



Procedures data cubes

Web report | Last updated: 12 Jul 2023 | Topic: [Hospitals](#)

About

A procedure is defined as a clinical intervention that is surgical in nature, carries a procedural risk, carries an anaesthetic risk, requires specialised training, and/or requires special facilities or equipment only available in an acute care setting. Procedures therefore encompass surgical procedures and also non-surgical investigative and therapeutic procedures.

Cat. no: WEB 216

- [Data cubes](#)
 - [User guide](#)
-





Data cubes

The following list of data cubes are available for access online. See the [Notes section](#) for more information on how to use the data cubes.

© Australian Institute of Health and Welfare 2023



User guide

The data cubes can be used to explore a range of clinical data related to hospital separations. This document will provide some tips on how to utilise the data cubes generally and how to deal with the different formats in which the cubes are provided.

From the 2015-16 financial year, hospitals data cubes have been made available in Excel format. Prior to 2015-16 hospitals data cubes are available in the SAS cubes software. The guide for extraction of information from these cubes depends on the format in which they are available.

Hospitals data cubes 2015-16 and later

The excel data cube workbooks consist of two sheets:

- Procedure Counts Data contains separation statistics by ACHI procedure by age group by sex by same-day status.
- Procedure Counts Summary contains a pivot table showing procedure counts by ACHI procedure code. This pivot table can be modified to various levels by right clicking on the table, selecting 'Show Field List' and then modifying the pivot table as desired.

- Variables in the ROWS list can be removed to disaggregate at higher levels.
- Variable such as age group, sex and/or same-day flag can be dragged to the COLUMNS list to disaggregate by these variables.

Hospital data cubes prior to 2015-16

These data cubes will open in a new window. Data will be displayed at the most aggregated level.

Chapter	Year	
	2013-14	2014-15
1 Procedures on nervous system	333,336	358,362
2 Procedures on endocrine system	19,538	19,530
3 Procedures on eye and adnexa	401,373	483,606
4 Procedures on ear and mastoid process	69,308	73,919
5 Procedures on nose, mouth and pharynx	277,019	287,281
6 Dental services	357,455	372,167
7 Procedures on respiratory system	205,087	217,716
8 Procedures on cardiovascular system	544,187	560,565
9 Procedures on blood and blood-forming organs	69,400	71,369
10 Procedures on digestive system	1,808,470	1,950,793
11 Procedures on urinary system	1,735,450	1,806,504
12 Procedures on male genital organs	120,586	120,293
13 Gynaecological procedures	573,709	605,837
14 Obstetric procedures	590,005	595,514
15 Procedures on musculoskeletal system	926,405	944,990
16 Dermatological and plastic procedures	748,499	803,648
17 Procedures on breast	79,881	84,806
18 Radiation oncology procedures	16,603	17,334
19 Noninvasive, cognitive and other interventions, not elsewhere classified	10,092,861	10,867,197
20 Imaging services	100,402	103,959

Expanding categories and sub-categories

Clicking on the plus (+) symbols against each row will expand that item into its relevant sub categories, within the current view.

Clicking the arrow symbols beside the plus will expand the category and also limit the view to just that expanded area of interest.

Right clicking on category headings such as Chapter will bring up a menu where you can click 'Expand All', which will expand every item in that list. If you also do this with the subchapter and block headings you can expand out the entire data cube and display all of the available information.

Chapter	Subchapter	Year	2013-14 Procedures	2014-15 Procedures
1	Procedures on nervous system		333,336	358,362
2	Procedures on endocrine system		19,538	19,530
			3,346	3,117
			17,288	18,512
			1,016	1,051
			8,387	9,920
			235,133	276,247
			18,342	21,509
			73,924	105,660
			4,395	4,527
			1,260	1,300
			17,617	19,478
			8,434	9,532
			12,231	12,753
			69,308	73,919
			277,019	287,281
			357,455	372,167
			205,087	217,716
			544,187	560,565
			69,400	71,369

Adding breakdowns

In the default view, the cube will just present the number of procedures by year but you can also add other breakdowns such as by Age group and sex.

To add an extra breakdown, right click on one of the numbers in the cube and choose 'Assign data'.

Chapter	Subchapter	Year	2013-14 Procedures	2014-15 Procedures
1	Procedures on nervous system		333,336	358,362
2	Procedures on endocrine system		19,538	19,530
	160-165 Eyeball		3,346	3,117
	166-176 Anterior Segment - Cornea		17,288	18,512
	177-184 Anterior Segment - Sclera		23	1
	185-192 Anterior Segment - Iris, Ciliary Body and Anterior Chamber		1	7
	193-203 Anterior Segment - Lens		1	1
	204-208 Aqueous, Vitreous		1	1
	209-214 Posterior Segment - Retina, Choroid and Posterior Chamber		1	1
	215-220 Ocular Adnexa - Extraocular Muscles		1	1
	221-229 Ocular Adnexa - Orbit		1	1
	230-240 Ocular Adnexa - Eyelid		1	1
	241-250 Ocular Adnexa - Lacrimal System		1	1
	251-256 Conjunctiva		1	1
4	Procedures on ear and mastoid process		6	6
5	Procedures on nose, mouth and pharynx		27	27
6	Dental services		35	35
7	Procedures on respiratory system		20	20
8	Procedures on cardiovascular system		54	54
9	Procedures on blood and blood-forming organs		69,400	71,369

Then choose which variables to add to rows or columns of the cube.

Year	2013-14 Procedures	2014-15 Procedures
	333,336	358,362
	19,538	19,530
	3,346	3,117
	17,288	18,512
	1,016	1,051
er	8,387	9,920
	235,133	276,247
	18,342	21,509
ber	73,924	105,660
	4,395	4,527
	1,260	1,300
	17,617	19,478
	8,434	9,532
	12,231	12,753
	69,308	73,919
	277,019	287,281
	357,455	372,167
	205,087	217,716
	544,187	560,565
	69,400	71,369

Exporting data to Excel

The current view of the data cube can easily be exported to Excel by choosing 'Export...' from the 'File' menu, and then saving the zipped file to your computer. When extracting the zip archive you will need to extract all files in the archive before opening the downloaded Excel document.

Exporting the whole data cube

To do this, first see the notes about Expanding the categories and sub categories first and using Expand All. Then once you have the full view of the cube, export the data as per the step above.

Tips on using the Procedures data cube

Note that the use of the different ACHI editions in the data cubes over time means that data across years may not be exactly comparable.

One or more procedures can be reported for each separation in the National Hospital Morbidity Database, but procedures are not undertaken for all hospital admissions, and so only a proportion of the separation records include procedure data.

Within the cubes, users can view the procedures by working down from the broad chapter level in the ACHI classifications to more specific categories (i.e. procedure code), as illustrated below.

- ACHI Chapter
 - ACHI Sub-Chapter
 - ACHI Block number
 - ACHI Procedure code

For example:

- 7. Procedures on Respiratory System (Blocks 520-569)
 - Lung and Pleura (Blocks 548-558)
 - Block 549 Incision procedures on lung or pleura
 - 38415-00 Incision of pleura

Users of the data cubes are likely to require some familiarity with the *Australian Classification of Health Interventions* (ACHI) and can also refer to the Australian Hospital Statistics publications. Users will generally need to know what chapter the information they are looking for is in, to work down to more specific levels of detail. More information about the breakdowns and categories used within the data cube are given below.

Australian Classification of Health Interventions

The Australian Classification of Health Interventions (ACHI) is the Australian national standard for procedure and intervention coding in Australian hospitals, based around the Medicare Benefits Schedule (MBS). Guidelines for the use of ACHI are contained in the Australian Coding Standards (ACS).

There are some differences in the coding between editions and these will be reflected in the cube. Readers should refer to the *further information* section below for information on how to access the full classification and for detailed information on the differences between ACHI editions.

ACHI has been structured with a principal axis of anatomical site. Within each chapter the anatomical site has been structured by a 'head-to-toe' approach. The secondary axis is procedure type, beginning with the least invasive procedure through to the most invasive procedure. Due to the historical development of ACHI, code numbers do not always appear in numerical order within the tabular list. A third

level axis, called a block, has been introduced. Blocks are numbered sequentially in the tabular list to assist clinical coders in locating a specific code and have titles that relate specifically to the codes within the block. There are certain chapters that are an exception to the general format: Dental services, Obstetric procedures, Radiation oncology procedures, Non-invasive, cognitive and other interventions, not classified elsewhere and Imaging services.

The following is a list of the ACHI procedure chapters and the code ranges covered by each under Edition 10 of the ACHI:

Chapter	Procedure classification	Block range
I.	Procedures on Nervous System	1-86
II.	Procedures on Endocrine System	110-129
III.	Procedures on Eye and Adnexa	160-256
IV.	Procedures on Ear and Mastoid Process	300-333
V.	Procedures on Nose, Mouth and Pharynx	370-422
VI.	Dental Services	450-490
VII.	Procedures on Respiratory System	520-572
VIII.	Procedures on Cardiovascular System	600-777
IX.	Procedures on Blood and Blood-Forming Organs	800-817
X.	Procedure on Digestive System	850-1011
XI.	Procedures on Urinary System	1040-1129
XII.	Procedures on Male Genital Organs	1160-1203
XIII.	Gynaecological Procedures	1240-1299
XIV.	Obstetric Procedures	1330-1347
XV.	Procedures on Musculoskeletal System	1360-1580
XVI.	Dermatological and Plastic Procedures	1600-1718
XVII.	Procedures on Breast	1740-1759
XVIII.	Radiation Oncology Procedures	1786-1800
XIX.	Non-invasive, Cognitive and Other Interventions, not elsewhere classified	1820-1923
XX.	Imaging Services	1940-2016

Block numbers and procedure codes can vary across editions, with the same block numbers representing two different procedure groups. This should be taken into consideration when comparing data using different ACHI editions. Separate cubes exist for each of the ICD-10-AM/ACHI editions as it is difficult to map across editions.

Notes

Tips on using the data cubes

Please refer to the [Hospitals procedures data cubes user guide](#) for instructions on using and downloading from the data cubes.

Data source(s)

The source of these data is the AIHW National Hospital Morbidity Database. It contains procedure information for all separations excluding newborns with only unqualified days, boarders and posthumous organ procurement. More information on the procedures reported for admitted patients are available in the [Australian hospital statistics](#) reports.

Confidentiality

In order to maintain confidentiality, some data have been suppressed at the block number and procedure code level of the procedure classification. Data for the suppressed categories will be included in the upper level totals.

More online data cubes

[Principal Diagnosis data cubes](#) and [AR-DRG data cubes](#) can also be accessed online.

ACHI classification information

For more information on the ICD-10-AM/ACHI/ACS classifications please note that the first seven editions of the ICD-10-AM/ACHI were developed by the [National Centre for Classification in Health \(NCCH\)](#), The University of Sydney, the Eighth edition by the [National Casemix and Classification Centre \(NCCC\)](#), and from the Ninth edition, see the [Australian Consortium for Classification Development \(ACCD\)](#).

Request a customised data analysis

If you are looking for statistics that are not available in publications or data cubes, we also offer a data request service. Customised data analyses can be provided, subject to data quality and confidentiality requirements, from a range of AIHW-held databases. Please note that a fee may apply for this service.

[Request a customised data analysis](#)



Related material

Latest related reports

- [Principal diagnosis data cubes](#) | **Web report** | 12 Jul 2023
 - [Australian refined diagnosis-related groups \(AR-DRG\) data cubes](#) | **Web report** | 12 Jul 2023
-

