Australian Government
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Northern Territory Remote Aboriginal Investment: Oral Health Program

July 2012 to December 2015

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Authoritative information and statistics to promote better health and wellbeing

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Australian Institute of Health and Welfare
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Contents

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Abbreviations

AIHW	Australian Institute of Health and Welfare
CHCI(CtG)	Child Health Check Initiative/Closing the Gap Program
dmft	decayed, missing or filled deciduous teeth
DMFT	decayed, missing or filled permanent teeth
FV	fluoride varnish
HRN	hospital registration number
NTER	Northern Territory Emergency Response
NT DoH	Northern Territory Department of Health
NTRAI OHP	Northern Territory Remote Aboriginal Investment: Oral Health Program
OHS-NT	Oral Health Services Northern Territory
SFNT OHP	Stronger Futures in the Northern Territory Oral Health Program
SiC	Significant Caries Index

Symbols

–	nil or rounded to zero
n.p.	not publishable because of small numbers, confidentiality or other concerns about the quality of the data

Summary

This is the second report on oral health services funded by the Stronger Futures in the Northern Territory Oral Health Program and the Northern Territory Remote Aboriginal Investment Oral Health Program (NTRAI OHP). It covers the period from July 2012 to December 2015. Where available, data from August 2007 to June 2012 have been included to allow examination of the effect of oral health services over the life course of associated programs delivered in the Northern Territory.

Preventive services

Fluoride varnish treatment

- In 2014 and 2015, 4,664 and 4,041 Indigenous children and adolescents received 5,054 and 4,441 full-mouth fluoride varnish (FV) applications, respectively. Compared with the previous report period (July 2012 to December 2013), the number of Indigenous children and adolescents who received full-mouth FV applications generally increased.
- From July 2012 to December 2015, a total of 10,052 Indigenous children and adolescents received 13,541 full-mouth FV applications.

Fissure sealant treatment

- In 2014 and 2015, 2,179 and 1,804 Indigenous children and adolescents received 2,323 and 1,943 fissure sealant applications, respectively. Compared with the previous report period (January to December 2013), the number of Indigenous children and adolescents who received fissure sealant applications generally increased.
- From July 2012 to December 2015, a total of 5,324 Indigenous children and adolescents received 6,477 fissure sealant applications.

Clinical services (for example, fillings for tooth decay, and tooth extractions)

- In 2014 and 2015, 3,159 and 3,378 occasions of clinical service were provided to 2,407 and 2,533 Indigenous children and adolescents, respectively. The number of Indigenous children and adolescents who received clinical services decreased from 2013 to 2014, but increased from 2014 to 2015.
- From July 2012 to December 2015, a total of 7,660 Indigenous children and adolescents were provided with 12,739 occasions of clinical service.

Oral health status of service recipients

- In 2014 and 2015, the average number of decayed, missing and filled deciduous (baby) teeth was highest among service recipients aged 6—at 5.4 and 5.6, respectively; the average number for permanent teeth was highest among those aged 15—at 4.1 and 3.7.

Changes over time

- The proportion of service recipients with experience of tooth decay decreased for most age groups between 2009 and 2015. The greatest decreases was found in the following age groups: for those aged 1–3, from 73% to 42%; for 5-year-olds, from 88% to 79%; and for 12-year-olds, from 81% to 69%.
- The majority of service recipients who received at least 2 services within each program, those receiving services during the NTRAI OHP had a smaller increase in tooth decay than those in the Child Health Check Initiative Closing the Gap Program.

1 Introduction

This report presents information on the oral health services provided to Indigenous children and adolescents aged under 16 in the Northern Territory through the Stronger Futures in the Northern Territory Oral Health Program (SFNT OHP) from July 2012 to June 2015. This program was replaced by the Northern Territory Remote Aboriginal Investment: Oral Health Program (NTRAI OHP) in July 2015.

Funded by the Australian Government and implemented by the Northern Territory Government, both programs aim to reduce the prevalence, incidence, severity and impact of oral health problems among Indigenous children and adolescents in the Northern Territory. These programs respond to these problems by improving existing public dental services, by establishing a coordinated oral health program and by providing greater access to dental services for all Indigenous children and adolescents in the Northern Territory (Standing Council on Federal Financial Relations 2013). In particular, the programs work with primary health services to deliver preventive and clinical oral health services.

The oral health services examined in this report include a program of preventive services involving applications of fissure sealants and full-mouth fluoride varnish (FV), and clinical services (including tooth extraction under of the children and adolescents who received these services. general anaesthesia). Information is provided on the services delivered as well as on the oral health

1.1 Background

Oral health of children and adolescents in Australia

Oral health is essential to general health and quality of life. Good oral health refers to a standard of health of oral and related tissues that enables an individual to eat, speak and socialise without active disease, discomfort or embarrassment and that contributes to general wellbeing (UK Department of Health 1994). The two oral diseases that occur most often are tooth decay (or dental caries) and periodontal disease (Oral Health Monitoring Group 2015). Poor oral health has been associated with cardiovascular diseases, diabetes, stroke and pre-term low birthweight (Roberts-Thomson et al. 2008; Williams et al. 2011) and, if not treated in a timely manner, can exacerbate other chronic diseases (Jamieson et al. 2010).

Although oral diseases accounted for a low level of fatal burden of disease, the non-fatal burden of oral diseases was considerable in Australia. According to the Australian burden of disease study published recently (AIHW 2016), oral diseases made up 1.7% of total burden among Indigenous Australians in 2011, and most of this burden (99.5%) was non-fatal.

While oral health is important to the general population, children are a priority in addressing Australia's oral health needs. Improvements to child oral health and prevention will reduce the overall burden of oral diseases and improve long-term oral health across the country (NACDH 2012). This is particularly true for children and adolescents from families in disadvantaged groups. *Healthy mouths, healthy lives: Australia's National Oral Health Plan 2015–2024* (Oral Health Monitoring Group 2015) identified high-priority populations as people who are socially disadvantaged, or on low incomes; Aboriginal and Torres Strait Islander people; people living in regional and remote areas; and people with additional

and/or specialised health-care needs. High-priority populations have high rates and risk of poor oral health and face challenges in accessing oral health care (Oral Health Monitoring Group 2015).

In the Australian children and adolescent population, oral diseases made up 7.8%, 4.2% and 3.3% of the non-fatal burden among those aged 5–9, 10–14 and 15–19, respectively. About 97% of the non-fatal burden of oral diseases in this population was attributed to tooth decay (AIHW 2016).

According to the 2010 Child Dental Health Survey in all Australian states and territories except New South Wales and Victoria (6.8% of children are recorded as Indigenous in this survey), tooth decay was more severe and prevalent among Indigenous children than among non-Indigenous children. This was found in comparing those aged 5–10 and 6–15, which represent the majority of school children with deciduous teeth (dmft) and permanent teeth (DMFT). For those aged 5–10, the mean dmft score of Indigenous children was almost double that of non-Indigenous children (3.81 and 2.22, respectively). Similarly for those aged 6–15, the mean DMFT score of Indigenous children and adolescents was significantly higher than that of non-Indigenous Australians (1.94 and 1.08, respectively) (AIHW 2015).

Box 1.1: The dmft or DMFT score

The dmft or DMFT (decayed, missing and filled teeth) score counts the number of teeth that are decayed, missing or filled. For example, a dmft score of 5 means that a child has five decayed, missing or filled deciduous teeth. The term 'dmft' is denoted for deciduous or baby teeth for children aged under 10 whose teeth develop during infancy and are lost and replaced by permanent teeth as they age. The term 'DMFT' is denoted for permanent or adult teeth for those aged 7 or older at their dental check.

Oral health of Indigenous children and adolescents in the Northern Territory

Children and adolescents in the Northern Territory, Indigenous and non-Indigenous combined, have higher levels of tooth decay than in other parts of Australia. In 2009, the mean dmft of children aged 5–6 was the highest (at 2.68) in the Northern Territory; compared with 2.13 at the national level. The regional variation can also be seen in adolescents aged 12, for whom the mean DMFT score was the highest (at 1.88) in the Northern Territory; compared with 1.05 at the national level (AIHW 2013a).

In line with the Australian national picture, Indigenous children and adolescents in the Northern Territory are also more likely than non-Indigenous children and adolescents to experience tooth decay. The mean dmft score of Indigenous children aged 5–10 was 2.3 times as high as that of non-Indigenous children of the same age (4.17 and 1.81, respectively). Similarly, the mean DMFT score of Indigenous children and adolescents aged 6–15 was 1.7 times as high as that of non-Indigenous Australians in the same age group (2.22 and 1.27, respectively). These estimates were derived from the 2010 Child Dental Health Survey, where Indigenous data became available (AIHW 2015).

The poor oral health of Indigenous children in the Northern Territory was also evidenced in data from the Child Health Check Initiative Closing the Gap Program CHCI (CtG), which ran from August 2007 to June 2012. This program largely targeted Indigenous children and adolescents referred from child health checks rolled-out in Prescribed Areas through the Northern Territory Emergency Response (NTER). Although not a representative sample,

data from this program showed severe tooth decay among children who received services, with a mean dmft score of 7.1 for 6-year-olds and a mean DMFT score of 2.4 for 12-year-olds; these scores were significantly higher than the same scores at the national level (AIHW 2012).

1.2 NTRAI and SFNT oral health programs

In response to the poor oral health among Indigenous children and adolescents in the NTER Prescribed Areas, an oral health program was established as part of the CHCI under the NTER in mid-2007. This program continued under the CtG in the Northern Territory National Partnership Agreement from mid-2009 to mid-2012.

By the end of these two programs—referred to as the CHCI (CtG) in this report—evidence from the data collected showed some improvements in oral health conditions among children and adolescents who received oral health services. However, oral health remains a critical health issue of concern for this population (AIHW 2014). Therefore, the Australian Government continued to fund—and expanded—the oral health services provided to Indigenous children and adolescents in the Northern Territory, through the SFNT OHP in July 2012 and the NTRAI OHP in July 2015. (The latter will provide funding to June 2022.)

These services, provided by the Northern Territory Department of Health, include both preventive services and clinical services. Under the CHCI(CtG), preventive services were provided as part of clinical services. Since the SFNT OHP, applications of full-mouth FV and fissure sealants were funded, as well as other preventive services. Both measures have proved to be highly effective in preventing tooth decay (Ahovuo-Saloranta et al. 2008; Marinho et al. 2013; Slade et al. 2011; Weintraub 2001).

Clinical services include diagnostic services, periodontics (treatment of gums), endodontics (pulp treatments), restorative fillings, bridges and crowns, tooth extractions, orthodontics (dental braces), and prosthetic treatments (replacement of teeth). As well, tooth extractions under general anaesthesia were also funded until the end of 2014.

These services cover all areas of the Northern Territory, but mainly focus on remote areas (where they are most needed). The target ages are in line with clinical best practice. Table 1.1 provides more information on the target populations of the three programs.

Table 1.1: NTRAI, SFNT and CHCI(CtG) oral health programs

Type of service	Target population	Population size
NTRAI (July 2015 to June 2022) and SFNT (July 2012 to June 2015)		**23,840**
Preventive services	Indigenous children and adolescents aged under 16 in the Northern Territory.	
	Full-mouth FV for those aged over 18 months and under 16.	21,833
	Fissure sealants for those aged over 6 and under 16.	14,921
Clinical services	Indigenous children and adolescents aged under the age of 16 in Prescribed Areas of the Northern Territory. Children and adolescents with a referral from NTER Child Health Checks were targeted. However, other children and adolescents in need in the Prescribed Areas were also able to access the services.	
CHCI(CtG) (August 2007 to June 2012)		**16,259**
Preventive and clinical services	Indigenous children and adolescents under the age of 16 in Prescribed Areas of the Northern Territory. Children and adolescents with a referral from NTER Child Health Checks were targeted. However, other children and adolescents in need in the Prescribed Areas were also able to access the services.	

Note: The estimated Indigenous population targeted by the NTRAI and SFNT programs was derived from the Australian Bureau of Statistics' Estimated Resident Population for 2016; the estimated population covered by the CHCI(CtG) was provided by the Department of Health (AIHW 2012).

1.3 Information collected

The Department of Health commissioned the Australian Institute of Health and Welfare (AIHW) to collect, manage and report on the data on oral health services provided through these programs. The Oral Health Services team in the Northern Territory Department of Health (OHS-NT) provided these data electronically. The data were extracted from an electronic information system where dental professionals record clinical information when they provide dental services. The data mainly include basic demographic information on service recipients and their oral health status.

Since 2014, there have been a number of changes in the data submitted. Apart from basic demographic information on service recipients, hospital registration number (HRN) and the number of decayed, missing and filled teeth, all other data items are no longer submitted. In the past, the AIHW received information about dental problems treated (for example, gum disease). As a result, it was not possible to include analyses related to the types of dental problems treated that were presented in previous AIHW reports on SFNT oral health services. Data items in the collection, and the changes since 2014, are listed in Table 1.2.

Table 1.2: NTRAI OHP data items and changes

OHS-NT dental clinics before January 2014	OHS-NT dental clinics from January 2014 onward
Hospital registration number (HRN)	Hospital registration number (HRN)
Basic demographic information on service recipient: date of birth, sex and community identification number	Basic demographic information on service recipient: date of birth, sex and community identification number
Number of decayed, missing and filled teeth: for both permanent (DMFT) and deciduous (dmft) teeth	Number of decayed, missing and filled teeth: for both permanent (DMFT) and deciduous (dmft) teeth
Type(s) of dental services provided Type(s) of dental problems treated Recommendation for extractions under general anaesthesia Whether follow-up services are required	Dental procedures undertaken at each episode of dental care, using 'The Australian Schedule of Dental Services and Glossary'

Data limitations

The NTRAI dental data collection has limitations that should be considered when interpreting the findings in this report. Some of the main limitations are listed in this chapter, and a full data quality statement is provided in Appendix C.

Non-consent for sharing individual information

The data that the AIHW receives relies on parents or guardians of service recipients consenting to share individual information. Only when consent is given is the detailed information on dental services sent to the AIHW. In cases where that consent is not given, the AIHW receives only aggregate information on the number of services and service recipients. Therefore, apart from the total number of services and service recipients, other information in this report is representative of children for whom consent was obtained, rather than of all service recipients.

Despite the fluctuations, the consent rate has generally improved over the years of the program. At first, it was very low as some service providers were not aware of the consent arrangements. This means that the data collected in the early phase of the program were not representative of children who received dental services through the program. However, the

consent rate increased significantly afterwards. Therefore, much of the detailed analyses in this report are focused on the 2013–2015 calendar years, where the consent rate was sufficient for analysis (Table 1.3).

Table 1.3: Consent rate (%) of NTRAI OHP service recipients, by service type, July 2012 to December 2015

Period	Full-Mouth FV	Fissure Sealant	Clinical service
July–December 2012	26.0	22.2	26.6
January–December 2013	82.9	80.6	72.0
January–December 2014	61.5	64.9	90.5
January–December 2015	**80.4**	**89.2**	**94.8**

Note: For more details, see tables 2.1, 2.2 and 2.4.

Missing or incorrect HRN

Because the names of service recipients are not provided, the AIHW can only count children and adolescents using their HRN. A very small proportion of service recipients (1%) could not be counted due to missing or incorrect HRNs. These are noted in relevant tables.

Data coverage

This data collection includes around 10,000 Indigenous children and adolescents aged 0–15, accounting for around 42% of the Northern Territory Indigenous population in this age group. However, those who received oral health services under the NTRAI OHP are not a random sample of Indigenous children and adolescents in the Northern Territory. As well, not all dental services provided in the Northern Territory are captured in the NTRAI dental data collection because it includes only oral health services funded by the Australian Government through the NTRAI OHP. Services provided through other funding sources (for example, the Northern Territory Government or private sector) are not included in this report. Therefore, findings in this report are not representative of all Indigenous children and adolescents in the Northern Territory.

1.4 About this report

The scope of this report is limited to services provided under the NTRAI OHP. The report focuses on the new data in 2014 and 2015, although it covers the whole period of the SFNT OHP and NTRAI OHP, from July 2012 to June 2015. Since the Aboriginal Community Controlled Health Organisation is not a part of the agreement of the NTRAI OHP, the dental services from this organisation are not included in this report. The number of dental services and service recipients in the previous years has been also adjusted accordingly.

This report contains two chapters:

- **Chapter 2—Dental service delivery**: provides information on the number of dental services provided, including clinical services, clinical services under general anaesthesia, and specific preventive services (that is, fissure sealants and full-mouth FV). Additional tables referenced in this chapter can be found in Appendix A: Data tables.
- **Chapter 3—Oral health status of children**: examines information on decayed, missing and filled teeth (dmft and DMFT scores), and changes in oral health status over time.

2 Dental service delivery

2.1 How are dental services delivered?

NTRAI OHP services are provided by the OHS-NT. This section describes the models of service delivery used.

The OHS-NT provides comprehensive oral health services and oral health promotion to Indigenous children and adolescents in the Northern Territory. It provides general dental services, including examinations, restorative fillings, extractions, preventive services and emergency care. The settings in which these services are provided include:

- multi-chair community clinics in Alice Springs, Darwin, Katherine, Palmerston, Nhulunbuy and Tennant Creek
- single-chair clinics in urban and regional primary schools
- single-chair clinics in remote community health centres
- single-chair mobile dental trucks (around Central Australia).

The OHD-NT also provides specialist services, such as orthodontics, oral surgery and extractions under general anaesthesia at hospitals.

The Northern Territory comprises an area of about 1.3 million square kilometres, and nearly half its population resides in remote areas. A number of factors affect dental service provision to remote communities, such as distance, unpredictable weather, cost, transport and the availability of accommodation for service providers. The NTRAI OHP provides funding to enhance OHS-NT services. This allows for more frequent visits to remote communities and for equitability in access to oral health services, comparable with that available in urban and regional centres. Figure 2.1 shows an aerial view of Warruwi, one of the communities serviced by the OHS-NT, and a dental room in the Tiwi Islands.

Oral health promotion plays an important role in improving the oral health of Indigenous communities. The OHS-NT provides a certificate course in Healthy Smiles. This course trains remote primary health-care workers, such as Aboriginal health-care workers and remote nurses, to incorporate oral health screening, oral health education and FV application into health checks for children aged from 18 months to 5. Primary health-care workers are also trained to accurately refer children and adolescents to oral health professionals who visit remote communities to treat dental conditions. This program provides ongoing support to families in remote communities; enhances the link between oral health and general health services; and enables children and adolescents to access services provided by oral health professionals.

Source: Northern Territory Department of Health.

Figure 2.1: Aerial view of Warruwi community (Goulburn Island) in North Arnhem Land *(left)*, and the dental room at the Nguiu Health Centre in Tiwi Islands *(right)*

Outreach dental teams service remote clinics and mobile dental trucks. These teams consist of either a dentist or dental/oral health therapist and a dental assistant. Regular OHS-NT staff are also supplemented by dental staff employed on short-term (3–4 week) contracts through the Remote Area Health Corps. This service delivery model increases the capacity to provide outreach services, without compromising the staffing of regular services. The teams of two travel to communities for 1–3 weeks at a time. In the Top End, the teams travel by four-wheel drive to closer communities (up to 4 hours drive time) and by chartered light aircraft or scheduled commercial flights (up to 2.5 hours flight time). In Central Australia, the teams travel by four-wheel drive, with travel times up to 9 hours, or by chartered light aircraft.

Oral health extractions under general anaesthesia are provided at Northern Territory public hospitals by regular OHS-NT staff and visiting specialists. NTRAI funding has enabled agreements with the Westmead Children's Hospital and the John James Foundation to conduct general anaesthetic 'blitzes' at the Alice Springs, Gove District, Katherine District and Tennant Creek hospitals. These blitzes are aimed at treating Indigenous children and adolescents from remote areas. The number of general anaesthetic procedures provided depends on the availability of staff, theatre time and transport as well as on the willingness of children and their carers to travel from remote locations to undertake the procedures.

The provision of preventive services is part of routine dental care. These services, along with other dental services, are provided in all dental clinics after dental examination as part of the individual dental treatment plan, with informed verbal consent from a parent or guardian.

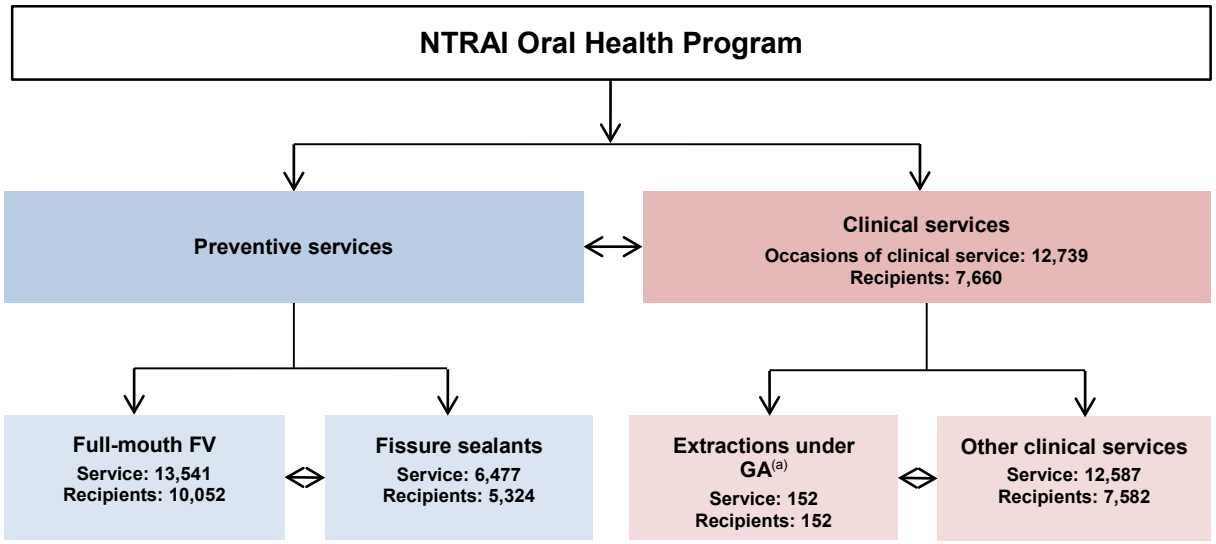
In remote settings where trained dental staff may not be available, full-mouth FV can be applied by primary health-care workers who have completed Healthy Smiles training (as indicated earlier, a certificate course run by the OHS-NT). This training allows remote nurses and Aboriginal health workers to apply FV to children aged between 18 months and 5 years as a part of a care program (such as Healthy Under 5 Kids in Northern Territory Government clinics) in remote health centres.

2.2 Number of services and service recipients

This section presents information on the main service components of the NTRAI OHP: the NTRAI preventive program (full-mouth FV and fissure sealants) and clinical services (which include tooth extraction under general anaesthesia). Definitions of 'occasion of service' and the service types analysed in this report are provided in Box 2.1. Figure 2.2 illustrates the service components in the NTRAI OHP and summarises the number of service occasions and service recipients for each from July 2012 to December 2015.

Box 2.1: Definitions of service types in this report

- **Clinical service:** A single type of treatment as determined by an Australian Dental Association item code. Examples of types of clinical services include restorative services, tooth extraction, diagnostic services or assessments, orthodontic services and periodontic services.
- **Occasion of clinical service:** For the purposes of this report, this includes occasions of service at which at least 1 clinical service was delivered, excluding those at which *only* full-mouth FV application and/or fissure sealant(s) were delivered. An occasion of clinical service can include those at which a preventive service (full-mouth FV or fissure sealant) was provided, but only if other types of clinical services were also provided.
- **Occasion of service:** An appointment at a dental clinic on a certain date. A single occasion of service can involve the provision of multiple types of services.
- **Preventive service:** Occasions of service at which full-mouth FV application and/or fissure sealants were delivered. For the purposes of this report, this definition excludes other preventive services such as oral health education (even though these might otherwise be classified as preventive services), as the NTRAI OHP program of preventive services is focused on full-mouth FV and fissure sealants.



(a) Tooth extractions in hospital under general anaesthesia.

Notes

1. The two-way arrows mean that a child or adolescent can receive multiple types of services; for example, clinical services and preventive services, and services within the two categories.
2. Includes consented and non-consented data. Non-consented data are provided to the AIHW in aggregate form, and individual service recipients cannot be tracked across the different service types. Therefore, the total number of children and adolescents who received NTRAI oral health program services, and the total number who received preventive services, could not be estimated.

Source: AIHW analysis of NTRAI dental data collection for services provided on or before 31 December 2015.

Figure 2.2: Diagram of services under the NTRAI OHP, and number of service occasions and recipients for different service types, July 2012 to December 2015

NTRAI OHP preventive program

The NTRAI OHP program of preventive services—comprising the provision of full-mouth FV and fissure sealants—is delivered by the Northern Territory Government (OHS-NT).

From July 2012 to December 2015, a total of 10,052 Indigenous children and adolescents received a service where a full-mouth FV application was provided (Table 2.1), and 5,324 children and adolescents received a service where a fissure sealant was applied (Table 2.2). A service recipient can have 1 or more fissure sealants applied on 1 service occasion.

Full-mouth FV

Full-mouth FV is a concentrated form of fluoride. A pea-sized dose is applied in 1 service to as many tooth surfaces as possible. A randomised controlled trial showed that the incidence of tooth decay was 2 times as high among children in a control group who did not receive full-mouth FV as among children who received the treatment once per year; the incidence of tooth decay was almost 4 times as high as among those who received full-mouth FV twice per year (Weintraub et al. 2006). The researchers found that, although the efficacy of the treatment improved with more regular applications, 1 application per year yielded substantial improvements; given the difficulties faced by public facilities in reaching children at regular intervals, 1 application per year constitutes a valuable public health intervention (Weintraub et al. 2006).

In 2015, a total of 4,041 Indigenous children and adolescents received full-mouth FV services at 4,441 occasions of service. This was a decrease from 2014—when 4,664 children and adolescents received 5,054 occasions of service for full-mouth FV—but a significant increase from 2013, when 3,329 children and adolescents received 3,617 full-mouth FV services (Figure 2.3; Table 2.1).

Table 2.1: Number of NTRAI OHP full-mouth FV services and service recipients, by consent status, July 2012 to December 2015

	Consent number		Non-consent number[a][b]		Total number		Consent rate[c] %	
Period	Services	Service recipients[d]	Services	Service recipients	Services	Service recipients[d]	Services	Service recipients
July–Dec 2012	113	111	316	316	429	427	26.3	26.0
Jan–Dec 2013	3,049	2,761	568	568	3,617	3,329	84.3	82.9
Jan–Dec 2014	3,260	2,870	1,794	1,794	5,054	4,664	64.5	61.5
Jan–Dec 2015	3,648	3,248	793	793	4,441	4,041	82.1	80.4
Total July 2012–Dec 2015	**10,070**	**6,581**	**3,471**	**3,471**	**13,541**	**10,052**	**74.4**	**65.5**

(a) Where consent for the sharing of detailed information was not provided and data were supplied in aggregate form.

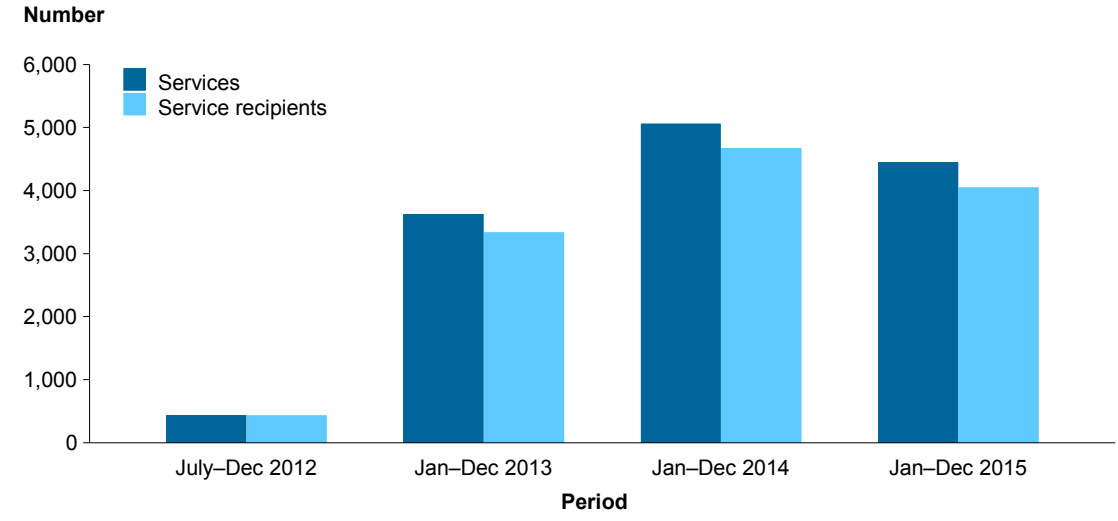
(b) Non-consent data are available only for the number of service recipients; therefore, each child was counted as receiving 1 service.

(c) Proportion of consented data.

(d) As children and adolescents could receive services in multiple periods, the sum of the column might not equal the total.

Note: Services include only those provided through the NTRAI.

Source: AIHW analysis of NTRAI dental data collection for services provided on or before 31 December 2015.



Source: Table 2.1.

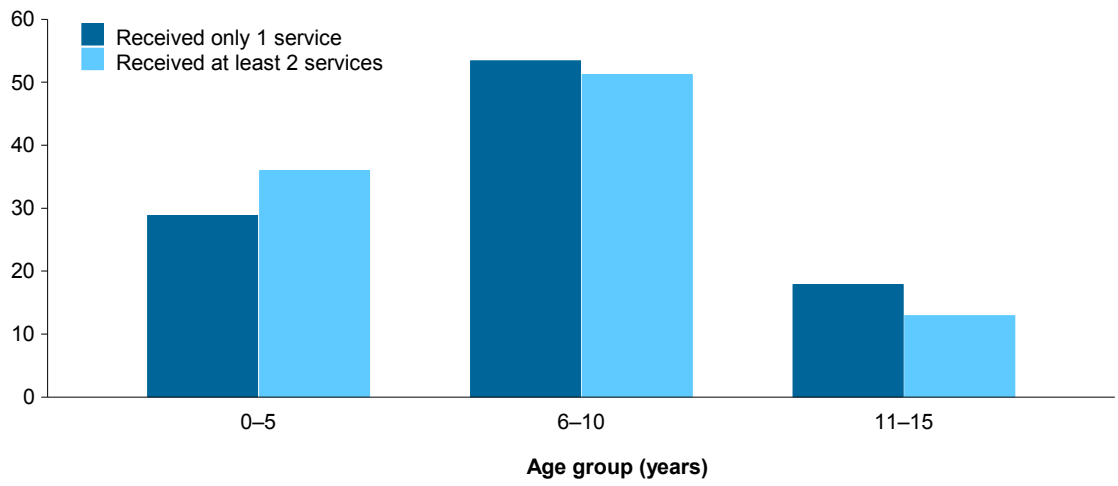
Figure 2.3: Number of NTRAI OHP full-mouth FV services and service recipients, July 2012 to December 2015

As discussed earlier, the parents or guardians of service recipients must give their consent for service recipient data (at the unit record level) to be shared with the AIHW; otherwise only a limited amount of aggregated data is sent to the AIHW. Between 2012 and 2015, there was a peak in the consent rate for children and adolescents who received full-mouth

FV services in 2013 (83%; 2,761 children and adolescents), which decreased to 62% (2,870) in 2014 before bouncing back to 80% (3,248) in 2015.

In 2015, of the 3,248 children and adolescents who received a service involving full-mouth FV and for whom consent was given to share information with the AIHW:

- just over half (53%) were aged 6–10, 30% were aged 0–5, and 17% were aged 11–15 (Table A2.2)
- similar proportions of boys and girls received services (48% and 52%, respectively) (Table A2.2)
- most children and adolescents received only 1 full-mouth FV service, ranging from 86% (828 of 962) of those aged 0–5 to 91% (512 of 560) of those aged 11–15 (Table A2.3)
- among the 2,875 children and adolescents who received 1 full-mouth FV service, 1,535 (53%) were aged 6–10; this age group accounted for 51% (191 of 373) of the children and adolescents who received 2 or more full-mouth FV services (Figure 2.4; Table A2.2).



Note: Data are reported only where consent was obtained.

Source: Table A2.2.

Figure 2.4: Proportion of NTRAI OHP full-mouth FV service recipients, by frequency of service and age, 2015

Fissure sealants

Fissure sealants are protective adhesive coatings applied to the grooves in the biting surfaces of back teeth to prevent the build-up of dental plaque and acids (SA Health 2007). Fissure sealants are usually applied to adult molars as soon as possible after they erupt. Sealants usually last for many years but need to be checked regularly to ensure that the seal is intact. A 'fissure sealant service' refers to an occasion of service where fissure sealants are applied. Children and adolescents can receive 1 or more individual sealants in 1 service.

In 2015, a total of 1,804 Indigenous children and adolescents received fissure sealant services at 1,943 occasions of service. This was a decrease from 2014, in which 2,179 children and adolescents received 2,323 occasions of service for fissure sealants, and an increase from 2013, in which 1,718 children and adolescents received 1,862 occasions of service for fissure sealants (Figure 2.5; Table 2.2).

Between 2012 and 2015, there were fluctuations in the consent rate for children and adolescents who received fissure sealant services, which decreased from 81% in 2013 to 65% in 2014 before increasing to 89% in 2015 (Table 2.2).

Table 2.2: Number of NTRAI OHP fissure sealant services[a] and service recipients, by consent status, July 2012 to December 2015

	Consent number		Non-consent number[b][c]		Total number		Consent rate[d] %	
Period	Services	Service recipients[e]	Services	Service recipients	Services	Service recipients[e]	Services	Service recipients
July–Dec 2012	82	76	267	267	349	343	23.5	22.2
Jan–Dec 2013	1,528	1,384	334	334	1,862	1,718	82.1	80.6
Jan–Dec 2014	1,559	1,415	764	764	2,323	2,179	67.1	64.9
Jan–Dec 2015	1,748	1,609	195	195	1,943	1,804	90.0	89.2
Total July 2012–Dec 2015	**4,917**	**3,764**	**1,560**	**1,560**	**6,477**	**5,324**	**75.9**	**70.7**

(a) A 'fissure sealant service' is an occasion of service where a fissure sealant was applied. Children and adolescents can receive 1 or more fissure sealants in 1 occasion of service.

(b) Where consent for the sharing of detailed information was not provided and data were supplied in aggregate form.

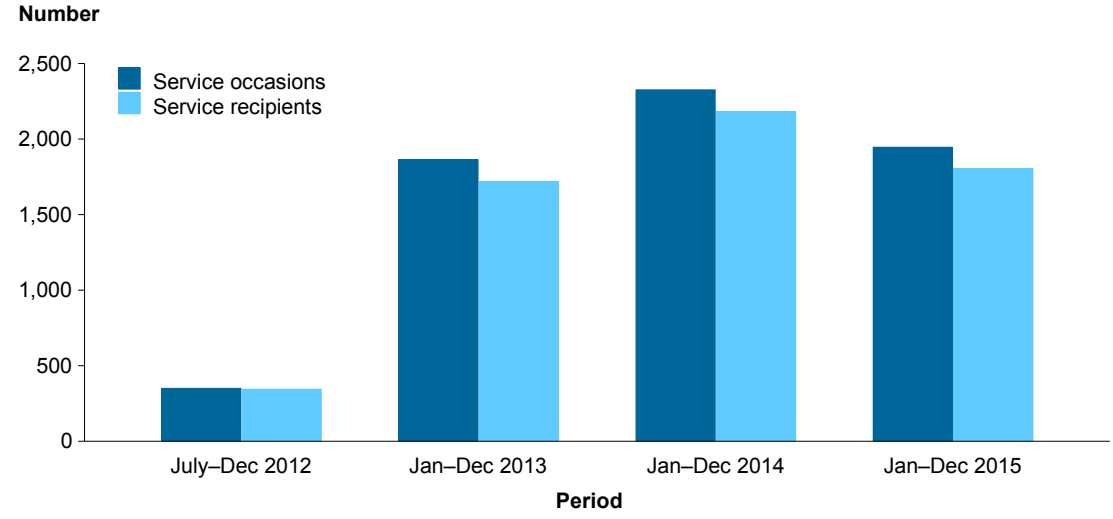
(c) Non-consent data are available only for the number of service recipients; therefore, each child was counted as receiving 1 service.

(d) Proportion of consented data.

(e) As children and adolescents can receive services in multiple periods, the sum of the column might not equal the total.

Note: Services include only those provided through the NTRAI.

Source: AIHW analysis of NTRAI dental data collection for services provided on or before 31 December 2015.



Source: Table 2.2.

Figure 2.5: Number of NTRAI OHP fissure sealant service occasions and service recipients, July 2012 to December 2015

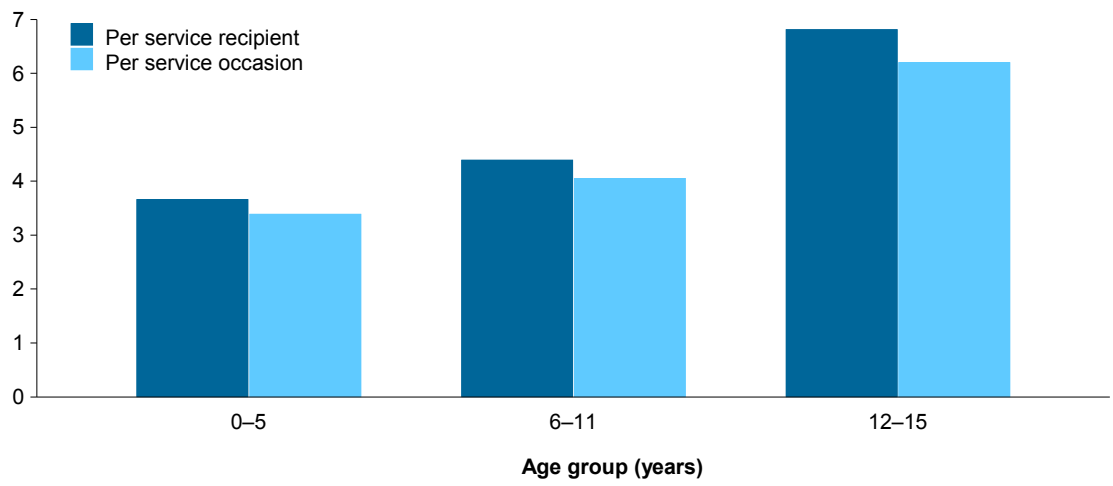
In 2015, of the 1,609 Indigenous children and adolescents who received a fissure sealant service and for whom consent was obtained to share information with the AIHW:

- nearly two-thirds (64%) were aged 6–11, over one-quarter (26%) were aged 12–15 and 10% were aged 0–5
- females accounted for a higher proportion of service recipients than males (56% and 44%, respectively) (Table A2.5).

A child or adolescent can receive several fissure sealants at 1 occasion of service.

In 2015:

- a total of 1,609 children and adolescents with consent received 7,940 individual fissure sealants. The average number of sealants per service recipient was 4.9 (Table A2.5)
- the group aged 12–15 received the highest number of sealants on average (6.8 per service recipient)
- those in younger age groups received fewer sealants on average: children aged 0–5 received an average of 3.7 sealants and those aged 6–11 received an average of 4.4 sealants (Figure 2.6).



Note: Data are reported only where consent was obtained.

Source: Table A2.5.

Figure 2.6: Average number of NTRAI OHP fissure sealants per service and service recipient, by age, 2015

In 2015, there was a total of 845 children who had applications of fissure sealants and at the same time had a dmft/DMFT score (Table 2.3).

- Children and adolescents with caries experience had a lower average number of fissure sealants (5.3) than those without caries experience (7.7).
- Specifically for children aged 6–11, those with caries experience had an average number of fissure sealants of 4.7, which was lower (at 7.0) than that for children without caries experience.

Table 2.3: Average number of fissure sealants[(a)] for service recipients with caries experience (dmft/DMFT>0) versus those with no caries experience (dmft/DMFT=0), by age group[(b)], 2015

	dmft/DMFT>0			dmft/DMFT=0			Total		
Age group (years)	Service recipients	Number of teeth with FS*	Average number of teeth with FS	Service recipients	Number of teeth with FS	Average number of teeth with FS	Service recipients	Number of teeth with FS	Average number of teeth with FS
1–5	99	375	3.8	9	35	3.9	108	410	3.8
6–11	434	2,026	4.7	91	634	7.0	525	2,660	5.1
12–15	157	1,288	8.2	55	524	9.5	212	1,812	8.5
Total	**690**	**3,689**	**5.3**	**155**	**1,193**	**7.7**	**845**	**4,882**	**5.8**

* FS = fissure sealant.

(a) A 'fissure sealant service' is an occasion of service where a fissure sealant was applied. Children and adolescents can receive 1 or more fissure sealants in 1 occasion of service.

(b) Age at last service.

Notes

1. Excludes service recipients with a missing or invalid HRN and service recipients with a missing dmft/DMFT score.
2. Services include only those provided through the NTRAI.

Source: AIHW analysis of NTRAI dental data collection for services provided on or before 31 December 2015.

NTRAI OHP clinical services

An 'occasion of service' can involve 1 or more clinical service types, such as restorative services, tooth extraction, diagnostic services or assessments, orthodontic services and periodontic services. Oral health education, and advice on dental hygiene and diet, can also be provided during this 'occasion of service'. In this report, the term 'occasions of *clinical* service' is used to distinguish between clinical and preventive services.

Most tooth extractions are undertaken at dental clinics with topical or local anaesthetic; however, there are cases where service recipients are treated in hospital under general anaesthesia. Full-mouth FV and fissure sealants can be provided at occasions of clinical service. However, these occasions of clinical service were examined separately in the earlier section on the NTRAI OHP preventive program, and are excluded from the analyses in this section.

From July 2012 to December 2015, a total of 7,660 Indigenous children and adolescents received 12,739 occasions of clinical service (Table 2.4). Of the children and adolescents who received a clinical service, 152 (2%) received extractions in hospital under general anaesthesia (Figure 2.2).

Between 2012 and 2015:

- the number of occasions of clinical service provided peaked at 4,597 in 2013 and decreased to 3,159 in 2014 before increasing to 3,378 in 2015 (Table 2.4)
- similarly, the number of service recipients peaked at 3,435 in 2013 and decreased to 2,407 in 2014 before increasing to 2,533 in 2015 (Figure 2.7; Table 2.4)
- the consent rate increased steadily from a low of 27% for clinical service recipients in 2012 to 72% in 2013, 91% in 2014 and 95% in 2015 (Table 2.4).

Table 2.4: Number of NTRAI OHP occasions of clinical service[a][b] and service recipients, by consent status, July 2012 to December 2015

Period	Consent number		Non-consent[c] number		Total number		Consent rate[d] %	
	Services	Service recipients[e]	Services	Service recipients [e]	Services	Service recipients[e]	Services	Service recipients
July–Dec 2012	430	371	1,175	1,022	1,605	1,393	26.8	26.6
Jan–Dec 2013	3,509	2,474	1,088	961	4,597	3,435	76.3	72.0
Jan–Dec 2014	2,846	2,179	313	228	3,159	2,407	90.1	90.5
Jan–Dec 2015	3,246	2,401	132	132	3,378	2,533	96.1	94.8
Total July 2012–Dec 2015	**10,031**	**5,317**	**2,708**	**2,343**	**12,739**	**7,660**	**78.7**	**69.4**

(a) A 'service' is an occasion of service.

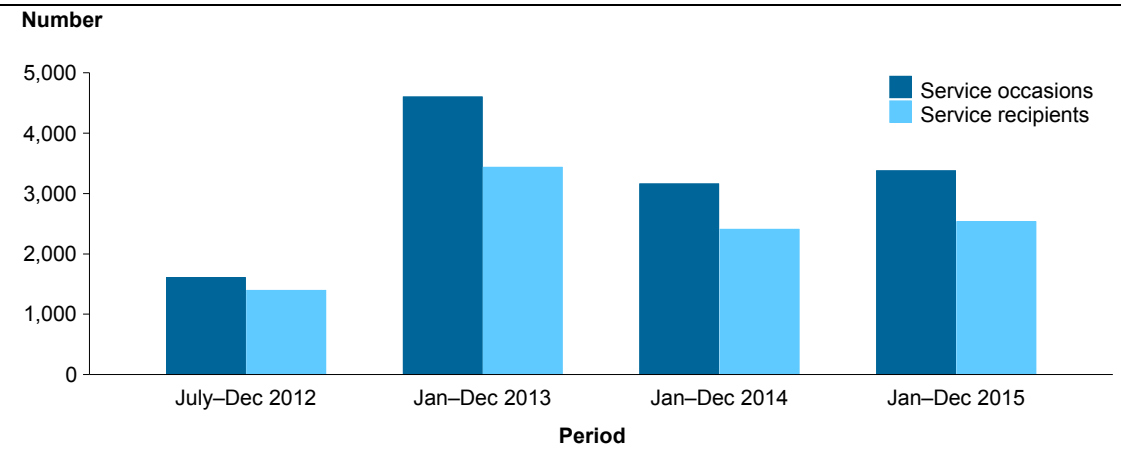
(b) Includes extractions under general anaesthesia.

(c) Where consent for the sharing of detailed information was not provided and data were supplied in aggregate form.

(d) Proportion of consented data.

(e) As children and adolescents can receive services in multiple periods, the sum of the column might not equal the total.

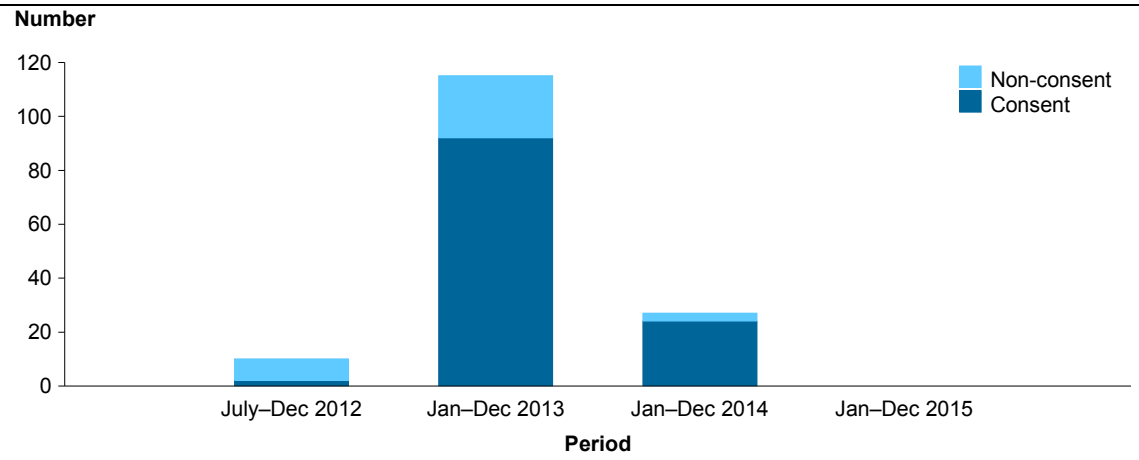
Source: AIHW analysis of NTRAI dental data collection for services provided on or before 31 December 2015.



Source: Table 2.4.

Figure 2.7: Number of NTRAI OHP occasions of clinical service and service recipients, July 2012 to December 2015

Figure 2.8 shows that there was a decrease in the number of children and adolescents who received extractions under general anaesthesia through the NTRAI OHP from 115 to 27 and to 0 between 2013 and 2015. This reflects the performance benchmarks of the National Partnership Agreement on Stronger Futures in the Northern Territory, which required 100 general anaesthetic procedures in 2012–13, 50 in 2013–14 and 25 in 2014–15. There has been no requirement for general anaesthetic procedures under the NTRAI OHP since 2015–16, with the funding redistributed to other services to allow a greater focus on prevention.



Note: Consent status refers to whether permission was obtained from the service recipient's parent or guardian to share information with the AIHW.

Source: Table A2.6.

Figure 2.8: Number of children and adolescents who had extractions under general anaesthesia through the NTRAI OHP, by consent status, July 2012 to December 2015

In 2015, among the 2,401 children and adolescents who received NTRAI OHP clinical services and for whom consent was obtained to share information with the AIHW:

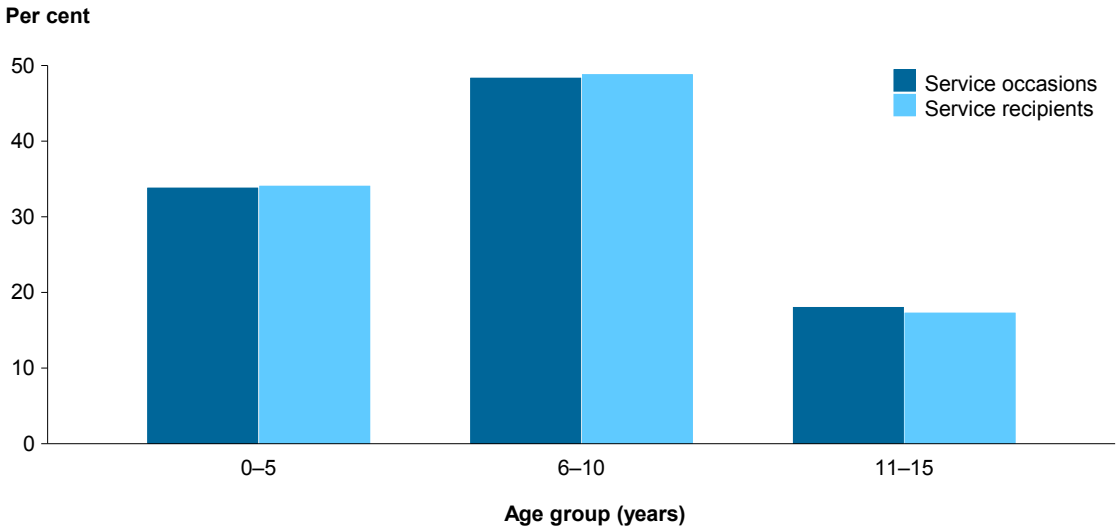
- nearly half (49%) of NTRAI OHP clinical service recipients were aged 6–10, while 34% were aged 0–5 and 17% aged 11–15 (Figure 2.9; Table A2.8)
- more females than males received NTRAI OHP clinical services (51% and 49%, respectively) (Table A2.8).

Figure 2.10 shows the top five types of clinical services received in 2015. A list of service codes from the Australian Schedule of Dental Services and Glossary (tenth edition) used for the analysis below is shown in Table D1 (Appendix D).

In 2015:

- the majority of children and adolescents received diagnostic (assessment) services (97%, or 2,339), and preventive services (excluding full-mouth FV or fissure sealants only), such as oral health and diet education (78%, or 1,860)
- around one-third of children and adolescents received restorative services such as fillings (35%, or 828)
- only a small proportion (5%, or 119) of children and adolescents received surgical procedures (for example, tooth extraction) (Table A2.9).

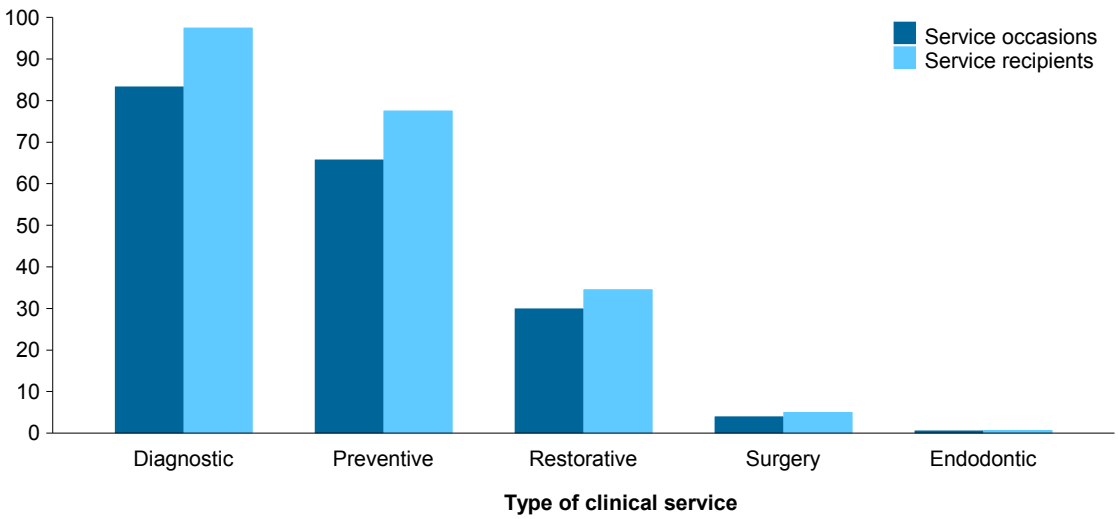
Less than 1% (16) of children and adolescents received other types of clinical services (Table A2.9).



Note: Data are reported only where consent was obtained.

Source: Table A2.8.

Figure 2.9: Proportion of NTRAI OHP occasions of clinical service and service recipients, by age group, 2015



Notes

1. Percentages are from the total number of NTRAI OHP services and service recipients for all types of clinical services, and not just the top 5 types of clinical services. See Table A2.9.
2. Data are reported only where consent was obtained.

Source: Table A2.9.

Figure 2.10: Top five types of NTRAI OHP clinical services, by proportion of service occasions and service recipients, 2015

3 Oral health status of service recipients

This chapter reports on the oral health status of NTRAI OHP service recipients, measured by the presence of decayed, missing and filled teeth (dmft/DMFT). It includes analyses of the proportion of Indigenous children and adolescents who had tooth decay experience (a dmft/DMFT score greater than 0), and the average number of decayed, missing and filled teeth per service recipient (the mean dmft/DMFT score). It also includes an analysis over time of the proportion of service recipients with experience of tooth decay from 2009 to 2015. The data should be interpreted with care because service recipients are not representative of all Indigenous children and adolescents in the Northern Territory (for more details, see data coverage in Chapter 1).

3.1 Decayed, missing and filled teeth

In 2014:

- the proportion of service recipients with experience of tooth decay fluctuated with age, ranging from nearly half (49%, 158 of 326) of children aged 1–3, to 91% (205 of 225) of 9-year-olds
- the mean dmft score was highest among children aged 5 and 6, at 4.8 and 5.4, respectively
- the mean DMFT score was 1.8 for 12-year-olds and 4.1 for 15-year-olds (Table 3.1).

In 2015:

- the proportion of service recipients with experience of tooth decay fluctuated with age, ranging from 45% (160 of 358) of children aged 1–3, to 85% (209 of 245) of 8-year-olds
- the mean dmft score was highest among children aged 5 and 6, at 5.2 and 5.6, respectively
- the mean DMFT score was 1.9 for 12-year-olds and 3.7 for 15-year-olds (Table 3.2).

The results for these children and adolescents show substantially poorer oral health than results from the 2009 Child Dental Health Survey, which involved children and adolescents who visited a school dental service in all states and territories except New South Wales and Victoria (AIHW 2013b). From the 2009 Child Dental Health Survey, it was found that the mean dmft for 6-year-olds was 2.4, and the mean DMFT for 12-year-olds was 1.1. As well, the proportion of 8-year-olds with experience of tooth decay was 67%.

Indigenous children and adolescents in the NTRAI OHP also had higher dmft/DMFT scores than those who participated in the Child Dental Health Surveys conducted between 2000 and 2003 in South Australia, New South Wales and the Northern Territory combined. The mean dmft score for 6-year-olds was 3.7 and the mean DMFT score for 12-year-olds was 1.3 (AIHW 2007).

Table 3.1: Decayed, missing and filled teeth (deciduous and permanent) among NTRAI OHP service recipients, and Significant Caries Index (SiC), by age[(a)], 2014

					Service recipients with dmft/DMFT>0		Service recipients in top 30% of dmft/DMFT scores	
Age (years)	Number of service recipients	Mean dmft	Mean DMFT	Mean dmft/DMFT	Number	%	Number	SiC value (mean dmft/DMFT)
1–3	326	2.0	—	2.0	158	48.5	97	5.6
4	196	4.2	0.0	4.2	148	75.5	58	9.1
5	241	4.8	—	4.8	192	79.7	72	10.5
6	259	5.4	0.0	5.4	221	85.3	77	10.9
7	234	4.6	0.4	5.0	196	83.8	70	10.3
8	266	4.5	0.5	5.0	222	83.5	79	10.0
9	225	4.3	0.8	5.1	205	91.1	67	9.6
10	234	2.2	1.1	3.3	183	78.2	70	7.1
11	231	1.2	1.3	2.5	174	75.3	69	5.8
12	203	0.6	1.8	2.5	136	67.0	60	6.2
13	154	0.2	2.8	3.0	114	74.0	46	6.9
14	114	0.2	3.4	3.6	86	75.4	34	8.3
15	73	0.2	4.1	4.2	58	79.5	21	9.6

(a) Age at last service.

Notes

1. Excludes service recipients with a missing or invalid HRN and service recipients with a missing dmft/DMFT score.
2. Services include only those provided through the NTRAI.

Source: AIHW analysis of NTRAI dental data collection for services provided on or before 31 December 2015.

Table 3.2: Decayed, missing and filled teeth (deciduous and permanent) among NTRAI OHP service recipients, and SiC, by age[(a)], 2015

Age (years)	Number of service recipients	Mean dmft	Mean DMFT	Mean dmft/DMFT	Service recipients with dmft/DMFT>0		Service recipients in top 30% of dmft/DMFT scores	
					Number	%	Number	SiC value (mean dmft/DMFT)
1–3	358	2.1	0.0	2.1	160	44.7	107	6.0
4	232	3.9	—	3.9	169	72.8	69	9.0
5	256	5.2	0.0	5.3	204	79.7	76	10.5
6	270	5.6	0.1	5.7	225	83.3	81	11.4
7	193	4.5	0.2	4.7	161	83.4	57	9.5
8	245	4.2	0.5	4.7	209	85.3	73	9.5
9	197	3.6	0.7	4.4	165	83.8	59	9.2
10	239	2.5	1.2	3.7	201	84.1	71	7.9
11	213	1.0	1.6	2.7	153	71.8	63	6.2
12	168	0.5	1.9	2.4	119	70.8	50	5.5
13	154	0.2	2.4	2.6	102	66.2	46	6.4
14	97	0.1	3.2	3.3	76	78.4	29	7.4
15	69	0.2	3.7	3.9	55	79.7	20	8.6

(a) Age at last service.

Notes

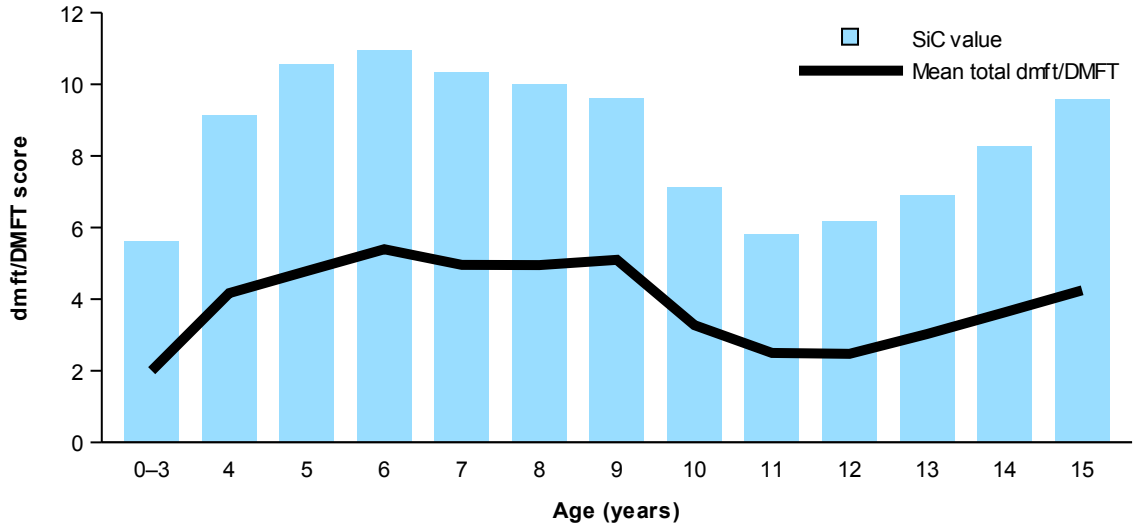
1. Excludes service recipients with a missing or invalid HRN and service recipients with a missing dmft/DMFT score.
2. Services include only those provided through the NTRAI.

Source: AIHW analysis of NTRAI dental data collection for services provided on or before 31 December 2015.

Significant Caries Index

The SiC is the average number of decayed, missing and filled teeth among the 30% of service recipients with the highest dmft/DMFT scores. This measure is used to bring attention to those individuals with the worst dental decay experience (AIHW 2011).

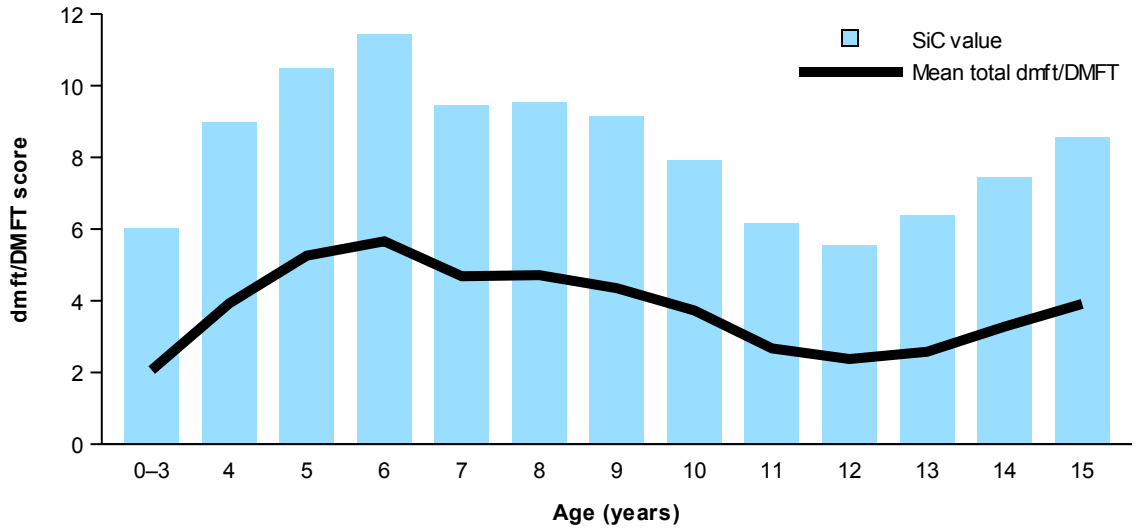
Among children and adolescents who received NTRAI OHP services in 2014, the SiC value was highest among those aged 5 and 6 at their last service—at 10.5 and 10.9, respectively (Table 3.1). Similarly in 2015, the SiC value was also highest among those aged 5 and 6 at their last service—at 10.5 and 11.4, respectively (Table 3.2). This, as expected, was substantially higher than the respective mean total dmft/DMFT (that is, for all service recipients) for the same age groups, as the SiC value represents those with the worst experience of tooth decay (figures 3.1 and 3.2).



Note: The SiC value is the mean dmft/DMFT of the 30% of service recipients with the highest dmft/DMFT scores.

Source: Table 3.1.

Figure 3.1: SiC and mean total dmft/DMFT scores among NTRAI OHP service recipients, by age, 2014



Note: SiC value is the mean dmft/DMFT of the 30% of service recipients with the highest dmft/DMFT scores.

Source: Table 3.2.

Figure 3.2: SiC and mean total dmft/DMFT scores among NTRAI OHP service recipients, by age, 2015

3.2 Changes in tooth decay experience

Table 3.3 shows the proportion of Indigenous children and adolescents with experience of tooth decay from 2009 to 2015. The data should be interpreted with care because changes observed over time may indicate changes in experience of tooth decay among service recipients, or simply reflect differences in the sample of children and adolescents who accessed NTRAI OHP services in different periods. This is because these results are summary information based on dmft/DMFT data that were available to the AIHW periodically, and children and adolescents who received outreach services do not represent the whole population.

Based on the available dmft/DMFT data, the proportion of children and adolescents with experience of tooth decay decreased for most age groups (Table 3.3). In particular, between the periods from March–December 2009 to January–December 2015, the proportion of NTRAI OHP service recipients with experience of tooth decay decreased:

- for those aged 1–3, from 73% to 42%
- for 5-year-olds, from 88% to 79%
- for 12-year-olds, from 81% to 69%.

However, there was much variation as well as inconsistent trends between age groups. Although large improvements (decreases) were seen in the proportion of children aged 1–3 with experience of tooth decay, such large improvements were generally not observed for children and adolescents over this age.

Table 3.3: Proportion of NTRAI OHP recipients with tooth decay experience, by age[(a)], 2009–2015[(b)]

Age (years)	Mar–Dec 2009	Jan–June 2011	Jan–June 2012	July 2012–June 2013	July–Dec 2013	Jan–Dec 2014	Jan–Dec 2015
1–3	72.9	66.3	50.3	58.1	52.0	48.0	41.9
4	79.4	80.8	85.1	79.3	75.4	75.5	71.2
5	88.3	88.8	92.4	86.3	82.5	79.7	78.6
6	88.5	92.5	92.3	83.4	85.8	85.3	82.7
7	91.8	86.0	89.1	85.8	89.5	83.8	82.7
8	93.2	83.9	90.0	88.3	88.8	83.5	84.3
9	86.2	87.1	90.5	79.9	79.7	91.1	82.3
10	81.5	85.7	84.8	81.0	76.2	78.2	82.6
11	69.3	63.1	71.0	67.5	67.9	75.3	68.7
12	80.5	72.0	75.6	69.8	63.0	67.0	69.4
13	70.8	89.7	76.2	60.7	70.9	74.0	63.5
14	82.9	92.0	94.9	70.0	73.0	75.4	76.4
15	75.3	79.5	88.7	73.5	80.8	79.5	69.9

(a) Age at last service.

(b) Length of periods analysed are inconsistent, as they are based on data periodically provided to the AIHW.

Note: Excludes service recipients with a missing or invalid HRN and service recipients with a missing dmft/DMFT score.

Source: AIHW analysis of NTRAI dental data collection for services provided on or before 31 December 2015.

Changes in tooth decay experience between children who received at least 2 services under the CHCI(CtG) and the NTRAI OHP

This section presents findings from a cohort analysis for the CHCI(CtG) and the NTRAI OHP period separately. This analysis is limited to the children and adolescents who received 2 or more dental services and had at least 2 dmft/DMFT records in each of the two periods: 360 under the CHCI(CtG) and 1,347 under the NTRAI OHP. Children under NTRAI OHP who also received services from CHCI(CtG) were excluded from the analysis of NTRAI OHP, considering the confounding factor associated with both programs.

Since children had different dmft/DMFT scores when entering the programs, changes (increment) in dmft/DMFT were measured between first and last services, and dmft/DMFT increment per person-year was compared between the two program periods.

The minimum time interval (gap) between the first and last services was 3 months and the median time interval was 13 months. (This time interval allows sufficient time to see the changes between the first and last services.) In order to maintain consistency in comparison, only deciduous (baby) teeth were compared for those aged 1–5, and only permanent teeth were compared for those aged 6–10 and 11–15.

The comparisons showed that the dmft/DMFT increment per person-year was lower in the CHCI(CtG) than in the NTRAI OHP in the age group 1-5, but were higher in other age groups (Table 3.4). Based on the available data, it is not clear why children and adolescents who received dental services during the NTRAI OHP period, on average, had a smaller increase in dmft/DMFT scores than those in the CHCI(CtG) period. However, it could be associated with the preventive interventions (for example full-mouth FV) that were implemented at population level from the NTRAI OHP period. Another point worth noting is that the CHCI(CtG) cohort is relatively small and this may contribute to volatility in the calculations.

As well as the differences between programs, changes in tooth decay varied across different age groups but showed a consistent pattern between the two programs.

- During the CHCI(CtG) period, dmft/DMFT increment per person-year was lower in the age group 6–10 (0.5) than in the age groups 1–5 (1.3) and 11–15 (0.8) (Table 3.4).
- During the NTRAI OHP period, dmft/DMFT increment per person-year was lower in the age group 6–10 (0.4) than in the age groups 1–5 (1.7) and 11–15 (0.7) (Table 3.4).

Children and adolescents aged 6–10 were less likely to experience an increase in DMFT scores than those in other age groups in both programs. This difference could be associated with the fact that children in this age group have fewer teeth than those in other age groups, because their permanent teeth have not fully developed after losing deciduous teeth as part of the natural process.

Table 3.4: Changes in dmft/DMFT between children and adolescents who received at least 2 services in the CHC(CtG) and NTRAI OHP programs, by age group[(a)]

	CHCI(CtG) program (August 2008 to June 2012)				NTRAI OHP program (July 2012 to December 2015)			
Age (years)	Total dmft/DMFT increment	Total children	Total time gap in year	dmft/DMFT increment per person-year	Total dmft/DMFT increment	Total children	Total time gap in year	dmft/DMFT increment per person-year
1–5	239	100	190.8	1.3	994	516	619.8	1.7
6–10	213	207	403.1	0.5	247	585	729.5	0.4
11–15	76	53	99.4	0.8	168	246	259.1	0.7

(a) Age at first service. For those aged 1–5, only deciduous teeth were compared; for those aged 6–10 and 11–15, only permanent teeth were compared. This analysis excludes service recipients with a missing or invalid HRN and those with missing dmft/DMFT scores.

Source: AIHW analysis of NTRAI dental data collection for services provided on or before 31 December 2015.

Appendix A: Data tables

Table A2.1: Number of NTRAI OHP full-mouth FV services and service recipients, by Health Service Delivery Area[a], July 2012 to December 2015[b]

	July–Dec 2012		Jan–Dec 2013		Jan–Dec 2014		Jan–Dec 2015	
Health Service Delivery Area[a]	**Services**	**Service recipients[c]**	**Services**	**Service recipients[c]**	**Services**	**Service recipients[c]**	**Services**	**Service recipients[c]**
Alice Springs Urban	67	67	504	451	408	363	309	288
Barkly	3	3	117	114	214	194	268	260
Borroloola	6	6	75	74	94	90	100	85
Central Australia	19	19	504	486	534	486	611	580
Darwin Rural	3	3	41	41	94	68	61	44
Darwin Urban	72	71	514	471	284	254	192	182
East Arnhem	90	89	594	545	748	627	586	515
Katherine East	2	2	88	87	68	68	389	330
Katherine Urban	3	3	159	152	50	49	95	84
Katherine West	—	—	59	57	119	106	172	163
Maningrida	51	51	197	184	135	120	214	190
Tiwi	44	44	140	129	69	65	127	111
Top End West	24	24	388	362	273	253	419	355
West Arnhem	45	45	237	206	170	158	105	93
Total	**429**	**427**	**3,617**	**3,329**	**5,054**	**4,664**	**4,441**	**4,041**

(a) Based on area where the service was provided rather than place of residence of the service recipient.

(b) Non-consent aggregated data for January to June 2014 include both consent and non-consent services and recipients for children and adolescents aged between 18 months and 16. For 2014 and 2015, the total number of non-consented services and service recipients were not available by Health Service Delivery Area but are included in the total.

(c) As children and adolescents can receive services in multiple regions, the sum of the column might not equal the total.

Note: Services include only those provided through the NTRAI.

Source: AIHW analysis of NTRAI dental data collection for services provided on or before 31 December 2015.

Table A2.2: Number of children and adolescents who received full-mouth FV services through the NTRAI OHP[a], frequency of service by age[b] and sex, 2015

	Received only 1 service		Received at least 2 services		Total service recipients	
	Number	%	Number	%	Number	%
Age (years)						
0–5	828	28.8	134	35.9	962	29.6
6–10	1,535	53.4	191	51.2	1,726	53.1
11–15	512	17.8	48	12.9	560	17.2
Sex						
Male	1,405	48.9	163	43.7	1,568	48.3
Female	1,466	51.0	210	56.3	1,676	51.6
Missing	4	0.1	—	—	4	0.1
Total	**2,875**	**100.0**	**373**	**100.0**	**3,248**	**100.0**

(a) Data are reported only where consent was obtained. Children and adolescents with missing HRN were counted in the category of receiving only 1 service.

(b) Age at last service.

Note: Services include only those provided through the NTRAI.

Source: AIHW analysis of NTRAI dental data collection for services provided on or before 31 December 2015.

Table A2.3: Number of children and adolescents who received full-mouth FV services through the NTRAI OHP[a], age[b] and sex by frequency of service, 2015

	Received only 1 service		Received at least 2 services		Total service recipients	
	Number	%	Number	%	Number	%
Age (years)						
0–5	828	86.1	134	13.9	962	100.0
6–10	1,535	88.9	191	11.1	1,726	100.0
11–15	512	91.4	48	8.6	560	100.0
Sex						
Male	1,405	89.6	163	10.4	1,568	100.0
Female	1,466	87.5	210	12.5	1,676	100.0
Missing	4	100.0	—	—	4	100.0
Total	**2,875**	**88.5**	**373**	**11.5**	**3,248**	**100.0**

(a) Data are reported only where consent was obtained. Children and adolescents with a missing HRN were counted in the category of receiving only 1 service.

(b) Age at last service.

Note: Services include only those provided through NTRAI.

Source: AIHW analysis of NTRAI dental data collection for services provided on or before 31 December 2015.

Table A2.4: Number of NTRAI OHP fissure sealant services[a] and service recipients, by Health Service Delivery Area[b], July 2012 to December 2015[c]

	July–Dec 2012		Jan–Dec 2013		Jan–Dec 2014		Jan–Dec 2015	
Health Service Delivery Area[b]	**Services[a]**	**Service recipients[d]**	**Services[a]**	**Service recipients[d]**	**Services[a]**	**Service recipients[d]**	**Services[a]**	**Service recipients[d]**
Alice Springs Urban	98	97	370	348	264	242	207	178
Barkly	48	47	62	62	164	141	203	184
Borroloola	n.p.	n.p.	18	18	43	40	46	42
Central Australia	69	69	367	353	317	300	335	323
Darwin Rural	n.p.	n.p.	13	12	23	21	19	16
Darwin Urban	68	65	304	266	119	106	158	138
East Arnhem	24	23	229	209	318	293	193	177
Katherine East	n.p.	n.p.	23	22	n.p.	n.p.	124	121
Katherine Urban	n.p.	n.p.	105	98	28	23	59	55
Katherine West	—	—	15	13	29	28	130	126
Maningrida	5	5	89	80	47	45	104	99
Tiwi	n.p.	n.p.	37	35	n.p.	n.p.	28	28
Top End West	12	12	141	134	116	111	103	95
West Arnhem	16	16	89	80	75	61	39	35
Total	**349**	**343**	**1,862**	**1,718**	**2,323**	**2,179**	**1,943**	**1,804**

(a) A 'fissure sealant service' is an occasion of service where a fissure sealant was applied. Children and adolescents can receive 1 or more fissure sealants in 1 occasion of service.

(b) Based on the area where the service was provided rather than the place of residence of the service recipient.

(c) Non-consent aggregated data for January–June 2014 include both consent and non-consent services and recipients for children and adolescents aged 6 to 15. For 2014 and 2015, the total numbers of non-consented services and service recipients are not available by Health Service Directory Area but are included in the total.

(d) As children and adolescents can receive services in multiple regions, the sum of the column might not equal the total.

Note: Services include only those provided through the NTRAI.

Source: AIHW analysis of NTRAI dental data collection for services provided on or before 31 December 2015.

Table A2.5: Number of NTRAI OHP fissure sealants[a], fissure sealant services[b] and service recipients, by age[c] and sex, 2015[d]

	Sealants		Services		Service recipients		Average no. sealants	
	Number	%	Number	%	Number	%	Per service	Per child
Age group (years)								
0–5	596	7.5	176	10.1	163	10.1	3.4	3.7
6–11	4,525	57.0	1,117	63.9	1,032	64.1	4.1	4.4
12–15	2,819	35.5	455	26.0	414	25.7	6.2	6.8
Total	**7,940**	**100.0**	**1,748**	**100.0**	**1,609**	**100.0**	**4.5**	**4.9**
Sex[e]								
Male	3,413	43.0	778	44.5	705	43.8	4.4	4.8
Female	4,508	56.8	968	55.4	902	56.1	4.7	5.0
Missing	19	0.2	2	0.1	2	0.1	9.5	9.5
Total	**7,940**	**100.0**	**1,748**	**100.0**	**1,609**	**100.0**	**4.5**	**4.9**

(a) Fissure sealant applied to individual teeth. A child may receive several sealants in 1 service.

(b) A 'fissure sealant service' is an occasion of service where a fissure sealant was applied. Children and adolescents can receive 1 or more fissure sealants in 1 occasion of service.

(c) Age at last service.

(d) Data are reported only where consent was obtained.

(e) Children with missing information for sex are included in total.

Note: Services include only those provided through NTRAI.

Source: AIHW analysis of NTRAI dental data collection for services provided on or before 31 December 2015.

Table A2.6: Extractions under general anaesthesia through the NTRAI OHP, number of services[a] and service recipients, by consent status, July 2012 to December 2015

	Consent number		Non-consent[b] number		Total number		Consent rate[c] %	
Period	Services	Service recipients[d]	Services	Service recipients	Services	Service recipients[d]	Services	Service recipients
July–Dec 2012	2	2	8	8	10	10	20.0	20.0
Jan–Dec 2013	92	92	23	23	115	115	80.0	80.0
Jan–Dec 2014	24	24	3	3	27	27	88.9	88.9
Jan–Dec 2015	0	0	0	0	0	0	0.0	0.0
Total July 2012–Dec 2015	**118**	**118**	**34**	**34**	**152**	**152**	**77.6**	**77.6**

(a) A 'service' is an occasion of service.

(b) Where consent for the sharing of detailed information was not provided and data were supplied in aggregate form.

(c) Proportion of consented data.

(d) As children and adolescents can receive services in multiple periods, the sum of the column might not equal the total.

Source: AIHW analysis of NTRAI dental data collection for services provided on or before 31 December 2015.

Table A2.7: Number of NTRAI OHP clinical services[a][b] and service recipients, by Health Service Delivery Area[c], July 2012 to December 2015[d]

	July–Dec 2012		Jan–Dec 2013		Jan–Dec 2014		Jan–Dec 2015	
Health Service Directory Area	**Services**	**Service recipients[e]**	**Services**	**Service recipients[e]**	**Services**	**Service recipients[e]**	**Services**	**Service recipients[e]**
Alice Springs Urban	—	—	51	49	—	—	12	11
Barkly	219	167	342	268	435	282	575	327
Borroloola	49	41	161	125	121	107	103	88
Central Australia	711	605	1,430	1,052	704	554	582	420
Darwin Rural	—	—	12	11	12	11	19	18
Darwin Urban	—	—	96	87	—	—	7	6
East Arnhem	150	142	838	606	854	611	586	449
Katherine East	51	48	176	136	41	39	373	288
Katherine Urban	n.p.	n.p.	63	63	20	20	33	27
Katherine West	n.p.	n.p.	75	69	94	65	205	175
Maningrida	106	97	292	214	197	147	279	216
Tiwi	95	87	215	159	65	60	49	49
Top End West	124	114	574	426	368	298	402	322
West Arnhem	92	86	272	203	138	120	21	20
Total	**1,605**	**1,393**	**4,597**	**3,435**	**3,159**	**2,407**	**3,378**	**2,533**

(a) A ‘service’ is an occasion of service.

(b) Includes extractions under general anaesthesia.

(c) Based on the area where the service was provided rather than the place of residence of the service recipient.

(d) Non-consent aggregated data for July 2014 onward and 2015; so the total numbers of non-consented services and service recipients are not available by Health Service Delivery Area but are included in the total.

(e) As children and adolescents can receive services in multiple regions, the sum of the column might not equal the total.

Note: Services include only those provided through the NTRAI.

Source: AIHW analysis of NTRAI dental data collection for services provided on or before 31 December 2015.

Table A2.8: Number of NTRAI OHP clinical services[(a)(b)] and service recipients[(c)], by age[(d)] and sex, 2015

	Services		Service recipients	
	Number	**%**	**Number**	**%**
Age group (years)[(d)]				
0–5	1,095	33.7	816	34.0
6–10	1,567	48.3	1,171	48.8
11–15	584	18.0	414	17.2
Total[(e)]	3,246	100.0	2,401	100.0
Sex				
Male	1,567	48.3	1,170	48.7
Female	1,676	51.6	1,229	51.2
Total[(e)]	**3,246**	**100.0**	**2,401**	**100.0**

(a) A 'service' is an occasion of service.

(b) Includes extractions under general anaesthesia.

(c) Data are reported only where consent was obtained.

(d) Age at last service.

(e) Includes 1 unknown date of birth and 2 unknown sex.

Note: Services include only those provided through the NTRAI.

Source: AIHW analysis of NTRAI dental data collection for services provided on or before 31 December 2015.

Table A2.9: Number of NTRAI OHP clinical services[(a)(b)] and service recipients[(c)], by type of clinical service, 2015

	Services[(d)]		Service recipients[(d)]	
Type of clinical service	**Number**	**%**	**Number**	**%**
Diagnostic	2,701	83.2	2,339	97.4
Preventive[(e)]	2,130	65.6	1,860	77.5
Restorative	969	29.9	828	34.5
Surgery	125	3.9	119	5.0
Endodontic	15	0.5	15	0.6
Other	1	0.0	1	0.0
Total	**3,246**	**100.0**	**2,401**	**100.0**

(a) A 'service' is an occasion of service.

(b) Includes extractions under general anaesthesia.

(c) Data are reported only where consent was obtained.

(d) Children and adolescents can receive multiple services, and multiple types of clinical services on 1 service occasion; therefore, the sum of the column might not equal the total.

(e) Includes preventive services other than full-mouth FV or fissure sealants (such as oral health education or instruction in dental hygiene).

Note: Services include only those provided through the NTRAI.

Source: AIHW analysis of NTRAI dental data collection for services provided on or before 31 December 2015.

Appendix B: Data collection form

NTRAI CHCI DENTAL SERVICES DATA COLLECTION FORM

1. Organisation details

Date of Service: ☐☐/☐☐/☐☐☐☐ (dd/mm/yyyy)

ID or name of Community or Town Camp where this service was provided:

☐☐☐☐☐

ID or name of Community or Town Camp where child is resident:

☐☐☐☐☐

2. Consent to provide information to the Commonwealth

This dental service is funded by the Commonwealth Government. Information relating to the dental services provided to you, including any treatment and follow up treatment you receive (for example, surgery) will be kept by your dentist and provided to the Australian Institute of Health and Welfare (AIHW). To ensure you receive any follow up services you need and to evaluate and improve this program, the AIHW may disclose the information it receives to the Commonwealth Government to enable this evaluation, improvement and follow up to occur. Your name will not be provided to the AIHW or the Commonwealth Government and your information will not be reported in any way which could identify you.

Consent given to provide information to the Commonwealth?

☐ Yes ☐ No

If consent is not obtained, no data to be sent to the AIHW.

3. Child's details

HRN: _____

DOB: ☐☐/☐☐/☐☐☐☐ (dd/mm/yyyy)

SEX: ☐ Male ☐ Female

(Continued on next page)

Please provide HRN and date of service again: HRN:_____ Date of service:_____

4. Dental services provided

Indicate all services provided during this occasion of service

- ☐ 0: Diagnostic
- ☐ 1: Preventive
- ☐ 1(a): Full-mouth fluoride
- ☐ 1(b): Fissure sealant
  Number of teeth have fissure sealant in this service ( )
- ☐ 2: Periodontic
- ☐ 3: Surgery/Exodontia
- ☐ 4: Endodontic
- ☐ 5: Restorative
- ☐ 6: Crown or bridge
- ☐ 7: Prosthetics
- ☐ 8: Orthodontic
- ☐ 9: Other – please specify_____

5. Problems treated

Indicate all problems treated during this occasion of service

- ☐ 1: Assessment only
- ☐ 2: Oral health education
- ☐ 3: Untreated caries
- ☐ 4: Gum disease
- ☐ 5: Broken or chipped teeth due to trauma
- ☐ 6: Abnormal teeth growth
- ☐ 7: Missing teeth
- ☐ 8: Mouth infection or mouth sores
- ☐ 9: Dental hygiene (including plaque and calcification)
- ☐ 10: Dental abscess
- ☐ 11: Other – please specify_____

6. dmft/DMFT and dmfs/DMFS scores

•dmft: if less than 11 years old	d		m		f		dmft	
•DMFT: if 7 years or over	D		M		F		DMFT	
•dmfs: if less than 11 years old	d		m		f		dmfs	
•DMFS: if 7 years or over	D		M		F		DMFS	

7. Follow-up requirements

Does this child require further follow-up in order to complete their treatment plan? ☐ Yes ☐ No

8. Referred for GA ☐ Yes ☐ No

Appendix C: Data quality statement—Stronger Futures in the Northern Territory dental data collection

Summary of key issues

- This data collection included around 10,000 Indigenous children and adolescents who were aged between 0 and 15 and who received oral health services under the SFNT OHP and, later, under the NTRAI OHP. They account for around 42% of the Northern Territory Indigenous population for this age group (23,840). However, they are not a random sample of Indigenous children and adolescents in the Northern Territory. Therefore, SFNT/NTRAI OHP data may not be representative of the general population of Indigenous children and adolescents in the Northern Territory.
- Data collected as part of the SFNT/NTRAI OHP are a by-product of a clinical process. That is, dental professionals who provide clinical services document the results on standard data collection forms or in a computer-based data collection system.
- In the first 6 months of the SFNT OHP (July to December 2012), the consent rate to share data with the AIHW was low, at 32% for clinical service recipients, 26% for full-mouth FV recipients, and about 24% for fissure sealant recipients; data collected in this period are not representative of all SFNT dental services and service recipients. However, consent rates improved substantially after the initial period to about 98% for clinical service recipients, 81% for full-mouth FV recipients, and 89% for fissure sealant recipients in 2015.

Description

The National Partnership Agreement on Stronger Futures in the Northern Territory (SFNT) was implemented in mid-2012 and replaced by the National Partnership Agreement on Northern Territory Remote Aboriginal Investment (NTRAI) in July 2015, outlining a 10-year commitment to 2021–22. It is funded by the Australian Government and delivered by the Northern Territory Government. The AIHW collects data on the SFNT/NTRAI OHP, which includes the delivery of clinical services; extractions under general anaesthesia (July 2012 to December 2014); and a preventive program, including the delivery of fissure sealants and full mouth FV applications.

Institutional environment

This section provides information about the origin of the data collection and the arrangements under which the collection is governed and administered.

The AIHW is a major national agency set up by the Australian Government under the *Australian Institute of Health and Welfare Act 1987* (Commonwealth) to provide reliable, regular and relevant information and statistics on Australia's health and welfare. It is an independent corporate Commonwealth entity established in 1987, governed by a management Board, and accountable to the Australian Parliament through the Health portfolio.

The AIHW aims to improve the health and wellbeing of Australians through better health and welfare information and statistics. It collects and reports information on a wide range of topics and issues, ranging from health and welfare expenditure, hospitals, disease and injury, and mental health, to ageing, homelessness, disability and child protection.

The Institute also plays a role in developing and maintaining national metadata standards. This work contributes to improving the quality and consistency of national health and welfare statistics. The Institute works closely with governments and non-government organisations to achieve greater adherence to these standards in administrative data collections to promote national consistency and comparability of data and reporting.

One of the main functions of the AIHW is to work with the states and territories to improve the quality of administrative data and, where possible, to compile national data sets based on data from each jurisdiction, to analyse these data sets and to disseminate information and statistics.

Compliance with both the *Australian Institute of Health and Welfare Act 1987* and the *Privacy Act 1988* (Commonwealth), ensures that the data collections managed by the AIHW are kept securely and under the strictest conditions with respect to privacy and confidentiality.

For more information, see the AIHW website <www.aihw.gov.au>.

The Northern Territory Department of Health (NT DoH) has been funded to deliver SFNT/NTRAI oral health services. The NT DoH is responsible for providing a wide range of health and family services, and delivers services related to the Ministerial responsibilities of Health and Senior Territorians. Further information can be found on the NT DoH website <www.health.nt.gov.au>.

Timeliness

This section specifies the timeliness of the supply of data for this collection, in terms of the time taken for the AIHW both to receive and process data from service providers, and to publish data from the end of a reporting period.

The first report from the SFNT dental data collection was published in December 2014, with a reference period of July 2012 to December 2013. The second report from the SFNT/NTRAI dental data collection was published in January 2017, with a reference period of July 2012 to December 2015. It is expected that future reports will be published on an annual basis by calendar year.

The data that have been collected from services delivered under the SFNT/NTRAI OHP are a by-product of a clinical process. The data items were extracted from an electronic information system where dental professionals record clinical information when they provide dental services. The data on services delivered were submitted to the AIHW by the NT DoH at the start of each calendar year.

Accessibility

This section outlines the capacity of data users to identify the availability of relevant information, and then to access it in a convenient and suitable manner.

SFNT/NTRAI reports are published on the AIHW website. They can be downloaded free of charge.

Permission to obtain unpublished data must be sought from the Department of Health and the NT DoH. As well, approvals from relevant Northern Territory ethics committees may be required.

Interpretability

This section includes information on the availability of information to help provide insight into the data, to assist with interpretation and usability.

To help stakeholders interpret information about the SFNT/NTRAI OHP, reports contain basic information about the program, relevant definitions, and information about the data contained in the analyses presented. This includes information about caveats or aspects that readers should be aware of when interpreting the data.

A copy of the SFNT/NTRAI National Partnership Agreement is available from the Standing Council on Federal Financial Relations <http://www.federalfinancialrelations.gov.au>.

Relevance

This section includes information about how well the data meet the agreed purpose of the data collection in terms of concepts measured and population represented.

The Northern Territory dental data collection captures data on children and young people who receive oral health services funded through the SFNT/NTRAI. The data include information on the amount of services provided, as well as demographic information and the oral health status of service recipients; the data also allow for comparison of children's oral health status over a time period. The information provided from the data is critical for monitoring oral health services and the oral health status of service recipients.

Accuracy

This section provides information about the degree to which the data correctly describe the phenomenon they were designed to measure.

This data collection included around 10,000 Indigenous children and adolescents, aged 0–15, who received SFNT OHP services and, later, NTRAI OHP services. They account for around 42% of the Northern Territory Indigenous population for this age group; however, they are not a random sample of Indigenous children and adolescents in the Northern Territory. Therefore, SFNT/NTRAI OHP data may not be representative of the general population of Indigenous children and adolescents in the Northern Territory.

Not all dental services provided in the Northern Territory are captured in the SFNT/NTRAI dental data collection. This data collection captures only oral health services funded through the SFNT/NTRAI OHP.

To obtain unit record data for a child or adolescent in the SFNT/NTRAI dental data collection, consent must be obtained from the service recipient's parent or guardian. If consent is not obtained, only a limited amount of information is sent to the AIHW. These data are submitted to the AIHW in aggregate form to enable the number of services and service recipients to be counted, but do not contain detailed demographic information, types of treatment received or oral health status. In the first 6 months of the SFNT OHP (July to December 2012), the consent rates were low, at 32% for clinical service recipients, 26% for full-mouth FV recipients, and about 24% for fissure sealant recipients. Hence, the data collected in the early stages of the program are not representative of all SFNT dental services

and service recipients. However, consent rates improved greatly over the past few years: in 2015, consent rates were over 98% for clinical service recipients, 81% for full-mouth FV recipients, and 89% for fissure sealant recipients.

Coherence

This section provides information about the internal consistency of a statistical collection, product or release, as well as its comparability with other sources of information, within a broad analytical framework and over time.

Oral health program services were originally funded through the Northern Territory programs referred to in this report as CHCI(CtG), which ran from August 2007 to June 2012. Direct comparisons between data from these programs and the SFNT/NTRAI OHP cannot be made due to differences in eligibility for the programs:

- CHCI(CtG) services were provided to Indigenous children and adolescents in Prescribed Areas of the Northern Territory and targeted those who had a referral from the NTER program of child health checks. The final report from the CHCI(CtG) program, *Northern Territory Emergency Response Child Health Check Initiative – follow-up services for oral and ear health: final report 2007–2012*, was published in 2012 and is available from the AIHW website.
- Under the SFNT/NTRAI OHP:
  - all Indigenous children and adolescents in the Northern Territory under the age of 16 are eligible for services
  - services are targeted towards remote areas of the Northern Territory.

Since 2014, there have been a number of changes in the data submitted by the OHS-NT to the AIHW. Apart from basic demographic information, HRN and number of decayed, missing and filled teeth for service recipients, all other data items are no longer submitted. In the past, the AIHW received information about dental problems treated (for example, gum disease). The latest data received by the AIHW include dental procedures undertaken at each episode of dental care, using 'The Australian Schedule of Dental Services and Glossary', a coding system for dental treatment. Although it is possible to derive the types of dental services provided from this coding system, the information is not sufficient to derive the exact type of dental problem treated. As a result, in the report with a reference period of July 2012 to December 2015, it was not possible to include the analyses related to the types of dental problems treated that were presented in previous AIHW reports on SFNT oral health services.

Appendix D: The Australian Schedule of Dental Services and Glossary codes

Table D1: The Australian Schedule of Dental Services and Glossary (tenth edition) codes used in report

The Australian Schedule of Dental Services and Glossary code	Service type in report
10–86	Diagnostic
111–171	Preventive
213–282	Periodontic
311–399	Surgery
411–458	Endodontic
511–597	Restorative
611–659	Crown or bridge
661–779	Prosthetics
811–881	Orthodontics
911–990	Other

Glossary

deciduous teeth: Primary teeth that develop during the embryonic stage of human development and erupt (that is, become visible in the mouth) during infancy. They are usually lost and replaced by permanent teeth, but in the absence of permanent replacements, they can remain functional for many years.

dental caries: An infectious disease that can lead to cavities (small holes) in the tooth structure that compromise both the structure and the health of the tooth, commonly known as tooth decay.

diagnostic services: Services that include examinations (initial, periodic and emergency oral examinations; consultations; written reports; referrals), radiographical examination and interpretation (intraoral radiographs, skull radiographs) and other diagnostic services (including bacteriological examination, antibiotic sensitivity tests, biopsy and casts).

dmft: Decayed, missing or filled teeth (deciduous). See **deciduous**.

DMFT: Decayed, missing or filled teeth (permanent).

dmft/DMFT: The score for deciduous and permanent teeth combined (that is, dmft+DMFT).

endodontics: Pulp treatments (pulp capping, pulpotomy, extirpation or debridement of root canal).

extraction: Removal of permanent or deciduous tooth, tooth fragment.

fissure sealants: Thin plastic coatings that are applied to the grooves on the chewing surfaces of the back teeth to protect them from tooth decay.

full-mouth fluoride varnish (FV): A concentrated form of fluoride that is applied in 1 service to as many tooth surfaces as possible.

Indigenous: A person of Aboriginal or Torres Strait Islander descent who identifies as an Aboriginal or Torres Strait Islander and is accepted as such by the community in which he or she lives.

periodontics: Treatment of gums and periodontal tissues (treatment of acute infection).

permanent teeth: Adult or secondary teeth that erupt at about 6 years of age. By about age 21, a person usually has 32 permanent teeth.

preventive services: Services including dental prophylaxis (removal of plaque, removal of calculus, recontouring of existing restorations), topical fluoride (application of fluoride solution or gel, instruction on self-application) and other preventive services (including dietary advice, oral hygiene instruction, fissure sealing and mouthguards).

restorative: Amalgams (filling of 1, 2, 3+ surfaces). Glass ionomer, silicate and composite resins (filling of 1, 2, 3+ surfaces).

Significant Caries Index (SiC): Mean dmft/DMFT score of the top 30% of the population.

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List of tables

List of figures

List of boxes

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AIHW (Australian Institute of Health and Welfare) 2012. Northern Territory Emergency Response Child Health Check Initiative: follow-up services for oral and ear health: final report, 2007–2012. Cat. no. DEN 223. Canberra: AIHW.

AIHW 2014. Stronger Futures in the Northern Territory: oral health services July 2012–December 2013. Cat. no. IHW 144. Canberra: AIHW.

AIHW 2011. Dental health of Indigenous children in the Northern Territory: findings from the Closing the Gap Program. Cat. no. IHW 41. Canberra: AIHW.

This report presents analyses on oral health services provided to Aboriginal and Torres Strait Islander children and adolescents in the Northern Territory under the National Partnership Agreement on Northern Territory Remote Aboriginal Investment. From July 2012 to December 2015, there was generally an increase in the number of Indigenous children and adolescents who received full-mouth fluoride varnish applications, fissure sealant applications, and clinical services. A long-term analysis shows that the proportion of service recipients with experience of tooth decay decreased for most age groups between 2009 and 2015, with the greatest decrease—from 73% to 42%—seen in those aged 1–3.