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## **Dental Public Health Team**

# **CHILD DENTAL GENERAL ANAESTHETICS IN WALES**

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**Purpose and Summary of Document:**

The aim of this work is to determine an overall figure for general anaesthesia (GA) dental procedures carried out on children aged 0-17 in Wales during 2014-15 and to compare this with data collected in 2013-14, 2012-13 and 2011-12. This information assists the Chief Dental Officer in monitoring GA provision and efforts to ensure it is used appropriately.

**Work Plan reference:**

Dental Public Health Team Work plan Objective 3.3

# 1 Child Dental General Anaesthetics in Wales

## Background

The 2011 inquiry into Children's Oral Health by the National Assembly for Wales Children and Young People's Committee recommended that:

*The Welsh Government should ensure that data on the number of general anaesthetics administered to children and young people for dental work in Wales is collated and reported as part of the monitoring of Designed to Smile.*

A written response by Welsh Government to the Committee agreed with this recommendation, acknowledging that:

*This may be a useful indicator of the success of Designed to Smile but it is important to collect these data on an all-Wales basis in a robust standardised way.*

As a result the Chief Dental Officers National Oral Health Plan prioritised this action:

*Following recommendations by the Children and Young People Committee, the Welsh Government will develop and publish data about the number of children receiving dental treatment under GA each year. ([NOHAP](#), March 2013, page 28)*

## 1.1 Purpose

The aim of this work is to determine an overall figure for general anaesthesia (GA) dental procedures carried out on children aged 0-17 in Wales during 2014-15 and to compare this with data collected in 2013-14, 2012-13 and 2011-12.

## 1.2 Method

*The data has been collated by making direct contact with dental provider managers requesting the 2014-15 information. This collation of data did not include dental treatment conducted via conscious sedation.*

It is important to note that systems are not in place across the whole of Wales to produce accurate and timely data relating to dental general anaesthesia.

### 1.3 Findings

A total of 7,855 dental GAs were performed in Wales during 2014-15. These are presented by LHB of provider in Table 1 and LHB of patient's residence in Table 2. This equates 1.16% of the under 18 population receiving a dental GA in Wales during 2014-15 (Table 3). Or *one in every 86 children* across Wales receives a GA for dental treatment.

Health Boards should have robust mechanisms in place to record and monitor data on dental general anaesthesia for the purpose of local clinical governance; consisting of individual record level data providing demographic information, details of treatment and anaesthetic type. This information should then be readily available when requested by Public Health Wales or Welsh Government. Some service providers are able to do this; some are able to provide a subset of the ideal monitoring information, whilst others have not been in a position to provide the full information requested, see Table 1.

**Table 1 GAs for children's dental treatment by LHB of provider – 2014-15**

LHB of Provider/ Commissioner	Provider	0-2yrs	3-17yrs	Total
Abertawe Bro Morgannwg	Parkway Clinic			1494
	Morrison Hospital	11	111	122
	Princess of Wales	7	76	83
Aneurin Bevan	Kensington Court	0	1342	1342
Aneurin Bevan	Aneurin Bevan (inc Royal Gwent)	55	308	363
Betsi Cadwaladr	CDS	2	1188	1190
Cwm Taf	Prince Charles	82	273	355
Cardiff and Vale	UDH	124	949	1073
Cardiff and Vale	Royal Glamorgan (C&V CDS via SLA)	12	561	573
Hywel Dda	Parkway Clinic			1257
Powys	Powys Teaching LHB	0	3	3
<b>WALES TOTAL</b>		<b>293</b>	<b>4811</b>	<b>7855</b>

There appear to be some data anomalies in the recording of GA in children for Powys residents. Only three GAs for dental treatment for children under 18 were performed by a provider in Powys (Table 1). According to Powys Health Board, 27 children from Powys received treatment via GA from other LHBs in Wales. The data that the other Welsh LHBs sent to the WOHIU totalled 20 children for Powys (Table 2). Cwm Taf Health Board (Prince Charles) for example stated they treated 15 Powys residents (Table 2) whilst Powys HB indicated that this figure was 12. ABMU stated they had

treated only 4 Powys residents, yet Powys HB documented this as 11 patients. However, it should be noted that the anomalous numbers involved are small and have a minimal effect on the national picture.

**Table 2 GAs for children's dental treatment by LHB of patient - 2014-15**

LHB of patient's residence	Provider	Number of patients from LHB
Aneurin Bevan	Kensington Court	1342
Aneurin Bevan	C&V - UDH	90
Aneurin Bevan	Royal Gwent*	359
Aneurin Bevan	Morrison Hospital	1
Aneurin Bevan	Prince Charles	69
Aneurin Bevan	Princess of Wales	1
<b>Aneurin Bevan total</b>		<b>1862</b>
Abertawe Bro Morgannwg	Parkway	1494
Abertawe Bro Morgannwg	Morrison Hospital	75
Abertawe Bro Morgannwg	Princess of Wales	53
Abertawe Bro Morgannwg	Prince Charles	7
Abertawe Bro Morgannwg	C&V CDS - at the Royal Glamorgan	3
Abertawe Bro Morgannwg	C&V - UDH	20
<b>Abertawe Bro Morgannwg total</b>		<b>1652</b>
Betsi Cadwaladr	CDS	1190
<b>Betsi Cadwaladr total</b>		<b>1190</b>
Cwm Taf	C&V CDS - at the Royal Glamorgan	534
Cwm Taf	C&V - UDH	80
Cwm Taf	Prince Charles	256
<b>Cwm Taf total</b>		<b>870</b>
Cardiff and Vale	C&V - UDH	878
Cardiff and Vale	C&V CDS - at the Royal Glamorgan	4
Cardiff and Vale	Morrison Hospital	5
Cardiff and Vale	Prince Charles	6
Cardiff and Vale	Princess of Wales	0
<b>Cardiff and Vale total</b>		<b>893</b>
Hywel Dda	Parkway	1257
Hywel Dda	Morrison Hospital	38
Hywel Dda	Princess of Wales	28
Hywel Dda	Prince Charles	1
Hywel Dda	C&V CDS - at the Royal Glamorgan	5
Hywel Dda	C&V - UDH	2
<b>Hywel Dda total</b>		<b>1331</b>
Powys	Morrison Hospital	3
Powys	Royal Gwent*	
Powys	Princess of Wales	1
Powys	C&V - UDH	3
Powys	Prince Charles	15
Powys	Powys Teaching LHB	3
<b>Powys total</b>		<b>25</b>
<b>WALES TOTAL</b>		<b>7823</b>

\*minus 4 patients - Powys, Swindon PCT and West Gloucestershire PCT

\*\*minus 1 for PCH - England

\*\*\*27 not assigned an LHB of residence at Royal Glamorgan

Table 3 provides a view on the number of GAs per unit child population. Given the main indication for a GA is to manage teeth affected by tooth decay we would expect higher GA provision in areas with higher decay levels.

**Table 3 Prevalence of dental GAs amongst the under 18 population**

<b>LHB</b>	<b>Number of children aged &lt;18</b>	<b>Number of GAs by LHB of patient's residence</b>	<b>% prevalence</b>
Powys	27850	25	0.09
Cardiff & Vale	105416	893	0.85
Betsi Cadwaladr	148940	1190	0.80
Aneurin Bevan	133632	1862	1.39
Cwm Taf	66495	870	1.31
Hywel Dda	81028	1331	1.64
Abertawe Bro Morgannwg	110726	1652	1.49
<b>WALES</b>	<b>674087</b>	<b>7823</b>	<b>1.16</b>

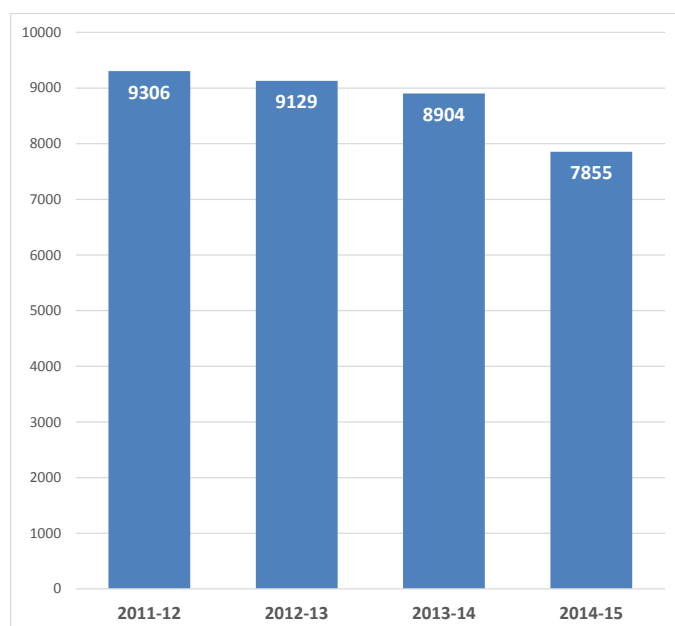
\*2011 Census data (calculated from single year age groups).

*NB 1 GA does not equate 1 child. A few children may have had more than one.*

The highest decay levels at ages 3, 5 and 12 are found in Cwm Taf and Aneurin Bevan LHB areas. The highest reported GA rates found in AMBU and particularly Hywel Dda LHBS are out of step with what would be expected given reported mean decay levels.

#### **1.4 Comparison with previous years activity (including the 2011-12 Baseline)**

Figure 1 compares the 2014-15 activity against the 2013-14, 2012-13 and the 2011-12 data, the latter was the first to be collated for this exercise and acts as baseline data.

**Figure 1 GA activity 2011-2015**

*\*2011-12 figure is adjusted to estimate the numbers that might have been reported by Aneurin Bevan for the Royal Gwent.*

First of all it is important to note that the 2011-12 figures did not include data from the Royal Gwent in Aneurin Bevan, because it was not reported. To make a fairer comparison between the four reporting years, the 2011-12 baseline has been adjusted to include 214 GAs (which was the figure for 2012-13). If we were to assume that approximately the same number of GAs were carried out in Aneurin Bevan in 2011-12, then the **amended Wales baseline** for that year would be  $9,092 + 214 = \mathbf{9,306}$ .

The number of GAs for dental treatment in children in Wales in 2014-15 was 7,855, this compares favourably with figures previously reported (Figure 1). This represents a 16% (1451) reduction in GAs in children since 2011-12 (assuming an adjusted 9,306 baseline).

## 1.5 Discussion

When reviewing the data presented by provider/commissioner it is evident that recent innovations of enhanced patient screening criteria and new care pathways have started to take effect. During 2014-15 GA activity for this vulnerable group has fallen for Parkway, Kensington Court and UDH. But, there has been a small increase in activity at Morryston, The Royal Gwent and the Royal Glamorgan (Figure 2(ii)).

Even though the numbers of children in Wales having GA for dental treatment appear to be falling – this does not equate to reduced experience of dental caries amongst Welsh children – it is a reflection of the changes to assessment and treatment protocols.

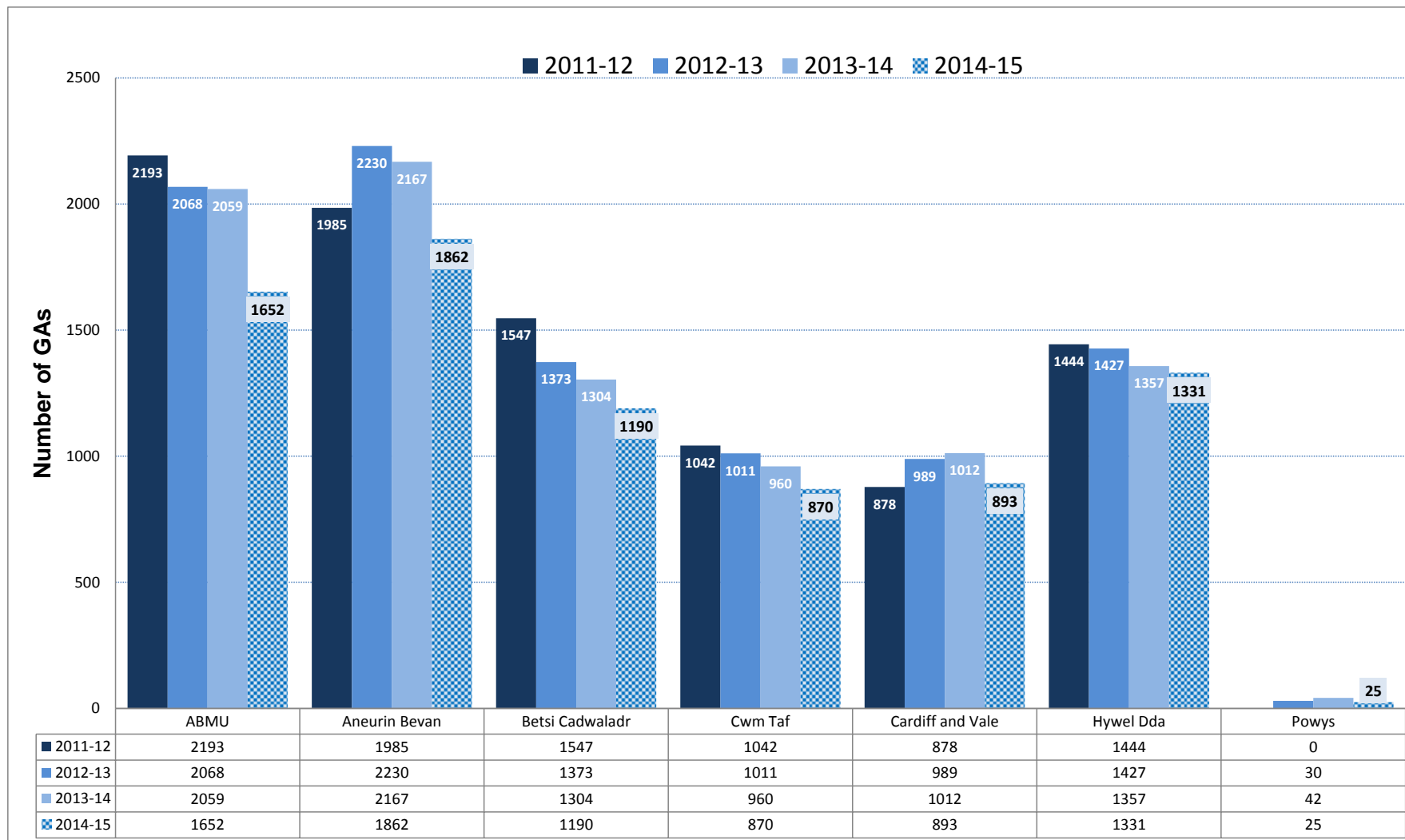
It is important to acknowledge that key stakeholders have raised concerns about evidence of double counting and other data anomalies – so GA data needs to be interpreted with caution.

Professional opinion expressed by key stakeholders suggested that some of this fall may reflect availability of GA sessions and longer waiting times and may not be associated with a reduction in need. Availability of specialist Paediatric Dental Service and conscious sedation services also affect the utilisation of GA for dental treatment.

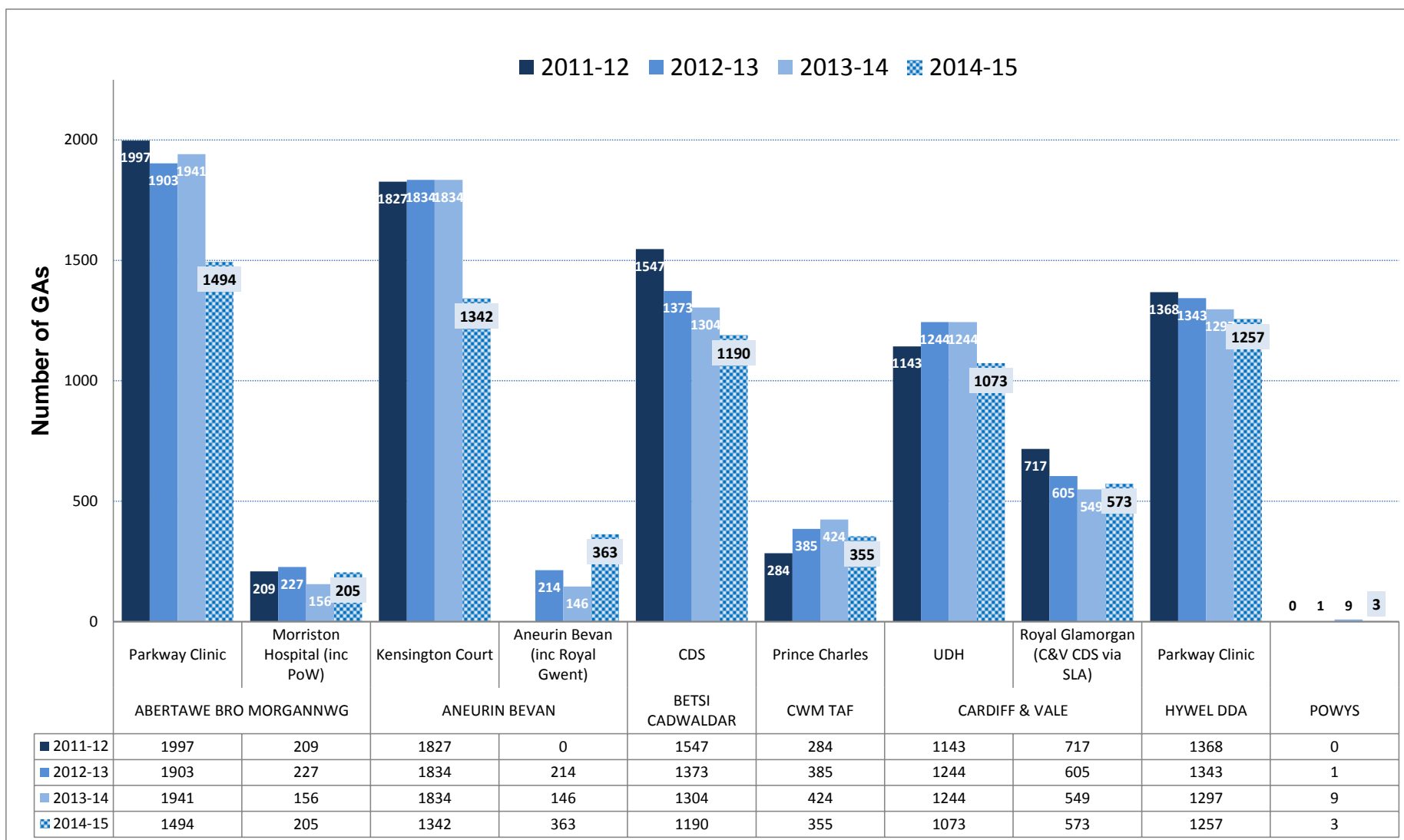
Compared with other LHB areas GA provision in ABMU and particularly Hywel Dda is higher than would be expected given the prevalence of decay.

## Conclusion

Number of general anaesthetic for dental treatment of children in Wales decreased in 2014/15 compared to previous years. This decrease seem to be because of changes in care pathways and local referral processes in some Health Boards.

**Figure 2(i) GA activity 2011-2015 presented by LHB of residence**

**Figure 2(ii) GA activity 2011-2015 presented by provider within LHB boundaries**





## **1.6 Recommendations**

- 1.5.1 It is recommended that the Welsh Government and Health Boards continue to monitor GAs for children's dental treatment, once the changes to care pathways and referral processes become embedded in all Health Boards, we should then be in a position to assess any changes associated with improvements in oral health.
- 1.5.2 There needs to be central reporting of, and a standardised approach to the collection of child dental GA data, and for the data to be robust enough to fulfil governance requirements. Health Boards should have robust mechanisms in place to record and monitor data on dental general anaesthesia for the purpose of local clinical governance. This information should then be readily available for the purpose of reporting (national/regional/local) to inform service planning.
- 1.5.3 Within their Local Oral Health Plans, all Health Boards should develop medium and long term strategies to reduce the number of child dental GAs. Health Boards that do not have standardised assessment and treatment planning, link with conscious sedation and specialist Paediatric Service within their existing dental GA care pathway revisit their care pathway. Some health boards still need to consider whether historical contract volumes for GA reflect current need, and if development/improvement of conscious sedation and specialist Paediatric services within the primary/community setting could reduce the need for dental GA.