKS) Program in 1996. Children in years Kindergarten, 2, 4, 6 and 8 were offered oral health education, oral health assessments, and clinical care on a priority based system. Most of the oral health education and assessments occurred in schools. Each year since 1996, around 260,000 children have received oral health assessments through the SOKS Program.

In 1999, the SOKS Program was reviewed. *Review Of The Save Our Kids Smiles (SOKS) Program Volume I: Report*, documents how the Program was reviewed, the review's findings, and recommendations for Program improvements. An accompanying document, *Review Of The Save Our Kids Smiles (SOKS) Program Volume II: Technical Reports*, provides supporting documentation to the Review's findings and recommendations.

This Review is timely as significant reforms to all public oral health services will be introduced in 2001. Implementation of the recommendations will allow us to further improve the delivery of oral health services to all children in NSW, particularly to those most at need. The proposed changes also represent a key strategy aimed at improving the oral health of our whole community. An implementation plan is currently being prepared and proposed changes will be introduced in consultation with key stakeholders.

I would like to thank all those who have contributed to the Review and look forward to providing better oral health, good oral health care for the children of NSW.



**Michael Reid**  
Director General

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Abbreviations	
AHS	Area Health Service
SOKS	Save Our Kids Smiles
CDHPO	Community Dental Health Program Officer
DA	Dental Assistant
DDS	Director of Dental Services
DEO	Data Entry Officer
DMFT or dmft	Number of decayed, missing or filled teeth due to caries. Upper case denotes permanent teeth, lower case signifies primary or deciduous teeth.
DO	Dental Officer
DT	Dental Therapist
NSW	New South Wales
OHP	Oral Health Promotion
OH&S	Occupational Health and Safety
PDHPE	Personal development, health and physical education
PDO	Principal Dental Officer
RA	Risk Assessment

# E xecutive summary

**This document outlines the Review of the Save Our Kids Smiles (SOKS) Program undertaken by the NSW Department of Health. The Review aimed to evaluate the implementation and effectiveness of the SOKS Program against its original objectives. These were the identification and treatment of children with dental caries, particularly in permanent teeth and to increase the number of children with no experience of oral disease.**

Public child oral health services in NSW are coordinated by the NSW Department of Health and administered by the 17 Area Health Services (AHSs). The SOKS Program, forming part of the NSW child oral health services, commenced in 1996. Its three main components are oral health education, risk assessment and clinical care. Biennial risk assessments and oral health education are provided for children in Kindergarten and Years 2, 4, 6 and 8 in participating schools. Treatment needs are prioritised on the basis of clinical need and children are referred to either public clinics or dentists in private practice for treatment.

A Technical Advisory Group comprising senior Departmental and Area Health Service representatives was formed to advise and support the review. Extensive consultations, an economic analysis and surveys investigating specific aspects of the SOKS Program have all provided information relevant to the Review. In August 2000 the Minister for Health, the Hon. Craig Knowles approved the findings and recommendations.

## Main findings

- The majority of children in NSW have no dental caries experience, with the burden of disease falling on the most disadvantaged sectors of the community.
- Economic analyses show that the current level of resources in child oral health services is not adequate for the assessment and treatment of all children identified by the SOKS risk assessment as needing treatment. These analyses reinforce the essential role of private oral health care, and the importance of the partnership between public and private sectors, in the delivery of oral health services.
- Evidence-based research shows that oral health education in schools is not effective in changing behaviour, but can be effective in increasing knowledge in the short term.
- Many oral health staff and the Department of Education and Training supported integrating OHP into the school curriculum, with oral health staff providing resources for teachers.
- The risk assessment appears to be reasonably effective in prioritising children on the basis of clinical need.
- Caries experience is under-reported and these data should not be collected during SOKS risk assessments under current conditions.
- Most children in Year 8 do not participate in the SOKS risk assessment.
- Trends in the three coding categories show little change over time. Despite the availability of the SOKS risk assessment; the proportion of Code 1 children (those requiring urgent care) has not decreased from 1996 to 1998. Over one quarter of children (28%) of children categorised as Code 1 in 1996 remained in need of urgent care when re-assessed two years later.

- Children assessed as needing urgent care (Code 1) are receiving priority of access in public clinics. The health outcome for the majority of children receiving SOKS risk assessments is unknown, including around 50% of children categorised as Code 1 who do not access public oral health clinics.
- Large numbers of children are attending public oral health clinics for emergency care.
- A large proportion of children (39%) attending for emergency care had been treated at a public oral health clinic within the last 12 months. 62% of children aged 5-15 years attending public clinics for emergency care had either received a SOKS assessment, or attended a public clinic in the previous 12 months.
- Wide variation exists in the occurrence and length of waiting lists across NSW, including within AHSs. Two AHSs currently have waiting lists for children assessed as Code 1 (urgent care) and Code 2 (routine care). Most other AHSs have waiting lists for Code 2.
- A statewide working group, comprising members of Oral Health Branch, Area Health Services and NSW Health Promotion Unit (NSW Health) should be formed to develop and evaluate appropriate evidence-based strategies and resources for oral health promotion which target high-risk children and to liaise with the NSW Department of Education and Training and NSW Board of Studies to further integrate oral health promotion into schools' curricula.
- Criteria will be developed to identify and target schools with children at high risk of oral diseases. Criteria should be based on a combination of dental risk, fluoridation and relevant indicators measuring socio-economic disadvantage.
- The amount of data collected by the SOKS Program will be reduced by targeting risk assessments and by no longer collecting caries experience data at the risk assessment. Another method of collecting these data, consistent with national reporting requirements, will be developed in collaboration with the Dental Statistics and Research Unit (Australian Institute of Health and Welfare).

## Major recommendations

- The SOKS Program should continue, but with modifications.
- A statewide policy on oral health promotion, assessment and clinical care should be developed in collaboration with other relevant organisations. This should focus on all children, including for children aged 0-4 years.
- Strategies to address the oral health needs of Aboriginal children should be developed as part of the overall Aboriginal Health Strategic Plan, in consultation with the Aboriginal Medical Service and other relevant agencies.
- Risk assessments for children in Year 8 should be discontinued. A statewide policy on oral health promotion and clinical care for high school aged children should be developed.
- Specific funding, as identified in the recent Ministerial announcement on organisational reforms in Oral Health, will be made available to implement a statewide oral health promotion plan.
- All high school children requesting a clinical assessment should be given a priority coding on the Priority Oral Health Program. Appointments for clinical care should be available in child or adult clinics.
- Children presenting for emergency care should receive care which optimises their oral health outcomes, which may include placement on a managed care program.
- The development of an Oral Health Information Management System, Priority Oral Health Program and Oral Health Minimum Data Set provide an ideal opportunity for the child oral data health collections to be revised and integrated into the new statewide information technology system.

# 1

# Introduction

## Background

The oral health of children in NSW has improved in the last thirty years due largely to the introduction of water fluoridation, fluoride in toothpaste, and to improved diet and oral hygiene practices.<sup>1</sup>

The majority of children in the State now have no experience of oral disease. For example, in 1995, almost 63% of six-year-old children and nearly 72% of twelve-year-old children had no untreated dental caries (dental decay). Oral disease is not evenly distributed across the population, with high rates of dental decay (in four or more teeth) found in 12% of six-year-old and 5% of twelve-year-old children respectively.<sup>2</sup> Those at the highest risk of disease are children those living in areas of low socio-economic status, in rural areas, those with physical or mental health problems and children of migrants or refugees.

## Overview of child oral health services in NSW

Public child oral health services in NSW are coordinated by the NSW Department of Health and administered by the 17 Area Health Services (AHSs). Annual costs of the service are approximately \$15 million, with one third of this funding for the SOKS risk assessments and oral health education.

All children are eligible for relief of pain, emergency and routine clinical care with treatment prioritised according to need.

Clinical services are provided in child oral health clinics across NSW and are carried out by Dental Therapists (DTs), with referral to Dental Officers (DOs) where required. DTs are trained to work with children within the public sector in Australia and each works in a team with a Dental Assistant (DA) who provides a range of clinical and administrative support.

Some child oral health clinics are located on school grounds and some have been combined with adult clinics, many of which are located in community health centres.

Prior to 1996, child oral health services were clinic-based and attended by mainly school-aged children on a demand and recall basis. While a small number of rural AHSs visited their local schools annually to screen and identify children in need of treatment, most clinics serviced the children of motivated parents who contacted the service. Approximately 26% of all children in NSW aged 5-14 years attended this service annually.<sup>3</sup> It is estimated from the SOKS database that 30% of children currently attend private dentists in NSW, but accurate data are hard to obtain. Prior to the SOKS Program, it is likely that many children at high risk of oral disease in NSW were neither assessed nor treated.

## The SOKS Program

The Save Our Kids Smiles (SOKS) Program was introduced by the NSW Department of Health in 1996. It was based on the Dental Assessment and Prioritisation Program (DAPP) implemented in an area of western Sydney. This program was not formally evaluated.

In 1995, all AHSs in NSW were asked to conduct pilot programs based on the DAPP program, with full implementation of the SOKS Program in 1996.<sup>4</sup>

This SOKS Program introduced major changes to the direction of child oral health services in NSW, moving from a clinic-based system to a population-based model. The principal of universal access to care remained, with any child of pre-school age, or any person aged up to 18 years and enrolled full time in a school or educational institution, or any person aged up to 18 years holding a concession card, or listed as a dependent on a concession card being eligible for a free clinical assessment and, if necessary, treatment in a public oral health clinic.

The Program, located within the overall framework of child oral health services, took a school-based approach. A school-based risk assessment for children in Kindergarten and Years 2, 4, 6 and 8 where children were prioritised on the basis of clinical need was provided, as well as an oral health education program for children in these school grades. All schools in NSW (Government, Catholic and Independent and special needs) were encouraged to participate.

A statewide manual outlining procedures for undertaking the SOKS Program was not published. AHSs compiled their own manuals and forms from a range of documentation and templates provided by the Dental Health Branch in 1996.<sup>5</sup>

The prioritising of treatment on the basis of clinical need signalled a major change in direction of oral health services across NSW and the risk assessment also meant that clinical staff were much more visible within the schools and community.

***The goals of the SOKS Program were to:***

- find and treat children with decay, focusing on the prevention and treatment of caries in permanent teeth.
- increase the number of children with no experience of oral disease.

***The three main objectives were to:***<sup>5</sup>

1. increase the number of children participating in an oral health education session.
2. allow access to an oral health risk assessment for school children in NSW every two years.
3. facilitate care for those children who need dental treatment.

The main components of the SOKS Program are oral health promotion, risk assessment and clinical care.

## Oral health promotion

The SOKS Program introduced the concept of school-based oral health education, aiming to increase the number of children who participate in an oral health education session.

***More specifically, this Program aimed to:***

- provide school-based education sessions for years K, 2, 4, 6 and 8.
- provide information to parents and carers about their children's teeth and how to keep them healthy<sup>5</sup>.

Oral health education is defined in the SOKS Program refers to educational programs seeking to bring about change in knowledge, attitudes and behaviour in individuals or groups.<sup>6</sup> Many AHSs in NSW continue to provide school-based oral health information in this way, but others now use a wider range of strategies more appropriately defined as oral health promotion i.e. taking a population rather than individualistic approach and directed towards the causes rather than the effects of ill health. In this review, the term oral health promotion (OHP) is used to cover both types of activities.

Although not formally part of the SOKS Program, OHP for children aged 0-4 years has been included in this section as service provision for this age group was explored in the review.

### Implementation of oral health promotion (OHP)

The AHSs were provided with OHP packages by the Oral Health Branch (OHB) in 1996 to assist with the implementation of the SOKS Program. Wide variation in the provision of OHP exists across the State, with minimal levels provided in some AHSs and additional resources provided in others e.g. to employ a specialist worker to coordinate OHP. The interviews and focus groups with AHS personnel and school principals in Technical Report No. 5-10 of this Review describe the current implementation of OHP across NSW.

The most common form of OHP in the SOKS Program is a one-off education session conducted approximately two weeks prior to the SOKS risk assessment (RA) by clinical staff to either individual classes or a complete school grade. In this session, the SOKS assessment forms are handed out and the children asked to obtain parental consent for the RA. The session lasts for approximately 30 minutes and usually occurs in the presence of class teachers who may, or may not, continue to develop the themes discussed.

In the oral health education / promotion session for children in the eligible grades, the DTs and DAs visit the school approximately two weeks prior to the oral health risk assessment and present a session lasting around 30 minutes. A video and other health education resources are used to inform children about oral hygiene, emphasising the importance of regular brushing with fluoride toothpaste. A letter informing parents about the SOKS risk assessment (RA) and requesting consent for the assessment is given to the children in this session.

### **OHP resources used in the SOKS Program**

The NSW Dental Health Branch, in consultation with the NSW Department of Education and Training, commissioned the development of three OHP packages for different age groups in the SOKS Program. A package designed for children in Year 6 children was planned but never finalised. Packages included any or all of the following: video, audio tape, activity sheets, presenters resource book and evaluation sheets for teachers, presenters and students.

#### **Description of the packages**

- *Natural Habits* – for Kindergarten children. This describes the importance of regular teeth and gum brushing twice a day using four Australian animals as characters<sup>7</sup>.
- *Tick-Tock Teeth* – for Years 2 and 4. This is a game show with two teams of children reinforcing the importance of regular brushing, healthy foods for lunch and snacks and mouthguards for sports activities<sup>8</sup>.

- *Life Sux without Teeth* – for Year 8. This describes the importance of regular tooth brushing with fluoride toothpaste, a healthy diet and a regular dental check-up. It also illustrates the results of plaque, decay and infected gums. While the setting is a dance hall in a remote bush location, DTs report that the video appeals to urban rather than rural adolescents<sup>9</sup>.

#### **Additional videos currently used by AHSs include:**

- *Something to Get Your Teeth into* (Year 4) (Westmead Hospital)
- *Loony tunes* (Year 4) (Colgate)
- *The Incredible Ride* (Years 2-4: multicultural focus) (Colgate)<sup>10</sup>
- *Brush up on your teeth* (Year 4) (Colgate)
- *Mr. Bean* (Years 4 and 6)
- *Acid Attack* (Year 8)

#### **Other resources used and often developed by SOKS staff include:**

- Packages on OHP for teachers to implement
- Posters including Wrigleys showboard/cards (age 6-7 years)
- Photographic slides
- Puppets
- Demonstration models to show correct brushing techniques
- Lesson plans and evaluation sheets

### **Changes to the original program**

More recently in several AHSs, teachers rather than clinical staff, have been asked to implement OHP. They have been provided with education resource packages. Targeting of OHP to high-risk schools has also taken place in several AHSs, with one AHS providing both an education session before and after the SOKS assessment.

In January 2000, the NSW Board of Studies implemented a new curriculum for the Personal Development, Health and Physical Education (PDHPE) program in primary schools, which is the main curriculum strand providing health information. The curriculum includes examples of oral health in the various modules which teachers can include in their lessons if they wish. This program will remain the NSW curriculum for at least the next five years and is subject to regular reviews. A joint project between the NSW Board of Studies and an AHS in NSW is also being undertaken to incorporate oral health into the Year 8 Science curriculum.

Several AHSs have evaluated the presentations by SOKS staff and a small number have evaluated the use and content of packages for teachers. Two AHSs evaluated the impact of teacher packages on the consent rate for the RA. As there was no reduction in consent, SOKS clinical staff were withdrawn from OHP presentations. One of these AHSs also reported a high level of use of the OHP packages by teachers, but the pattern elsewhere in NSW is unknown.

## Oral health risk assessment

The risk assessment (RA) is undertaken in either a classroom or school hall and comprises a brief oral assessment taking around one minute for each child for whom parental consent has been received. Conditions for the assessment vary across the State, with some AHSs using portable dental chairs and lights and others using school chairs or gym mats and tables. Mirrors and probes are used. Radiographs are not taken.

The assessment categorises children's oral health status into one of three codes.<sup>5</sup> Children assessed as Code 1 require immediate care, children categorised as Code 2 need routine care, radiographs and, or preventive treatment such as fissure sealants and children assessed as Code 3 do not require treatment. The SOKS code is recorded on each child's assessment form. At the RA, caries status for each tooth is charted on the odontogram on each form. Definitions for the assessment codes and the assessment for teeth is found in Volume II: Technical Report No. 1.

Children are then given a letter for their parents informing them of their child's assessment result and advising them to contact either their local oral health clinic or a private dentist for treatment if necessary. Children who are absent on the day of the SOKS assessment, or who attend with incomplete forms are provided with a 'Missed Assessment' form and invited to attend an oral health clinic for a SOKS assessment.

## Clinical care

Each child receives a full oral examination on their first visit and a patient card is also completed, but clinic staff do not have direct access to the results of the RA on the AHS database.

Data from the National Dental Telephone Survey conducted in 1995 suggests that most children in Australia attend private dentists for treatment, but data for NSW is not available.<sup>11</sup>

Children classified as Code 1 are treated in child oral health clinics as soon as possible after making contact, normally within four weeks. Clinical staff in most AHSs follow-up all Code 1 children if they have not sought treatment within that time. Children requiring a course of treatment are then placed on a managed care program where subsequent clinic appointments are made. Managed care is used to describe treatment that is provided over an extended period of time and is based on the clinical needs of the child. In some AHSs, waiting lists exist for children requiring urgent care (Code 1).

Children requiring routine or preventive treatment (Code 2) usually wait longer for an appointment and are placed on a waiting list in many AHSs.

Children requiring relief of pain or emergency care can attend a public child oral health clinic. In most AHSs, treatment is restricted to the cause of the emergency, with any further treatment needs either referred to the private sector, or dealt with by placing the child on a clinic waiting list. In some AHSs, the child may have to wait until after their next SOKS assessment for treatment.

## Services for children in alternate school years

The SOKS Program operates on a biennial cycle allowing every child in participating schools to receive a risk assessment every two years. A follow-up or recall system was developed for children in the alternate school years (Years 1, 3, 5 and 7) who had previously been assessed and were considered in need of a subsequent assessment or treatment within the following 12 months (for example, for fissure sealants). In practice, many AHSs now use a managed care system or advise parents to contact the clinic.

## Aboriginal children

Aboriginal children participate in the SOKS Program in the same way as other children. In some schools, Aboriginal Education Assistants assist in obtaining consent for Aboriginal children and may take the children for treatment if their parents are unavailable. The children may attend either a public oral health clinic or, if available, an Aboriginal Community Controlled Health Service which operates in a formal partnership with the NSW Department of Health.<sup>12</sup>

## Children with special needs

Children with disabilities who are integrated into primary and secondary schools, participate in the SOKS Program along with other children in these schools. Special schools may be either offered a RA at the school, invited to attend the child oral health clinic, or if they have severely disabled children, informed of appropriate services at Westmead Centre for Oral Health.

RAs are held regularly at Intensive English Language Centres for children who are newly arrived migrants or refugees. These children are then referred to a child oral health clinic for treatment.

## Children aged 0-4 years and 15-18 years

Children age 0-4 years and school students aged 15 to 18 years are not formally part of the SOKS Program. There is evidence from other Australian data sources that pre-school children have high levels of untreated dental caries. For example, data from Victoria indicates almost 80% of caries in five-year-old children are untreated.<sup>13</sup>

Children in both these age groups are eligible for a clinical assessment and if appropriate, treatment in public clinics. In practice, there is wide variation across the State in the provision of services for these age groups, with treatment restricted to emergency care in many AHSs.

## Oral health services in other States and overseas

Four States and Territories in Australia provide free oral health services to all children aged to 16 years or more and both full clinical assessments and treatment are provided within the public sector in most parts of Australia (Volume II: Technical Report No. 2).

The United Kingdom (UK) is the only country canvassed to have a national program. Similarities between NSW, the United States of America and Canada exist in that private dentists provide the majority of treatment for children. These countries also show a varied pattern of service provision and do not have a national school oral health service, unlike the UK which has a comprehensive national service. Oral health promotion was not coordinated or implemented at a national level in any of the four countries, with most provided in an ad-hoc manner and with limited resources available. More detail is provided in Volume II: Technical Report No. 2.

## Oral health screening

The primary purpose of screening, or early diagnosis, is to reduce morbidity and mortality from disease through early detection and treatment. It is used in a range of circumstances including conditions where the prevalence of pre-clinical (or early stages) of the disease is high in the population screened and where the disease is of a serious nature.<sup>14</sup> Oral diseases differ from many of these conditions in that they are not normally life threatening and persist in a chronic form in many children and adults. The SOKS risk assessment was introduced primarily for the purpose of prioritising children on the basis of clinical need, thus enabling those with the most severe oral diseases to be identified and treated first.

An evaluation of a health screening program would normally include assessment of the validity and reliability of the screening test, as well as a review of the feasibility and effectiveness of the overall program. Health outcomes as shown by changes in the incidence or severity of the disease over time should also be estimated and this initial review of the SOKS Program has included most of these components. Other factors normally taken into account when evaluating a screening program include adequacy of the resources available to deal with the demand for services as a result of the screening. There is little point in screening if there are inadequate resources to treat those identified or 'labelled' as in need of care or if there is a low level of compliance for treatment.<sup>15</sup>

Ideally, the introduction of a proposed screening test should take place only after extensive investigations involving intervention and control groups which assess all of the above factors. In reality, resource and time limitations mean that this does not always take place, as occurred with the SOKS Program.

There is very little available literature on oral health screening or risk assessment with the exception of some older studies expressing reservations about the usefulness of screening in child oral health services. One such study in Victoria published in 1983 found that use of private dental care increased only marginally in the two months after a school assessment by children and that many of these children had already been attending private care.<sup>16</sup>

# 2

## Aim of the SOKS Review

**This Review aimed to evaluate the implementation and effectiveness of the SOKS Program in NSW from 1996-99 against its original goals and objectives and within the three component parts of the Program:**

1. Oral health education and promotion
2. Oral health risk assessment
3. Prioritised clinical care

On the basis of the review findings, recommendations have been made to make the Program more efficient, effective and appropriate in meeting the needs of children in NSW on a sustainable basis.

### Summary of methods used in the Review

Details of methods used, and results, are described in *Review of the Save our Kids Smiles (SOKS) Program Volume II: Technical Reports*.

A Technical Advisory Group comprising senior Departmental and AHS representatives was formed to advise and support the project and a project officer appointed (Technical Report No. 3). An evaluation plan was developed and is outlined in Technical Report No. 4.

Information for the Review was collected from a range of sources, including:

- Submissions from various stakeholders (Technical Report No. 5)
- Semi-structured interviews with the Community Dental Health Program Officer or a Senior Dental Therapist in each AHS (Technical Report No. 6)
- Semi-structured interviews with the Directors of Dental Services or Principal Dental Officers in each AHS (Technical Report No. 7)
- Focus groups with other staff working in the SOKS Program (Technical Report No. 8)
- Discussion groups and interviews with school principals and departmental officers from the NSW Department of Education and Training (Technical Report No. 9)
- Discussion groups with parents (Technical Report No. 10)
- A review of the literature on oral health education and promotion and of the OHE resources used in the SOKS Program (Technical Report No. 11)
- An assessment of the reliability of the risk assessment categories and caries status data (Technical Report No. 12, 13)
- An investigation of the treatment status of children who had attended a risk assessment (Technical Report No. 14, 15)
- Results of a survey investigating the SOKS status of children attending for emergency care at child oral health clinics (Technical Report No. 16, 17)
- Data collection in child oral health services, including the results of an analysis of SOKS data from 1996 to 1998 (Technical Report No. 18)
- An economic analysis (Technical Report No. 19)

### Limitations of the Review of the SOKS Program

Comparison of child oral health status between the pre and post-SOKS Program periods has been limited by differences in the populations sampled. Prior to the introduction of the SOKS Program, data for the Child Dental Health Survey were obtained from a sample of children attending public oral health clinics for treatment. After the SOKS Program was introduced, data from the school-based risk assessment were used.

As the SOKS Program was implemented as a statewide program, there was not a control group for comparison. However, as the SOKS database now contains data covering a four-year period from 1996 to 1999, the first year of data has been used as the baseline in this review. Evaluating the validity of the SOKS RA was also difficult to undertake in the current review because of the way in which the SOKS codes are defined.

Data are not collected on the children who do not participate in the SOKS Program (over one third of those eligible). The risk profile of these children remains unknown, in addition to oral health services they may or may not use. The lack of statewide data on all children seeking treatment in private and public oral health services further limits exploration of oral health outcomes, particularly as most care is provided in the private sector. However, while a statewide survey was not feasible in the current review, a short survey investigating the proportion of children seeking treatment in the public sector was undertaken.

# 3 Findings

## General

- The SOKS Program is the only statewide child oral risk assessment program undertaken in schools in Australia.
- The majority of children in NSW have no experience of dental caries and the burden of disease falls on the most disadvantaged sectors of the community.
- Most stakeholders support the SOKS Program and believe that the service is better managed than the previous demand driven model. Successful aspects of the SOKS Program include the population focus of the Program, and the beliefs that it is more equitable and reaches more children at high risk of oral disease.
- The oral health risk profile of the one-third of children who do not participate in the SOKS Program is unknown.
- The proportion of children attending either private oral health care or not receiving care at all is unknown.
- Many high-risk children (including those who received a risk assessment) are not accessing routine treatment and are presenting at clinics for emergency care.
- Trends in the three coding categories show little change over time. Despite the availability of the SOKS risk assessment; the proportion of Code 1 children (those requiring urgent care) has not decreased from 1996 to 1998. Over one quarter of children (28%) assessed as Code 1 (in need of urgent care) in 1996 were again classified as Code 1 in 1998.
- The economic costs of providing the assessment and public education arms of the Program are relatively low.
- Economic analyses show that the current level of resources in child oral health services is not adequate for the assessment and treatment of all children identified by the SOKS risk assessment as needing treatment.
- The goal of assessing and treating all children in the even numbered school year is not possible given the potential level of demand. While it would be possible to treat all Code 1 disease if resources could be adequately targeted it is not possible to treat Code 1 and Code 2 disease within the available budget constraints without an extremely high level of private oral health care being used.
- Analysis of the costs of providing treatment in public clinics reinforces the essential role of private oral health care, and the importance of the partnership between public and private sectors, in the delivery of oral health services.

## Oral health promotion

- Most staff in the SOKS Program supported the inclusion of oral health promotion (OHP). Some advocated OHP be targeted to high-risk children and a small number suggested expansion of this component. Many reported difficulties in presenting OHP in high schools.
- Evidence-based research shows that oral health education in schools is not effective in changing behaviour, but can be effective in increasing knowledge in the short term.
- Evidence also supports the targeting of additional OHP strategies to high-risk groups over and above effective preventive strategies such as water fluoridation, fissure sealants and tooth brushing with fluoride toothpaste.
- Several AHSs have appointed a specialist worker coordinate and implement OHP.
- Many AHSs have developed OHP resources and packages in addition to those originally provided by the Dental Health Branch for the SOKS Program. Many of the new resources have not been evaluated and there appears to be some 're-inventing of the wheel'.

- Many oral health staff and the Department of Education and Training supported integrating OHP into the school curriculum, with oral health staff providing resources for teachers.
- School principals wished to maintain the current system of health education presentations by clinical staff rather than by teachers.
- The NSW Health Department is currently developing a policy on health promotion with schools. The draft policy supports the role of OHP.
- Increased liaison with the Health Promoting Schools program and NSW Canteen Association was supported.

## Risk assessment

- The risk assessment is reasonably effective in prioritising children on the basis of clinical need.
- An investigation of the SOKS codes showed they are moderately reliable. It was not possible to assess the validity of the codes currently used.
- Caries experience is under-reported and these data should not be collected during SOKS risk assessments under current conditions.
- The majority of oral health staff advocated targeting high-risk children, given the level of available resources.
- There was no overall agreement by staff on the preferred frequency of the risk assessment or eligible school grades, with the exception of the inclusion of Kindergarten children.
- Most children in Year 8 do not participate in the risk assessment.
- Identifying strategies for increasing overall participation in the risk assessment was suggested.
- Some children who change schools may be missing the risk assessments and a system for tracking these children was advocated.
- Simplifying the process of consent, for example by incorporating it into school enrolment or at the beginning of each school year was supported. Some families from non-English speaking backgrounds have found the consent procedure and assessment form difficult to understand.

- Some parents and private practitioners appear to be confused about the risk assessment and its results. A revision and simplification of the SOKS coding system was supported. Clarification of routine versus preventive treatment in letters to parents and the use of one colour for these letters was also suggested.
- There is wide variation across NSW in the conditions under which the SOKS assessment takes place and in the equipment used.
- Development of statewide occupational health and safety guidelines for the SOKS risk assessment was supported.

## Data collection

- There was strong support for reducing the amount of data collected in the SOKS Program and for streamlining data entry.
- Many technical difficulties with the SOKS computer program were reported. In addition, there was a lack of support for information management and technology in many AHSs.
- Risk assessment data from 1996 to 1998 are now available to all AHSs. Risk assessment data can now be used to identify schools with high levels of need.
- The ability of AHSs to produce reports is limited. Many staff supported an increased capability to produce reports and make statewide comparisons.
- The DMIS and Oral Health Status reports received by AHSs are often out-of-date and of limited usefulness for performance monitoring. DMIS reports were not considered to be user-friendly.
- Access to risk assessment data in clinics and the integration of the assessment and clinical data were supported.

## Clinical services

- Children assessed as needing urgent care (Code 1) are receiving priority of access in public clinics.
- Children requiring urgent treatment are seen more quickly in public oral health clinics than those needing routine care.
- There is a belief that the SOKS Program is not identifying all high risk children.

- The proportion of children categorised as Code 1 and who access clinical services needs to be increased.
- The health outcome for the majority of children receiving SOKS risk assessments is unknown, including around 50% of children categorised as Code 1 who do not access public oral health clinics.
- Many staff believe that barriers exist which reduce access to clinical care, particularly by high-risk children. These barriers include difficulty making clinic appointments, lengthy waiting lists and reliance on children to take letters home.
- Many clinical staff find that an individualised clinic-based managed care program is more effective than the prescriptive follow-up or recall systems originally developed in the risk assessment part of the Program.

## Emergency care

- Large numbers of children are attending public oral health clinics for emergency care.
- A large proportion of children (39%) attending for emergency care had been treated at a public oral health clinic within the last 12 months. 62% of children aged 5-15 years attending for emergency care had either received a SOKS assessment, or attended a public clinic in the previous 12 months.
- A small number of AHSs currently identify all children attending for emergency care as high-risk and place them on a managed care program. Siblings are offered a clinical assessment and treatment.

## Waiting lists

- Wide variation exists in the occurrence and length of waiting lists across NSW, including within AHSs. Two AHSs currently have waiting lists for children assessed as Code 1 (urgent care) and Code 2 (routine care). Most other AHSs have waiting lists for Code 2.
- Waiting lists are managed at a clinic level. It is possible for a child to be placed on more than one list.
- Many staff believed that more effective management of waiting lists is required.

## Children aged 0-4 years

- There is strong support to include children aged 0-4 years in the SOKS Program.
- There is wide variation in service provision for this age group across NSW and a need for standardisation. Many AHSs restrict services to emergency care, with some even restricting emergency care to dependents of card holders.
- There is support for investigating opportunistic interventions in oral health with pre-school screening and immunisation programs.
- Reducing the need for pre-school children in rural areas to travel to Sydney for treatment was supported.

## Young people aged 15-18 years

- There is wide variation in service provision across the State with most AHSs restricting treatment to emergency care. There is a need for standardisation of service delivery policy.
- Some SOKS staff supported increasing access to oral health services for this age group, particularly those at high risk of oral diseases – for example, homeless young people.
- The option of providing care in either adult or child oral health clinics was supported.

## Workforce issues

- AHSs are responsible for administering and delivering child oral health services, including the SOKS Program.
- Increased staffing levels in clinics was strongly supported, particularly for relief and receptionist staff, in addition to increased flexibility to relocate staff as required.
- The role of the Community Dental Health Programs Officer (CDHPO) has changed since the implementation of the SOKS Program. This position is now the responsibility of the AHSs and in many cases duties have been modified. Whilst the majority of CDHPOs requested that regular meetings with other CDHPOs be reinstated, this matter is not the responsibility of Oral Health Branch.
- In-service professional training related to children's services was supported for all child oral health staff.
- Opportunities for increased career advancement for dental therapists was advocated.

# 4 Recommendations

## General

- The SOKS Program should continue, but with modifications.
- Strategies to address the oral health needs of Aboriginal children should be developed as part of a proposed Aboriginal Oral Health Strategic Plan, in consultation with the Aboriginal Medical Service and other relevant agencies.
- All schools, including high schools, should receive information about the availability of child public oral health services.
- Co-ordination and administration of, and responsibility for the delivery of child oral health services should be reviewed by each AHS.
- AHSs, in consultation with relevant professional bodies, should undertake in-service training for child oral health staff.
- A statewide protocol for occupational health and safety for the SOKS risk assessment should be developed in keeping with current legislation and NSW Health Department policies.

## Oral health promotion

- Specific funding, as identified in the recent Ministerial announcement on organisational reforms in Oral Health, will be made available to implement a statewide oral health promotion plan.
- A statewide policy on oral health promotion, assessment and clinical care should be developed in collaboration with other relevant organisations. This should focus on all children, including children of preschool and high school ages.
- A statewide working group, comprising members of Oral Health Branch, Area Health Services and NSW Health Promotion Unit (NSW Health) should be formed to develop and evaluate appropriate evidence-based strategies and resources for oral health promotion which target high-risk children and to liaise with the NSW Department of Education and Training and NSW Board of Studies to further integrate oral health promotion into schools' curricula.

- OHP programs and resources should comply with the NSW Health Department draft guidelines 'Health Promotion with schools: a policy for the Health System'.
- Suitably qualified people should undertake oral health promotion in schools, rather than SOKS clinical staff who can more effectively utilise their skills in clinical care.

## Risk assessment

- Oral Health Branch, in consultation with the NSW Department of Education and Training should develop criteria to identify and target schools with children at high risk of oral diseases.
- The amount of data collected by the SOKS Program will be reduced and another method of collecting data, consistent with national reporting requirements, will be developed in collaboration with the Dental Statistics and Research Unit (Australian Institute of Health and Welfare).
- Risk assessments for children in Year 8 should be discontinued. A statewide policy on oral health promotion and clinical care for high school aged children should be developed.
- A sub-committee of the Oral Health Policy Review Group will review and simplify the SOKS administrative systems. The coding system will be simplified:

**Code 1:** urgent clinical care

**Code 2A:** routine clinical care

**Code 2B:** preventive or other care (including radiographs)

**Code 3:** No care required

- This new coding system should be integrated into the Priority Access Program.
- Criteria will be developed to ensure a minimum level of targeted risk assessment is provided in each AHS. Provision of risk assessments outside these targets will be at the discretion of each AHS.
- Evaluation protocols will be developed to assess the validity of the SOKS codes.

## Data collection

- The development of an Oral Health Information Management System, Priority Oral Health Program and Oral Health Minimum Data Set provide an ideal opportunity for the child oral data health collections to be revised and integrated into the new statewide information technology system.
- Data collection will be reduced by limiting risk assessments to children in primary schools and by cancelling collection of caries experience data at the risk assessment.
- The reporting capabilities and responsibilities of the Oral Health Branch and AHSs in regard to child oral health should be reviewed. The capacity of Area Health Services to generate child oral health reports should be increased.

## Clinical care

- Strategies to identify and reduce barriers to accessing clinical care will be developed.
- All high school children requesting a clinical assessment should be given a priority coding on the Priority Oral Health Program. Appointments for clinical care should be available in child or adult clinics.
- Children presenting for emergency care should receive care which optimises their oral health outcomes, which may include placement on a managed care program.
- A detailed statewide survey of children receiving emergency care should be undertaken.
- An expert panel will be established to consider issues relating to the development of clinical pathways and clinical guidelines.

## Evaluation and monitoring

- The proposed Oral Health Information Management System will be used to evaluate, monitor and report on child oral health services in NSW, including the SOKS Program.
- In consultation with the Australian Dental Association, a statewide oral health outcomes survey will be undertaken to investigate the use of, and level of satisfaction with, children's public and private oral health services in NSW.
- Further economic analyses will be undertaken to determine cost-effectiveness of current and alternative service delivery models.

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# N otes

