

3 General dental care

3.1 Participants

Of the 900 participants required for the general component of the RNI Study, 740 patients requesting routine dental care were recruited across SA and NSW. Overall, 82.2% of the anticipated sample was collected. A breakdown of the sample collected at each clinic in each state is given in Table 26.

In SA 471 eligible patients requesting routine dental care were recruited for the study. Overall, 85.6% of the required sample for SA was collected. In NSW, 269 patients were selected for inclusion in the study, making up 76.9% of the required sample for that state.

Table 26: Sample size collected from selected dental clinics in SA and NSW

State	Community Dental Service Clinic	Anticipated sample size	Sample size achieved	
SA	East Marden	80	49	
	Gawler	60	60	
	Gilles Plains	130	133	
	Kadina	30	31	
	Parks	90	92	
	Somerton Park	100	101	
	Victor Harbor	60	4	
	SA total	550	471	(85.6%)
NSW	United Dental Hospital	120	129	
	Western Sydney Area Health Service – Mt Druitt	70	70	
	Illawarra Area Health Service – Bulli	70	70	
	South Western Sydney Area Health Service – Narellan	90	0	
		NSW total	350	269
	Total sample	900	740	(82.2%)

3.2 Population characteristics

Sociodemographic characteristics of respondents

The percentages of respondents in each of several sociodemographic groupings for both SA and NSW, as well as in the overall sample are shown in Table 27.

Almost 42% of respondents were aged 25–44 years and a further 28% were aged 45–64 years, while 9.1% were in the youngest age group, which spanned only 7 years. There is an over-representation of females in the sample but this could be because females tend to use dental services more so than men. The majority of respondents had completed some or all of their secondary school education (59.3%), 32.1% had some secondary school education and a further 27.2% had completed secondary school. Almost 52% of patients presenting for general dental care held a full-entitlement pensioner concession card and approximately 43% of the sample had a health care card.

Table 27: Distribution of sample sociodemographic characteristics by state

	SA (n = 471) %	NSW (n = 269) %	Total (n = 740) %
Age group	n = 469	n = 268	n = 737
18–24 years	10.4	6.7	9.1
25–44 years	39.7	44.8	41.5
45–64 years	27.9	28.4	28.1
65+ years	22.0	20.1	21.3
Sex of patient	n = 471	n = 269	n = 740
Male	41.0	45.4	42.6
Female	59.0	54.6	57.4
Born in Australia	n = 471	n = 268	n = 739
Yes	60.1	53.0	57.5
No	39.9	47.0	42.5
Language mainly spoken at home[*]	n = 471	n = 269	n = 740
English	89.8	73.6	83.9
Other	10.2	26.4	16.1
Indigenous status[*]	n = 470	n = 268	n = 738
No	98.9	95.1	97.6
Yes, Aboriginal	1.1	2.2	1.5
Yes, Torres Strait Islander	–	2.6	0.9
Highest level of education	n = 471	n = 268	n = 739
Primary school	6.4	7.1	6.6
Some secondary school	33.8	29.1	32.1
Completed secondary school	26.1	29.1	27.2
Some university or higher education	7.9	5.6	7.0
Completed university or higher education	8.1	7.1	7.7
Some TAFE, CAE or vocational course	7.0	6.7	6.9
Completed TAFE, CAE or vocational course	9.6	13.4	11.0
Other	1.3	1.9	1.5
Usual/previous occupation	n = 453	n = 261	n = 714
Manager/professional	11.3	11.5	11.3
Para-professional/trade	22.3	18.0	20.7
Clerk/sales/driver/labourer	45.0	50.6	47.1
Self-employed	1.8	1.1	1.5
Home duties	8.6	12.6	10.1
Other	11.0	6.1	9.2
Health care card status	n = 470	n = 269	n = 739
Pensioner Concession Card (full) only	48.5	57.2	51.7
Pensioner Concession Card (part) only	4.0	2.2	3.4
Health Care Card only	45.1	38.3	42.6
Other card(s)	2.3	2.2	2.3

* Statistically significant chi-square, P<0.05

Access to dental services

Dental visiting patterns of respondents in both SA and NSW, and in the overall sample, are shown in Table 28.

Almost 60% of respondents reported that a dental problem was their usual reason for a dental visit and 35% visited a dentist in the last 12 months. It should be noted that those who last visited a dentist 12 months ago would have visited for emergency care since the inclusion criteria for the general RNI sample states that patients should not have visited the dentist for routine dental care in the last year. Just over 60% of respondents received their last course of care at a public dental hospital/clinic.

Table 28: Dental visiting factors by state

	SA (n = 471) %	NSW (n = 269) %	Total (n = 740) %
Dentate status	n = 470	n = 268	n = 738
Natural teeth only	82.6	78.0	80.9
Denture (U and/or L) and natural teeth	17.4	22.0	19.1
Private dental insurance*	n = 471	n = 269	n = 740
Yes	5.1	1.9	3.9
No	94.9	98.1	96.1
Usual reason for visit*	n = 470	n = 263	n = 733
Check-up	51.5	14.1	38.1
Problem/pain	44.3	81.7	57.7
Check-up/problem/pain	4.3	4.2	4.2
Time since last visit*	n = 469	n = 268	n = 737
<12 months	27.1	48.9	35.0
12-<2 years	20.3	15.3	18.5
2-<3 years	15.8	10.4	13.8
3-<5 years	17.7	10.4	15.1
5+ years	19.0	14.6	17.4
Never	0.2	0.4	0.3
Place of last visit*	n = 464	n = 267	n = 731
Private practice	35.3	27.0	32.3
Public hospital/clinic	53.7	71.5	60.2
School Dental Service	8.8	1.1	6.0
Other	2.2	0.4	1.5
Frequency of dental visits*	n = 467	n = 266	n = 733
More than 2 times a year	5.6	6.4	5.9
2 times a year	7.5	7.1	7.4
Once a year	16.1	13.2	15.0
Once every 2 years	34.0	22.6	29.9
Once every 5 years	23.3	19.9	22.1
Less often than that	13.5	30.8	19.8

* Statistically significant chi-square, P<0.05

3.3 Data variables

Dependent variable

The aim of this study was to determine levels of priority of those people seeking routine dental care. Urgency of care, based on the assessing dentist's clinical judgment, was therefore used as the dependent variable. This variable consists of the following four categories into which a patient's urgency for dental treatment may be classified by the assessing dentist: <1 month, 1-3 months, 4-6 months or 7+ months.

Independent variables

Questionnaire variables were developed from the literature to reflect potential predictors of urgency of care. These variables are described in Table 29.

Table 29: Potential predictors of urgency of dental care

Sociodemographic variables	<ul style="list-style-type: none"> • age group • sex of patient • born in Australia • language mainly spoken at home • maximum education
Dental visiting factors	<ul style="list-style-type: none"> • usual reason for visit • time since last dental visit • place of last dental visit • frequency of dental visits
Ability to chew^(a)	<p>Are you usually able to:</p> <ul style="list-style-type: none"> • chew a piece of fresh carrot? • chew boiled vegetables? • chew fresh lettuce salad? • chew firm food such as steaks or dried apricots? • bite off and chew a piece of whole fresh apple? • chew hamburger? <p><i>Response format: yes/no</i></p>
Ability to speak^(a)	<p>Thinking about problems with your teeth or mouth...</p> <ul style="list-style-type: none"> • do you ever have difficulty pronouncing any words? • do you ever have difficulty speaking clearly? • do you have difficulty making yourself understood? <p><i>Response format: yes/no</i></p>
Oral and facial pain symptoms^(a)	<p>In the last four weeks, have you had the following problems?</p> <ul style="list-style-type: none"> • toothache • pain in teeth with hot food or fluids • pain in teeth with cold food or fluids • pain in teeth with sweet food • pain in jaw while chewing • pain in jaw when opening mouth wide • pain in front of ear • burning sensation in tongue or other parts of mouth • shooting pain in face or cheeks • pain or discomfort from denture <p><i>Response format: yes/no</i></p>

(a) The variables described in 'Ability to chew', 'Ability to speak', 'Oral and facial pain symptoms', 'Other oral symptoms', 'Eating impact scale', 'Communication/social relations impact scale', 'Activities of daily living impact scale' and 'Worry/concern impact scale' are taken from Locker's battery of eight Subjective Oral Health Status Indicators (SOHSI) (Locker, 1997).

(continued)

Table 29: Potential predictors of urgency of dental care (continued)

Other oral symptoms[†]	<p>In the last four weeks, have you had the following problems?</p> <ul style="list-style-type: none"> • mouth ulcers • cold sores • sore gums • bleeding gums • bad breath • dryness of mouth • unpleasant taste • changes in ability to taste • clicking/grating noise in jaw joint • difficulty opening mouth wide <p><i>Response format: yes/no</i></p>
Eating impact scale^(a)	<p>Thinking about your dental health over the last year, how often...</p> <ul style="list-style-type: none"> • have you been prevented from eating foods you would like to eat? • have you found your enjoyment of food less than it used to be? • did it take you longer to finish a meal than other people? <p><i>Response format: all the time, very often, fairly often, sometimes, never</i></p>
Communication/social relations impact scale^(a)	<p>Thinking about your dental health over the last year, how often...</p> <ul style="list-style-type: none"> • did you avoid eating with other people because of problems with chewing? • were you embarrassed by the appearance or health of your teeth or mouth? • did you avoid laughing or smiling? • did you avoid conversations with others? <p><i>Response format: all the time, very often, fairly often, sometimes, never</i></p>
Activities of daily living impact scale^(a)	<p>During the past year, how often have pain, discomfort or other problems with your teeth, mouth or dentures caused you to...</p> <ul style="list-style-type: none"> • have difficulty sleeping? • stay home more than usual? • stay in bed more than usual? • take time off work? • be unable to do household chores? • avoid usual leisure activities? <p><i>Response format: all the time, very often, fairly often, sometimes, never</i></p>
Worry/concern impact scale^(a)	<p>During the past year, how often have you worried about...</p> <ul style="list-style-type: none"> • the appearance of your teeth or mouth? • the health of your teeth or mouth? <p><i>Response format: all the time, very often, fairly often, sometimes, never</i></p>
Shortened OHIP Functional limitation scale	<p>During the past year...</p> <ul style="list-style-type: none"> • have you felt that your sense of taste has worsened because of problems with your teeth, mouth or dentures? • have you had trouble pronouncing any words because of problems with your teeth, mouth or dentures?
Physical pain scale	<ul style="list-style-type: none"> • have you had a painful aching in your mouth? • have you found it uncomfortable to eat any foods because of problems with your teeth, mouth or dentures?

(a) The variables described in 'Ability to chew', 'Ability to speak', 'Oral and facial pain symptoms', 'Other oral symptoms', 'Eating impact scale', 'Communication/social relations impact scale', 'Activities of daily living impact scale' and 'Worry/concern impact scale' are taken from Locker's battery of eight Subjective Oral Health Status Indicators (SOHSI) (Locker, 1997).

(continued)

Table 29: Potential predictors of urgency of dental care (continued)

Psychological discomfort scale	<ul style="list-style-type: none"> • have you been self-conscious because of problems with your teeth, mouth or dentures • have you felt tense because of problems with your teeth, mouth or dentures?
Physical disability scale	<ul style="list-style-type: none"> • has your diet been unsatisfactory because of problems with your teeth, mouth or dentures? • have you had to interrupt meals because of problems with your teeth, mouth or dentures?
Psychological disability scale	<ul style="list-style-type: none"> • have you found it difficult to relax because of problems with your teeth, mouth or dentures? • have you been a bit embarrassed because of problems with your teeth, mouth or dentures?
Social disability scale	<ul style="list-style-type: none"> • have you been a bit irritable with other people because of problems with your teeth, mouth or dentures? • have you had difficulty doing your usual jobs because of problems with your teeth, mouth or dentures?
Handicap scale	<ul style="list-style-type: none"> • have you felt that life in general was less satisfying because of problems with your teeth, mouth or dentures? • have you been totally unable to function because of problems with your teeth, mouth or dentures?
	<i>Response format: responses scored from 1 to 5 (i.e. from 'very often' to 'never')</i>
Other symptoms	<p>In the last four weeks, have you had the following problems?</p> <ul style="list-style-type: none"> • pain which is worse in the middle of the day • pain at night • swelling on gums • swelling of your face or neck • a lost filling • a lost crown • a broken filling • a broken crown • a loose tooth • a cracked tooth • high temperature
	<i>Response format: yes/no</i>
Other questions	<ul style="list-style-type: none"> • Do you take any regular medication? • Do you have diabetes? • Do you smoke tobacco?
	<i>Response format: yes/no</i>
Dental anxiety	<ul style="list-style-type: none"> • Imagine you had an appointment to go to the dentist tomorrow, how would you feel about it? • Imagine you are waiting in the dentist's waiting room for your turn in the chair, how would you feel? • Imagine you are in the chair waiting while the dentist gets the drill ready to begin working on your teeth, how would you feel? • Imagine you are in the dentist's chair to have your teeth cleaned. While you are waiting and the dentist is getting out the instruments to be used to scrape your teeth around the gums, how would you feel?
	<i>Response format: responses scored from 1 to 5</i>

(a) The variables described in 'Ability to chew', 'Ability to speak', 'Oral and facial pain symptoms', 'Other oral symptoms', 'Eating impact scale', 'Communication/social relations impact scale', 'Activities of daily living impact scale' and 'Worry/concern impact scale' are taken from Locker's battery of eight Subjective Oral Health Status Indicators (SOHSI) (Locker, 1997).

Distribution of responses to dependent and independent variables

Dependent variable distribution – urgency of care

The percentage of respondents falling into each category of urgency of care, as determined by the assessing dentist, by state and total sample is shown in Table 30.

Table 30: Percentage of respondents placed in categories of urgency of care

	SA (n = 428) %	NSW (n = 259) %	Total (n = 687) %
Urgency of care			
<1 month	7.5	25.5	14.3
1–3 months	18.2	37.5	25.5
4–6 months	15.9	23.2	18.6
7+ months	58.4	13.9	41.6

According to the assessing dentist, just over 14% of respondents required dental care within 1 month and a further 25.5% needed to be seen between 1 and 3 months. Almost 42% of respondents were classified in the '7+ months' category, suggesting that their dental treatment needs did not require immediate attention.

Frequency of responses to independent variables

The percentage of respondents reporting 'yes' to various symptoms by state and overall sample is shown in Table 31. Patients were questioned about various problems they may have experienced in the last year.

Table 31: Frequency of responses

	SA % within state	NSW % within state	Total % within state	Sig.
Ability to chew				
Able to chew piece of fresh carrot	88.1	69.5	81.4	*
Able to chew boiled vegetables	94.3	96.6	95.1	n.s.
Able to chew fresh lettuce salad	94.0	97.0	95.1	n.s.
Able to chew firm food such as steak or dried apricots	89.6	73.9	83.9	*
Able to bite off and chew a piece of whole fresh apple	87.2	72.8	82.0	*
Able to chew hamburger	92.1	88.0	90.6	n.s.
Ability to speak				
Difficulty pronouncing any words	11.1	22.0	15.0	*
Difficulty speaking clearly	7.2	20.5	12.1	*
Difficulty making yourself understood	6.8	15.3	9.9	*
Oral and facial pain symptoms				
Toothache	35.9	60.1	44.7	*
Pain in teeth with cold food or fluids	35.9	60.1	44.7	*
Pain in teeth with hot food or fluids	26.9	45.0	33.5	*
Pain in jaw while chewing	14.0	34.0	21.3	*
Pain in teeth with sweet food	17.6	38.7	25.2	*
Pain in front of ear	16.0	26.9	19.9	*
Shooting pain in face or cheeks	8.5	19.0	12.3	*
Pain in jaw when opening mouth wide	11.0	23.6	15.6	*
Burning sensation in tongue or other parts of mouth	2.8	10.9	5.7	*
Pain or discomfort from denture	5.3	12.7	8.0	*
Other oral symptoms				
Dryness of mouth	31.5	44.8	36.3	*
Sore gums	21.3	38.2	27.4	*
Unpleasant taste	24.5	38.8	29.7	*
Bleeding gums	29.8	39.7	33.4	*
Bad breath	29.4	45.1	35.1	*
Difficulty opening mouth wide	11.0	23.6	15.6	*
Clicking/grating noise in jaw joint	16.2	25.7	19.6	*
Changes in ability to taste	7.5	16.3	10.7	*
Mouth ulcers	16.0	18.0	16.7	n.s.
Cold sores	10.0	16.9	12.5	*
Eating impact scale				
Prevented from eating foods you would like to eat	31.1	58.4	41.0	*
Have found enjoyment of food less than it used to be	21.9	46.5	30.9	*
Has taken longer to finish a meal than other people	20.0	50.7	31.2	*
Communication/social relations impact scale				
Avoided eating with other people	5.3	21.2	11.1	*
Embarrassed by appearance/health of teeth or mouth	35.7	56.7	43.4	*
Avoided laughing or smiling	26.1	48.0	34.1	*
Avoided conversations with others	11.9	33.6	19.8	*
Activities of daily living impact scale				
Have difficulty sleeping	21.9	52.4	33.0	*
Stay home more than usual	5.5	28.6	13.9	*
Avoid usual leisure activities	5.7	27.9	13.8	*
Be unable to do household chores	3.4	18.2	8.8	*
Stay in bed more than usual	2.3	17.5	7.8	*
Take time off work	2.1	7.1	3.9	*
Worry/concern impact scale				
Worry about health of teeth or mouth	74.8	63.6	79.0	*
Worry about appearance of teeth or mouth	63.3	75.8	67.8	*

* Statistically significant chi-square, P<0.05

n.s. Not statistically significant

(continued)

Table 31: Frequency of responses (continued)

	SA % within state	NSW % within state	Total % within state	Sig.
Shortened OHIP				
Trouble pronouncing words	8.9	27.1	15.5	*
Sense of taste worsened	11.7	29.4	18.1	*
Painful aching in mouth	40.6	69.0	50.9	*
Uncomfortable to eat any foods	36.9	70.6	49.2	*
Been self-conscious	38.2	61.3	46.6	*
Felt tense	23.4	53.2	34.2	*
Diet been unsatisfactory	11.7	34.9	20.1	*
Had to interrupt meals	13.0	47.2	25.4	*
Found it difficult to relax	20.6	50.7	31.5	*
Been a bit embarrassed	30.4	58.0	40.4	*
Been a bit irritable with other people	16.0	43.5	26.0	*
Had difficulty doing usual jobs	7.4	26.0	14.2	*
Felt that life in general was less satisfying	16.6	45.7	27.2	*
Been totally unable to function	5.9	21.6	11.6	*
Other symptoms				
Pain at night	12.3	30.7	19.0	*
A lost filling	11.7	24.0	16.1	*
A cracked tooth	5.3	17.7	9.8	*
A broken filling	8.3	24.1	14.0	*
A broken tooth from an accident	0.6	4.9	2.2	*
Swelling on gums	12.8	23.2	16.6	*
A loose tooth	5.1	15.0	8.7	*
A chipped tooth	11.9	27.7	17.7	*
Swelling of your face or neck	4.9	12.8	7.8	*
Pain which is worse in the middle of the day	4.5	15.7	8.5	*
High temperature	7.0	9.0	7.7	n.s.
A broken crown	1.7	4.5	2.7	*
A lost crown	0.9	4.9	2.3	*
Taking any regular medication	52.8	51.7	52.4	n.s.
Smokes tobacco	27.6	42.0	32.9	*
Diabetic	5.3	3.7	4.7	n.s.
Dental Anxiety Scale (DAS) score				
DAS score ≥13	10.0	22.3	14.5	*
DAS score <13	90.0	77.7	85.5	

* Statistically significant chi-square, P<0.05

n.s. Not statistically significant