

SPECIALIST PAEDIATRIC ORAL HEALTH CARE FOR REGIONAL AND RURAL AREAS IN NSW

Final Report

NSW HEALTH DEPARTMENT

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B ackground

Around 1.6 million adults and approximately 1.6 million children are eligible for public oral health care, including specialist care.

In metropolitan NSW, public specialist oral health care is provided mainly at the United Dental Hospital (UDH) and Westmead Centre for Oral Health (WCOH).

Approximately 24 FTE specialists covering all specialities are employed in public oral health services.

In two other metropolitan AHSs, Visiting Dental Officers provide limited specialist oral health care. In rural NSW, however, public specialist oral health care is even more limited. Waiting times apply for both adults and children requiring specialist care. Priority may be given to those with greatest clinical need and, or, dependents of eligible adults.

Pilot program: Specialist paediatric oral health care for rural and regional NSW

A pilot program to increase access to specialist oral health care in rural and regional areas of NSW was developed. Paediatric dentistry was selected for the pilot because paediatric services are unavailable in most AHSs, data on existing services are available and paediatric service delivery is well organised. Publicly funded paediatric specialist services are only available at UDH, WCOH and Westmead Children's Hospital and private specialists in this discipline are only located in Sydney.

Access to specialist paediatric services for children from regional and rural AHSs is extremely limited. For example, in the six month period, July to December 1998, 97% of the 3,742 occasions of service in children's dentistry at the UDH were for children from metropolitan Sydney, and only 3% for children from regional and rural AHSs (data from UDH). Similarly for WCOH (May 97-Dec 98), 85% of referrals and emergencies are for children residing within the Sydney metropolitan area. Only 2% of children resided in rural AHSs.

The project's aims were to:

1. determine the need for specialist paediatric oral health services.
2. develop a statewide model for delivery of specialist oral health services.
3. increase patients' satisfaction with availability of services and the service provided.
4. develop relationships between specialist paediatric services in teaching hospitals and other oral health services in these pilot AHSs.

Methods

To minimise the costs of piloting the program, five AHSs located within or close to Sydney were selected (Hunter, Illawarra, Mid Western, South Eastern Sydney, and South Western Sydney). Local personnel and infrastructure were provided by the host AHS. UDH were to provide services to Illawarra and South Eastern Sydney AHSs, while staff from WCOH were to visit Hunter, Mid Western and South Western Sydney AHSs.

Specialist paediatric services were offered on one day per month. A specialist paediatric dentist or registrar was to travel to these clinics. Consultations for referred patients and in-service training was offered.

Referrals would be received from public oral health clinics and private practitioners. Standard criteria were used for defining referral to the specialist paediatric oral health services. Local Divisions of the Australian Dental Association were informed of the pilot program and asked to advise their local dental practitioners of the service.

Results

Only WCOH participated. Therefore data are available only for the clinics at Fairfield (South Western Sydney AHS), Orange (Mid Western AHS) and Wallsend (Hunter AHS) and for WCOH. UDH could not participate due to difficulties with recruitment and retention of specialist staff at the time the pilot program commenced.

The pilot was conducted from February to July 2000. During this time, six visits involving two specialists for each visit were made to Fairfield, five visits to Orange (one specialist) and four visits to Wallsend (one specialist). Preliminary results (Preliminary report, Aug 2000) were extremely favourable and the program was continued in all three AHSs, although demand for consultations at Wallsend is low, and consultations have not been provided since July. Results are available for the period February–November 2000.

Referrals and consultations

Table 1 shows that of the 493 appointments made for specialist paediatric services in this pilot program, 356 consultations were conducted in the local AHSs by specialist staff from WCOH. Patients failed to attend (FTA) the remainder of appointments. The majority of referrals as well as missed appointments occurred at Fairfield. While the missed appointment rate is high, the rate reduced as the pilot progressed and the waiting time from referral to consultation appointment reduced. Of the 341 children who received consultations, approximately one-quarter of children (26%) were aged 0–4 years, 61% were aged between five and 11 years, and 15% were older. The majority (54%) were male.

Location	Number consultation appointments made	Occasions of service*	FTA	% FTA
Fairfield	406	240	166	41%
Orange**	73	99	6	8%
Wallsend	14	17	0	0%
Total	493	356	172	35%

*occasions of service approximates the number of patients seen – very few children received more than one appointment
 **based on estimate of 6 FTA

Table 1. Number of consultation appointments made, number of patients seen and number of appointments missed, NSW specialist paediatric pilot program, February–November 2000

Location	Jul 99 to Jan 00		Feb 00 to Nov 00	
	N	%	N	%
Metropolitan ¹	781	88%	1333	85%
Other urban ²	44	5%	73	5%
Rural ³	52	6%	153	10%
Total	877		1565	

1. Metropolitan AHSs are defined as Central Sydney, South Eastern Sydney, Northern Sydney, Wentworth, South West Sydney and Western Sydney AHSs
 2. Central Coast, Hunter, and Illawarra comprise other urban AHSs
 3. Rural AHSs comprise Greater Murray, Northern Rivers, Mid North Coast, Macquarie, New England and Mid Western AHSs

Table 2. Number and proportion of children receiving consultations at WCOH before and during the period February–November 2000 (seen at WCOH and in pilot sites)

Effect on access to specialist services for children from regional and rural AHSs

The pilot program increased the proportion of consultations to children from regional and rural AHSs (Table 2). Obviously this increase is due to the increased numbers of consultations in Mid Western and Hunter AHSs. The increased proportion of consultations for children from rural and regional areas declined after July 2000, as fewer consultations were conducted in the Wallsend clinic (Hunter AHS).

Treatment required

The majority of children referred for specialist care required treatment under general anaesthesia (Table 3). Most of these general anaesthetics were to be performed at WCOH.

Effect on waiting time for consultations at WCOH

From December 1999 to August 2000, an average of 124 referrals each month was received at WCOH. The waiting time from referral to an appointment for a consultation has dramatically fallen as a result of the pilot program. Prior to February 2000, children waited up to 17 weeks for a consultation. Children referred in August 2000 waited up to six weeks for an appointment. Now, children referred in November are waiting only four weeks for an appointment (Angus Cameron, personal communication from WCOH data). Table 4 illustrates the dramatic decline in waiting times for consultations. Children referred in October 1999 were waiting up to 5 months for their consultation appointment, while those referred in June 2000 were seen within two months.

Location	GA	Sedation	Treatment	Review, other consultation	Other	Total
Fairfield	135	34	30	34	7	240
Orange	16	2	16	33	32	99
Wallsend	8	0	1	6	2	17
Total	159	36	47	73	41	356
% of Total	45%	10%	13%	21%	12%	100%

Table 3. Treatment required by children receiving consultations in NSW specialist paediatric pilot program, February-November 2000

Number placed on waiting list in that month	Oct-99 41		Jun-00 55		Oct 00 107		
	Number and % receiving appointments in months after referral received						
	N	%	N	%	N	%	
(seen in same month)	0	4	10%	0	0%	0	0%
(seen in following month)	1	4	10%	46	85%	85	79%
	2	3	7%	9	15%		
	3	19	46%				
	4	2	5%				
	5	9	22%				
Still waiting (at Nov 27)					22	21%	
		41	100%	55	100%	107	100%

Table 4. Number children referred to WCOH for paediatric specialist care, and numbers and percentage removed by month after referral received for October 1999, June 2000 and October 2000.

Waiting times for treatment

Figure 1 shows that waiting times for treatment (not requiring GA) at WCOH, after consultation have increased as a result of the pilot program. This increase has mainly been for children not requiring acute or urgent specialist care.

Waiting times for treatment requiring general anaesthesia

While total numbers of children waiting for treatment under general anaesthesia have increased, the

proportions waiting for treatment under general anaesthetic by category of AHS have not changed as a result of the pilot program (Table 5).

Despite the increase in numbers waiting for general anaesthetics, the proportion of children taken off the waiting list, by month, for children receiving consultations in September 1999, and February, April and August 2000 have not changed (Figure 2). In addition, waiting times for general anaesthesia have not changed.

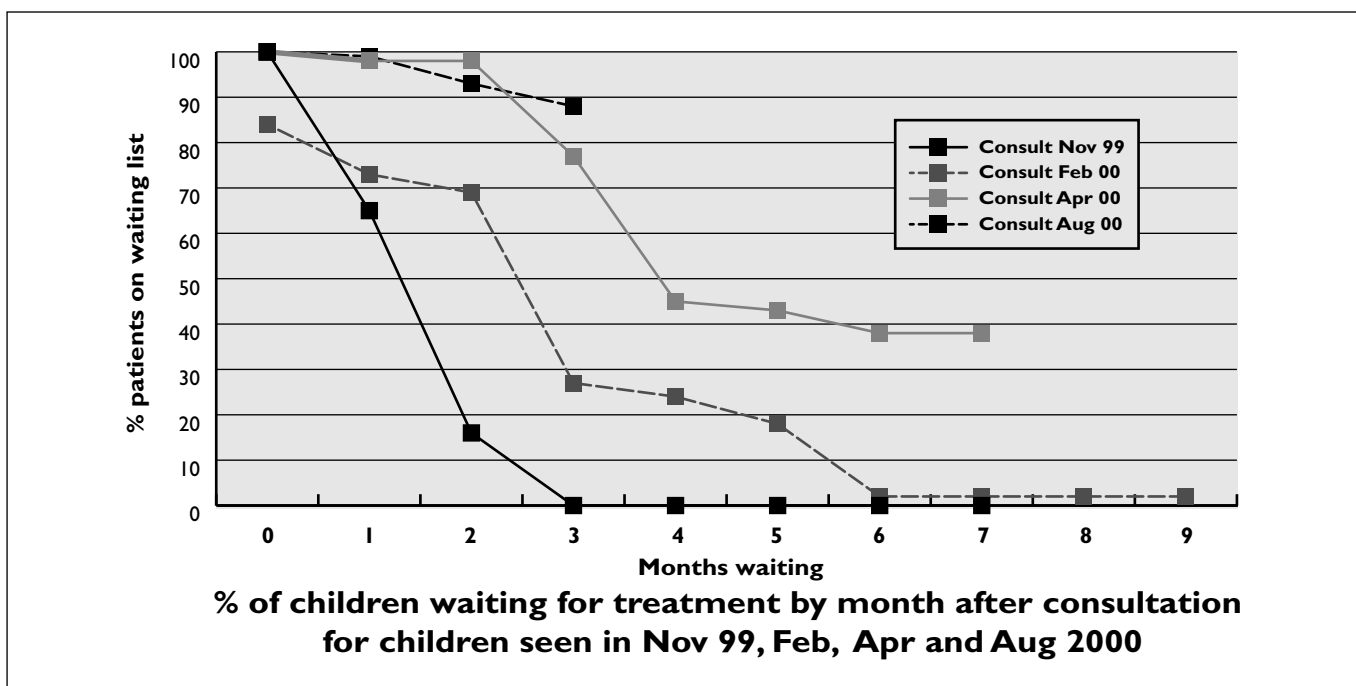


Figure 1. Waiting times for treatment (not requiring GA) for children receiving consultations in November 1999 and February, April and August 2000.

	Feb - Oct 99 inclusive		Feb - Oct 2000 inclusive	
Metropolitan ¹	688	90%	721	89%
Other urban ²	37	5%	42	5%
Rural ³	42	5%	47	6%
Total	767		810	

1. Metropolitan AHSs are defined as Central Sydney, South Eastern Sydney, Northern Sydney, Wentworth, South West Sydney and Western Sydney AHSs
2. Central Coast, Hunter, and Illawarra comprise other urban AHSs
3. Rural AHSs comprise Greater Murray, Northern Rivers, Mid North Coast, Macquarie, New England and Mid Western AHSs.

Table 5. Numbers and percentage of children waiting for treatment under general anaesthetic in nine months prior to, and during the pilot program

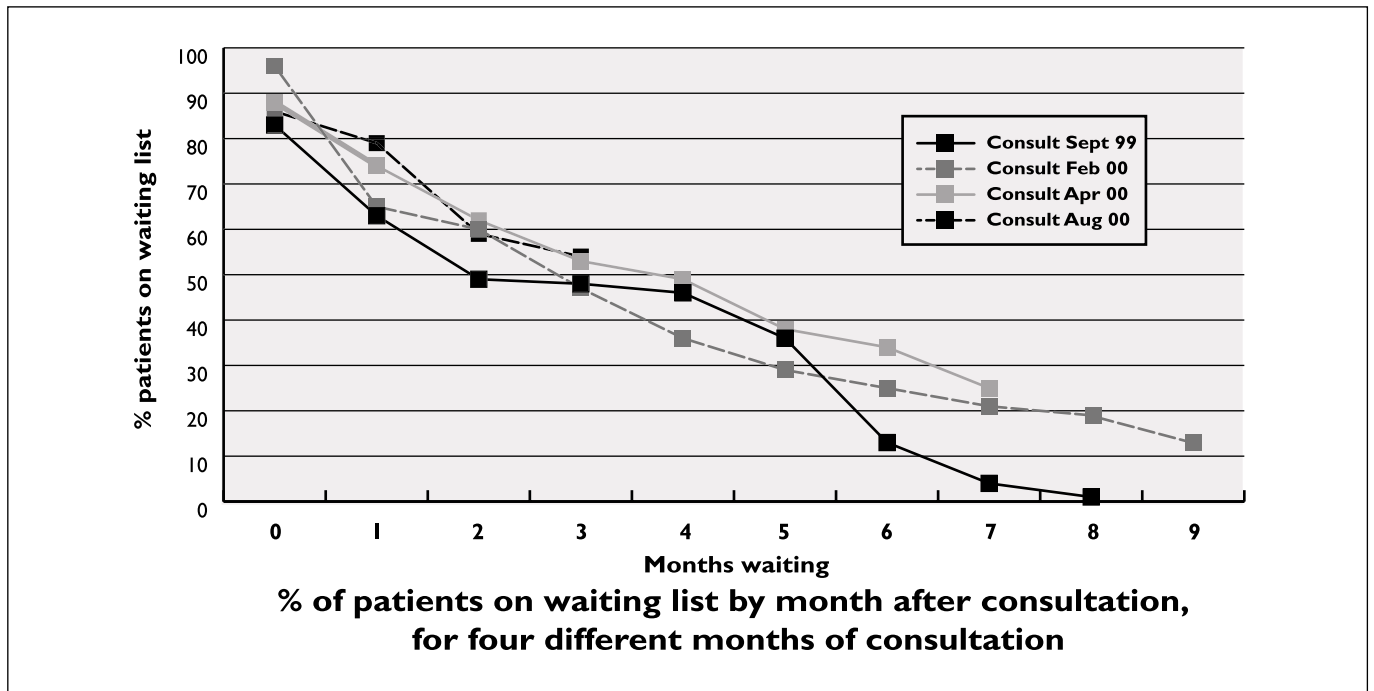


Figure 2. Waiting times for treatment under general anaesthetic for children receiving consultations in Sep 1999, Feb, Apr and Aug 2000, NSW specialist paediatric pilot program, February-November 2000.

2 Costs

Costs to host clinics

Clinic staff completed a log of items used during consultation sessions. Few items were used and the cost of these was negligible. While time was lost for seeing their usual clinic load during these sessions, clinics also gained by having patients seen who would not normally be able to access these specialist services.

Costs to WCOH

Table 6 shows the actual costs incurred by WCOH during the pilot program.

If costs using a daily rate were calculated (at \$131.65/day for staff specialists, NSW Health Department Circular 2000/45) then each trip to Orange would have cost \$51.65 more, giving a total cost for the pilot program of \$1785.41.

Costs to patients

Seventy one patients completed a questionnaire about their involvement in the pilot program. Information from 35 who estimated the cost of travel to their appointment in the local area indicated that the total cost to these patients was \$601 (mean of \$17.17 per patient). How representative these costs are, is unknown. (Eight patients who estimated the cost as zero, and one who estimated the cost as \$5,000 were excluded from this analysis.)

Isolated Patients' Travel and Accommodation Assistance Scheme (IPTAAS)

These specialist paediatric dental consultations and treatment may be covered by IPTAAS provided certain other criteria are met (information from IPTAAS website <http://internal.health.nsw.gov.au/pmd/iptaas/home.html>)

Assuming the majority of patients from Fairfield and Wallsend clinics would not have been eligible for IPTAAS, and that the majority of patients attending the Orange clinic would have been, the potential cost to IPTAAS was \$9,600 – \$13,920.

This was based on travel and accommodation costs:

Travel

- Orange 500 km @ 12.7c/km = \$63.50 (NB many patients could be further from Sydney than Orange) for car travel
- Or adult + child economy rail ticket = \$45.10 one way adult economy + 1/2 price for child = \$135.35 return (also seniors and pensioners get 50% discount, so this fare could be reduced to \$90.20 for some patients)
- (Information from countrylink Website - <http://www.countrylink.nsw.gov.au>)

Location	Distance return (km)	Travel cost*/visit (\$)	Accommodation cost / visit (\$)	No. visits	Total cost (\$)
Fairfield	30	9.09	0	6	54.54
Orange	500	151.50	80	5	1157.50
Wallsend	260	78.78	0**	4	315.12
Total					1527.16

*Based on 30.3c/km for 2.0L, private vehicle (Circular 2000/45)
 **Overnight accommodation was rarely required during these visits

Table 6. Travel and accommodation costs incurred

Accommodation

- Up to \$46/night for double room (required for adult + child)

Total travel + accommodation costs which could be payable by IPTAAS are for each child with adult escort is approximately \$100 - \$181.

As 96 children received specialist care at Orange, potential costs to IPTAAS approximated \$9,600 to \$17,376.

Summary of cost analysis

In comparing the costs incurred with the potential costs to IPTAAS, the pilot program has been an inexpensive method of providing specialist paediatric oral health services to rural NSW, for both patients and health services.

Feedback from patients

Feedback from 71 children's carers who completed a questionnaire indicated a very high regard for the service and an appreciation of being able to access specialist services locally.

Reasons given for preferring the consultation in the local area were predominantly due to the convenience related to having less distance to travel (and therefore time), closeness to home, and costs involved in travelling to WCOH. In addition, many added further comments about how pleased they were with the staff and service.

By far the majority of respondents (93%) preferred to have these appointments in their local clinics, rather than having to travel to WCOH. The average travel time to the clinic was 44 minutes, with travel time being less than 30 minutes for 45%, between 30 minutes and 1 hour for 31%, and one hour or more for the remaining 24%.

Of the 24 carers who took time off work to attend the consultation, half took up to half a day, a few took between half a day and a full day, while 42% took the whole day.

Feedback from staff

Eleven staff directly involved in the pilot program in host areas responded to a questionnaire about the pilot program. All were extremely enthusiastic about the advantages to local patients and to their own staff development. All but one indicated that the program should continue in their local areas. Staff were divided about whether the consultation sessions disrupted their routine work and about whether they learned anything new. However, they believed that local and visiting staff worked well together as a team. The program also gave clinicians more confidence in their ability to manage more difficult children, and in contacting a specialist for advice.

Continuing education

During the pilot program, continuing education sessions were held in Hunter and Mid Western regions. In Hunter, a meeting was held with the Australian Dental Association and was attended by over 30 regional dentists. A similar meeting held in Bathurst for the Western Division of the ADA was attended by 20 dentists and dental therapists. A monthly study group has been organised in Orange with practitioners from Orange, Bathurst and Cowra attending. This has proved to be an extremely successful study group, bringing private dental practitioners and government dentists and therapists together for joint presentation of difficult cases and topics of interest.

3

Summary

Access to specialist care for children from regional and rural AHSs increased as a result of this pilot program. As well, an overall increase in demand for services at WCOH occurred.

Overall, the pilot program resulted in a net gain for all patients referred to WCOH for specialist paediatric oral health care, whether seen at WCOH or in the pilot sites. This net improvement has been due to a decline in waiting time from referral to consultation, as well as stable waiting lists and times for treatment under general anaesthetic, and lengthening waiting times for clinical treatment.

Prior to the pilot program, the specialist staff for paediatric oral health care comprised two consultants, two senior and two junior registrars and one resident dental officer. During the pilot program, a resident dental officer was only available for one month. This reduction in staffing during the pilot partly explains the increased waiting time for routine care. As well, the increased number of consultation sessions has reduced the number of sessions available for treatment.

Relative to the potential costs of patients from rural and regional areas travelling to WCOH for these services, the pilot program has been an inexpensive method of providing specialist paediatric oral health services to rural NSW, for both patients and health services.

Satisfaction with pilot program by patients, staff in pilot sites and at WCOH and Principal Dental Officers has been high. Patients in rural areas particularly were extremely pleased with the service. Staff in host clinics increased their confidence in managing more difficult cases, as well as in contacting specialist services. Attendance at continuing education meetings and on-going participation in a study group by oral health professionals working in both private and public practice further illustrate professional support for this program.

Results suggest that this pilot program could be extended to other AHSs, and that similar programs for other specialist oral health care services may be feasible.

Acknowledgments

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- Members of the pilot program committee from Oral Health Branch, Westmead Centre for Oral Health, United Dental Hospital and participating Area Health Services
- Patients who participated in the pilot program

