

Round 18 Private Sector Overnight NHCDC

18 November 2015

DRG Version: AR-DRG 6.0x



List of abbreviations

Abbreviation	Abbreviation Description
ABS	Australian Bureau of Statistics
AHPCS	Australian Hospital Patient Costing Standards
AIHW	Australian Institute of Health and Welfare
ALoS	Average length of stay
AR-DRG	Australian Refined Diagnosis Related Group
DoH	Department of Health
EDW	Enterprise Data Warehouse
GL	General ledger
HCP	Hospital Casemix Protocol
ICD-10-AM	International statistical classification of diseases and related health problems, Tenth Revision, Australian modification
ICU	Intensive care units including neonatal and cardiac units
IHPA	Independent Hospital Pricing Authority
LoS	Length of stay
MRN	Medical record number
NHCDC	National hospital cost data collection
NHDD	National Health Data Dictionary
OR	Operating room (theatres)
Pre-QA	Pre-costing quality assurance
Post-QA	Post- costing quality assurance
PHDB	Private Hospital Data Bureau
PwC	PricewaterhouseCoopers Australia
SPS	Specialist procedure suites
WIP	Work in progress

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1 Executive Summary

1.1 Private sector NHCDC

The private sector National Hospital Cost Data Collection (NHCDC) is a voluntary collection that produces a range of hospital cost and activity information by Australian Refined Diagnosis Related Groups (AR-DRG). This report includes the findings from Round 18 (financial year 2013-14) of the NHCDC for acute admitted care provided by overnight private hospitals.

1.2 Sample participation

Sufficiently high participation levels are essential to the ability to complete this report. In 2013-14 there were 235 hospitals eligible to participate in the collection of which 96 hospitals participated (see table 1), representing 41% of the population of in-scope hospitals. The full population reported 2,827,996 separations during the year, with the participating hospitals making up 1,697,311 of these (see table 1). This represents 60% of the population of in-scope separations (see table 1).

Table 1 Summary of private hospital participation

Summary	Round 7 2002-03	Round 11 2006-07	Round 12 2007-08	Round 13 2008-09	Round 16 2011-12	Round 17 2012-13	Round 18 2013-14
Number of hospitals	113	82	109	110	105	95	96
Sample Separations	1,240,388	1,297,147	1,607,678	1,648,989	1,775,059	1,650,816	1,697,311
Percentage of population separations	65%	59%	72%	71%	66%	60%	60%
AR-DRG version	4.2	4.2	4.2	5.1	6.0x	6.0x	6.0x

The 60% participation level represents an increase of 3% in the sample separations compared to Round 17. One of the reasons for this movement was that Round 18 had 15% more same day separations compared to Round 17 thus impacting the volume of separations provided by the sample hospitals, with the higher volume of separations reported in AR-DRGs R63Z – Chemotherapy (32,699), U60Z - Mental health, sameday, without ECT (13,795) and C16Z - Lens procedures (10,884).

1.3 Average Length of Stay (ALoS)

Round 18 average length of stay (ALoS) decreased from 2.53 days to 2.45 days which is a reduction of 3.1% compared to Round 17. The data shows an increase in same day separations compared to Round 17 which is a likely factor influencing this reduction. In addition, published literature provides further evidence that this downward trend in ALoS is expected. For example, the Australian Institute of Health and Welfare reported a sector annual average decrease in ALOS of 1.2%¹. This was attributed to hospitals focusing on efficiency strategies such as patient pathways/discharging planning; and new technologies and medical advancements enabling certain procedures to be performed quicker or with shortened recovery times.

1.4 Key findings

This section highlights the key findings of the Round 18 results for the top 20 AR-DRGs by cost weight, population-adjusted separations, cost weighted separations, and ALoS.

¹ Australian Institute of Health and Welfare (AIHW), Australia's hospitals 2013-14 – Admitted patient care 2013-14, Australia's hospitals at a glance 2013-14, viewed 22nd October 2015

1.4.1 AR-DRGs by cost weight

When analysing the top 20 AR-DRGs by cost weight, 65% were consistent between Round 17 and Round 18 with the top three being ranked on the top four last year. These AR-DRGs were anticipated to be included in this ranking due to the clinical nature of the patients, the high resource intensive treatments often requiring ventilation or high cost prosthetic implants.

The significant movement was A06D - Tracheostomy without catastrophic CC, which was ranked 18 in the current round whereas in Round 17 it was ranked 62. The reason for this movement was an increase in the critical care cost weight driven by the increase of feeder data being used rather than service weights, which represents a truer cost weight than previous years. In addition, P61Z – neonate, admitted weight <750 grams was ranked number one in Round 17 but is masked in Round 18 as it has less than five separations coded to this AR-DRG.

The highest cost weight AR-DRG for Round 18 was A06A – Tracheostomy with ventilation > 95 hours with catastrophic CC, with a cost weight of 45.16. This was ranked number two last year and is known to be a top ranking AR-DRG given it is a highly complex and resource intensive patient pathway.

1.4.2 AR-DRGs by population-adjusted separations

An analysis was performed to identify the top 20 AR-DRG's by population-adjusted separations. This is a measure of the volume of separations in the whole population (i.e. the number of separations in the Round 18 sample, adjusted using the weights to reflect the whole population). This analysis showed a 95% consistency between Round 17 and 18 with the top three being ranked in the same order as last year.

The key change in Round 18 for the top 20 AR-DRGs was U60Z –Mental health, sameday, without ECT was ranked number 13 compared to Round 17 where it was ranked 25. This movement is influenced by the number of participating hospitals this year treating patients under this mental health AR-DRG.

R63Z – Chemotherapy had the greatest number of population-adjusted separations of 240,396 and is expected to be number one considering the high frequency required of this treatment.

1.4.3 AR-DRGs by cost weighted separations

A cost weighted separation refers to the number of population-adjusted separations multiplied by the cost weight for that AR-DRG, and measures the total cost associated with that AR-DRG. These AR-DRGs would either have a high number of separations (i.e. high volume) or have a high average cost per separation (i.e. high cost weight).

The results of the analysis show strong consistency between Round 17 and Round 18 with the top 5 rankings not changing between years. 90% of the top 20 AR-DRGs were orthopaedic, neurology or cardiac procedures which require high cost prostheses or high volume treatments like chemotherapy. The number one AR-DRG was I04B – Knee Replacement without catastrophic or severe complications was ranked number one with a total cost weighted separations of 123,920.

The key changes in Round 18 for the top 20 AR-DRGs were A12Z – Insertion of Neurostimulator Device which was ranked number 22 in Round 17 compared to a ranking of 14 for Round 18. Additionally D40Z – Dental Extraction and Restorations was ranked 21 in Round 17 and is now ranked 20 for Round 18. The reasons for these movements were an increase in activity for these treatments by the participants.

1.4.4 AR-DRGs by ALoS

The analysis of the top AR-DRGs by ALoS show that 70% were consistent between Round 17 and 18. The top one and two in Round 18 were ranked two and three in Round 17. The top ranking was P62Z – Neonate, admitted weight 750-999 grams which was ranked number two last year and represents the highly complex and resource intense needs of these patients.

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The key changes in Round 18 were I61A – Distal Femoral Fractures with CC was ranked 150 in Round 17 and is now ranked 18. One reason for this movement is that the complications/comorbidities are influencing the ALoS. The other significant change was B60A – Acute Paraplegia/Quadriplegia with or without OR Procs with Cat CC which moved between Rounds from ranking 5 for Round 17 to ranking 17 for this Round, driven by a reduction in the range of ALoS.

2 Introduction

2.1 Purpose of this report

The Round 18 (2013-14) private sector National Hospital Cost Data Collection (NHCDC) is a voluntary collection that produces a range of hospital cost and activity information grouped by Australian Refined Diagnosis Related Groups (AR-DRG). The Department of Health (DoH) defines an AR-DRG as “a patient classification scheme which provides a means of relating the number and types of patients treated in a hospital to the resources required by the hospital, as represented by a code²”. The AR-DRG is derived from a range of data collected on admitted patients, including diagnosis and procedure information, classified using International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM)³.

This report documents the data, processes, methodology and results for acute admitted care provided by overnight private hospitals. The results of the collection are expressed as national cost weights by AR-DRG version 6.0x, and associated analytical tables.

2.2 Format of the report

The report format is structured based on Round 17 (2012-13) private overnight NHCDC which included AR-DRG aggregated data, cost weights and other cost relativities.

The AR-DRG information is displayed (as applicable) in the following way:

- Total cost weighted separation per AR-DRG;
- Percentage of total DRG cost by total Operating Room (OR) and Specialist Procedure Suites (SPS);
- Percentage of total DRG cost by critical care;
- Percentage of total DRG cost by prostheses; and
- Percentage of total DRG cost by miscellaneous.

For definitions of the cost buckets please refer to Appendix E: Cost weight tables by AR-DRG or alternatively see Australian Hospital Patient Costing Standards version 3.1 (AHPCS v3.1) which is on IHPA website:

(<http://www.ihipa.gov.au/internet/ihipa/publishing.nsf/Content/aust-costing-standards-2014-html>).

2.3 History of the private sector NHCDC

Round 1 of the private sector NHCDC was conducted in 1996-97 with 23 hospitals and 240,000 episodes being represented. Since then, the collection has grown steadily although no publication was released for round 8, 9, or Rounds 14 due to low participation rates. No collection was carried out for Round 10 or Round 15 (2010-11) as the sector elected to bypass that year and move directly to the following round. Table 2 below shows the participation rate for Round 18 and the last seven published rounds.

² DOH (Department of Health), A Users Guide for the Collection of Hospital Casemix Protocol (HCP) and Private Hospital Data Bureau (PHDB) (Version 1.2- May 2010 - page 38), [http://www.health.gov.au/internet/main/publishing.nsf/Content/38E5E5E23C0D4336CA257BF0001E8AC3/\\$File/Data%20Definitions%20Manual.pdf](http://www.health.gov.au/internet/main/publishing.nsf/Content/38E5E5E23C0D4336CA257BF0001E8AC3/$File/Data%20Definitions%20Manual.pdf), dated viewed 15th September 2015

³ DOH (Department of Health), A Users Guide for the Collection of Hospital Casemix Protocol (HCP) and Private Hospital Data Bureau (PHDB) (Version 1.2- May 2010 - page 38), [http://www.health.gov.au/internet/main/publishing.nsf/Content/38E5E5E23C0D4336CA257BF0001E8AC3/\\$File/Data%20Definitions%20Manual.pdf](http://www.health.gov.au/internet/main/publishing.nsf/Content/38E5E5E23C0D4336CA257BF0001E8AC3/$File/Data%20Definitions%20Manual.pdf), dated viewed 15th September 2015

Table 2 **Summary of private hospital participation**

Summary	Round 7 2002-03	Round 11 2006-07	Round 12 2007-08	Round 13 2008-09	Round 16 2011-12	Round 17 2012-13	Round 18 2013-14
Number of hospitals	113	82	109	110	105	95	96
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AR-DRG version	4.2	4.2	4.2	5.1	6.0x	6.0x	6.0x

2.4 Background statistics for the sector for Round 18 (2013-14)

The Australian Bureau of Statistics (ABS)⁴ reported that there were 612 private hospitals operating in Australia in 2013-14, a net increase of 11 from 2012-13. There were four additional Acute and psychiatric hospitals and seven additional free-standing day hospitals in 2013-14.

There were 30,920 beds and chairs available in private hospitals in 2013-14. Acute and psychiatric hospitals accounted for 27,943 or 90.4% of all beds and chairs, with the remaining 2,977 located in free-standing day hospital facilities.

There were over 4.3 million patient separations in 2013-14, with 74.1% of those separations reported by acute and psychiatric hospitals. Total patient separations increased by 4.0% from 2012-13 to 2013-14.

Private hospitals provided close to 10 million patient days of care in 2013-14. Acute and psychiatric hospitals provided 8.8 million, or 88.7% of all patient days. Within acute and psychiatric hospitals, overnight-stay patients accounted for 6.9 million patient days and same-day patients accounted for a further 1.9 million.

Private hospitals reported a total of 1,448 operating theatres in 2013-14 with 1,097 (75.8%) located in acute and psychiatric hospitals.

2.5 Scope of this collection

The scope of the private hospital overnight cost data collection was for admitted acute patients only. This included patients that were admitted to a hospital, were classified under the AR-DRG classification and had a care type of acute admitted or qualified newborn (see section 2.6 Care types included in this collection)⁵.

Any private sector overnight facilities that had admitted acute separations in the year 2013-14 financial year were invited to participate. (Please note that stand alone same-day facilities fall under a separate collection).

⁴ Australian Bureau of Statistics (ABS), Private Hospital Statistics for 2013-14, <http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/4390.0~2013-14~Main%20Features~Hospitals~5>, date viewed 15th September 2015 (this reference is for the whole of section 2.3)

⁵ Australian Institute of Health and Welfare (AIHW), Data Dictionary, METeOR ID: 270174, <http://meteor.aihw.gov.au/content/index.phtml/itemId/270174>, date viewed 15th September 2015; or

⁵ DOH (Department of Health), A Users Guide for the Collection of Hospital Casemix Protocol (HCP) and Private Hospital Data Bureau (PHDB) (Version 1.2- May 2010 page 27-31), [http://www.health.gov.au/internet/main/publishing.nsf/Content/38E5E5E23C0D4336CA257BF0001E8AC3/\\$File/Data%20Definitions%20Manual.pdf](http://www.health.gov.au/internet/main/publishing.nsf/Content/38E5E5E23C0D4336CA257BF0001E8AC3/$File/Data%20Definitions%20Manual.pdf), dated viewed 15th September 2015

For this report the classification of an overnight hospital was having performed over 200 acute admitted separations within the financial year 2013-14. This defines the population from which the sample was drawn.

2.6 Care types included in this collection

Acute admitted care type 1.0 is defined by DoH⁶ as “Acute care is care in which the clinical intent or treatment goal is to: manage labour (obstetric); cure illness or provide definitive treatment of injury; perform surgery; relieve symptoms of illness or injury (excluding palliative care); reduce severity of an illness or injury; protect against exacerbation and/or complication of an illness and/or injury which could threaten life or normal function; perform diagnostic or therapeutic procedures.”

Newborn care type 7.0 is defined by DoH⁷ as “Newborn care is initiated when the patient is born in hospital or is nine days old or less at the time of admission. Newborn care continues until the care type changes or the patient is separated:

- Patients who turn 10 days of age and do not require clinical care are separated and, if they remain in the hospital, are designated as boarders.
- Patients who turn 10 days of age and require clinical care continue in a newborn episode of care until separated.
- Patients aged less than 10 days and not admitted at birth (e.g. transferred from another hospital) are admitted with newborn care type.
- Patients aged greater than 9 days not previously admitted (e.g. transferred from another hospital) are either boarders or admitted with an acute care type.
- Within a newborn episode of care, until the baby turns 10 days of age, each day is either a qualified or unqualified day.
- A newborn is qualified when it meets at least one of the criteria detailed in Newborn qualification status.

Within a newborn episode of care, each day after the baby turns 10 days of age is counted as a qualified patient day. Newborn qualified days are equivalent to acute days and may be denoted as such.”

2.7 In or out of scope separation

For this report an acute admitted separation is defined as in or out of scope based on the care type of the patient and the four admission and discharge scenarios.

Care Type

Firstly, the costs and separations associated with acute admitted care and newborn care with qualified care days (as defined in previous section) are in scope. Therefore these separations are included in the calculation of the AR-DRG cost weights. The costs associated with unqualified neonate separations⁸ have been included in the costs of care on an adjusted basis. This is the neonate adjustment please refer to Appendix C: Detailed methodology for details on the neonatal adjustment.

⁶ DOH (Department of Health), A Users Guide for the Collection of Hospital Casemix Protocol (HCP) and Private Hospital Data Bureau (PHDB) (Version 1.2- May 2010 page 28), [http://www.health.gov.au/internet/main/publishing.nsf/Content/38E5E5E23C0D4336CA257BF0001E8AC3/\\$File/Data%20Definitions%20Manual.pdf](http://www.health.gov.au/internet/main/publishing.nsf/Content/38E5E5E23C0D4336CA257BF0001E8AC3/$File/Data%20Definitions%20Manual.pdf), dated viewed 15th September 2015

⁷ DOH (Department of Health), A Users Guide for the Collection of Hospital Casemix Protocol (HCP) and Private Hospital Data Bureau (PHDB) (Version 1.2- May 2010 page 30-31), [http://www.health.gov.au/internet/main/publishing.nsf/Content/38E5E5E23C0D4336CA257BF0001E8AC3/\\$File/Data%20Definitions%20Manual.pdf](http://www.health.gov.au/internet/main/publishing.nsf/Content/38E5E5E23C0D4336CA257BF0001E8AC3/$File/Data%20Definitions%20Manual.pdf), dated viewed 15th September 2015

⁸ These are separations with care type 7.0 (new born care), with zero qualified days in the neonate DRGs (Major Diagnostic Category 15 newborns and other neonates)

Four admission and discharge scenarios

Secondly, the following scenarios below and as illustrated in figure 1 are taken into account.

In scope

Scenario 1: Admitted and discharged within financial year 2013-14 these separations are in scope for this study.

Scenario 2: Admitted in a prior year and discharged within financial year 2013-14 these separations are in scope for this study.

Out of scope

Scenario 3: Admitted within 2013-14 however not discharged at 30 June 2014 these separations are classified as work in progress (WIP) patients and therefore are out of scope for the study.

Scenario 4: Admitted in a prior year however not discharged at 30 June 2014 these separations are classified as work in progress (WIP) patients and therefore are out of scope for the study.

Figure 1 In or out of scope separations

Scenarios	<--- Previous financial years	Financial year 2013/2014	Future financial years --->	In or out of scope for Round 18
Scenario 1				In scope
Scenario 2				In scope
Scenario 3				Out of scope
Scenario 4				Out of scope

2.8 In- scope costs

The Australian Hospital Patient Costing Standards version 3.1 (AHPCS v3.1)⁹ defines product costs in scope as “all costs incurred by, or on behalf of the hospital, that are necessarily incurred in the production of patient and non-patient products, subject to the specific exclusion that the costs of time provided by medical specialists to treat private patients that are not directly met by the hospital, are not to be imputed.”¹⁰ This includes non-cash expenditure items such as depreciation.

Private hospital participants were requested to submit their data in compliance with the AHPCS v3.1 to support consistency in output of this collection.

Some of the hospitals participating in this round submitted financial data for non-acute admitted care types for example Outpatients. These non-admitted acute care types are out of scope for Round 18, therefore their associated financial and activity data has been removed.

⁹ Independent Hospital Pricing Authority (IHPA), Australian Hospital Patient Costing Standards v3.1, July 2014, <http://www.ihoa.gov.au/internet/ihoa/publishing.nsf/Content/aust-costing-standards-2014-html>, viewed 15th September 2015

¹⁰ Independent Hospital Pricing Authority (IHPA), Australian Hospital Patient Costing Standards v3.1, July 2014, page 14, standard SCP 2.003 – Product Costs in Scope, <http://www.ihoa.gov.au/internet/ihoa/publishing.nsf/Content/aust-costing-standards-2014-html>, viewed 15th September 2015

2.9 Public and private sector differences

This report does not seek to compare the average cost per separation between the public and private sectors, as the scope of costs between the two sectors is different. Many of the cost items present in the public sector such as Pathology or Imaging are not equally represented in Private Hospital general ledgers. In addition, the costs of medical specialists are usually not captured in private hospital general ledgers. For example, these costs are generally not reported for the private sector because the majority of hospitals do not provide these services directly and patients pay for these services separately.

2.10 Confidentiality of data

Due to the commercial nature of the sector, all participating hospitals in Round 18 are requested to sign a confidentiality agreement before any final reports are released. Where a cost weight reported for an AR-DRG is based on less than five population-adjusted separations, the figures for this cost weight have been replaced by asterisks (****). If the number of contributing hospitals for a particular AR-DRG is less than three, the figures for this cost weight have been replaced by dashes (----).

For the cost weight table appendix we have removed the column that showed the number of hospitals associated with an AR-DRG. This decision was based on feedback received from the sector in relation to hospitals being identifiable.

2.11 Reliance and limitations

Data quality assurance checks and reasonableness tests have been performed at three stages of the project: at data collection, during the costing process and on costed output. These quality assurance reviews do not constitute a formal audit process; they only serve as a reasonableness test on information supplied.

The collection also required approval from hospitals during the data collection and costing phases of the collection. A description of the checks is provided in Appendix C: Detailed methodology.

The following areas can have a material impact on the reported costs and cost weights. The costing process relies on information provided by hospitals in the following areas:

1. All participants' understanding and complying with the AHPCS v3.1.
2. Mapping of general ledger to cost buckets which are tested pre-costing and post-costing for anomalies.
3. Incorrect percentage allocation of cost centres to care areas, for example cost centre called "Outpatients" being split 80% to Acute Care and 20% to Emergency Department. If the allocation is incorrect then this will affect the dollars being costed for Acute Care and thus under/overstate the cost of treating these patients.

3 Methodology Summary

3.1 Identifying the minimum sample size

In September 2012 IHPA engaged PwC to review the methodology for calculating the minimum sample size to have a valid and reliable private sector NHCDC collection (see Appendix A: Analysis performed to determine the minimum sample size for further details). This review was requested by the Private sector to ensure the validity and reliability of the collection.

The calculations were based on data received from IHPA, the DoH and PHDB in 2012 to determine the number of separations, number of hospitals and number of hospital groups required to participate.

The conclusion of this re-evaluation based on 2012 data was:

- Approximately 60% of all separations are required in order to achieve a 95% confidence level and 4% acceptable margin of error.
- The 95% confidence level and 4% margin of error parameters have been informed by considering participation levels in historic publications.
- The collection should include approximately 90 hospitals and 10 hospitals 'groups' (of 2 or more hospitals) to be representative.

These minimum targets were used as the condition on which the Round 18 collection would go ahead. It should be noted that these criteria are based on 2012 data and no adjustments have been made to account for any significant sector or market changes for this round 18 collection and associated reports.

For Round 18 the participation rate was 60%, 96 hospitals and 19 groups therefore the collection proceeded.

3.2 Changes to Round 18 collection

The methodology applied for Round 18 is mostly consistent with that of prior year with the exception of the improvements described in the sections below (3.2.1. to 3.2.5).

In January 2015, IHPA consulted with Private Hospitals around the private sector NHCDC process and requested hospitals to express their intention to participate in Round 18. As a result of this forum, it was agreed with the sector that AR-DRG version 6.0x continue to be utilised.

3.2.1 Data items

There were minor changes to the data item files that hospitals submitted during the data collection phase of the project. These changes were to data items 1 and 3 to enable the collection of more accurate information.

Data item 1a and 1b changes:

Data item 1 was split into two separate files data item 1a and 1b.

Data item 1a was the general ledger which showed the cost centres, account codes, account type (revenue or expenditure), dollar amount and how the amount is allocated as a percentage to the hospital product (for example acute 90% and outpatients 10%).

Data item 1b contained the allocations units should the participants elect to utilise different allocation methods in the costing process. If this data item was not submitted then overhead costs were allocated by the share of total expenses method.

Data item 3a and 3b changes:

Data item 3a was the cost centre mapping file in which each cost centre was given a description, and its cost was allocated according to what proportion of the cost belonged in each care area.

Data item 3b handled overhead allocation mapping. Each overhead care area was mapped to the overhead allocation statistic that best reflected how that overhead cost should be allocated to cost centres (for example, non-clinical salaries overhead could be allocated by full time equivalent staff numbers).

3.2.2 Submission via website

For Round 18 it was agreed that hospitals did not send files via email due to the commercially sensitive and confidential nature of the data. Data was submitted by the hospitals via the NHCDC website or Enterprise Data Warehouse (EDW) drop boxes where each stakeholder was able to access their own hospital account via a unique login with password protection and other security protocols in place.

3.2.3 Changes to validation

The NHCDC website conducted data validation and reasonableness tests over the submitted data item csv files to ensure the data received was of a high quality before going through to the pre-quality assurance review stage (see section 0Stages of the private sector NHCDC for further details). The additional validation checks undertaken this year were:

- The start and end times for each encounter in the feeder data files (prosthetics, operating room and critical care) were compared to encounter file start and end times. If there was a difference this was flagged to the user and the user needed to review the files and make the necessary changes and then re-submit the files.
- An AR-DRG version validation was performed which compared the elected AR-DRG version made by the hospital to the actual AR-DRGs submitted in the data item 4 file. If these did not match the master version of AR-DRG v6.0x, this was flagged to the user and the user had to review the files and make the necessary changes and then re-submit the files.

3.2.4 Changes to the AHPCS version 3.1 compared to version 2.0

The major changes have been amendments, development of new standards, and reinstatement of standards.

The following standards were amended¹¹:

- GL 4A.002 Critical Care definition (page 38) - to define the critical care areas for costing purposes.
- COST 3.004 Final cost allocation to patient and other products (pages 47-49) – to aim for consistency between hospitals including use of service weights and to provide clarity about consultation liaison services.
- COST 3A.001 Allocating Clinical Salary and Wages to patients and other products (pages 50-51) – to provide guidance on the costing of consultation liaison services.
- COST 5.002 Treatment of Work-In-Progress Costs (pages 56-57) – to address current issues of work-in-progress and long stay patients.
- Attachment E: Final Cost Allocation (pages 107-114)– to provide a more precise process in the costing allocations

¹¹ Independent Hospital Pricing Authority (IHPA), Australian Hospital Patient Costing Standards v3.1, July 2014, <http://www.ihpa.gov.au/internet/ihpa/publishing.nsf/Content/aust-costing-standards-2014-html>, Pages: 38, 47-49, 50-51, 56-57, 107-114, 52-54 and 73. Viewed 13th October 2015

The following are new or reinstated standards:

- COST 3A.002 Allocation of Medical Costs for Private and Public Patients (pages 52-54) – to ensure appropriate allocation of private medical costs.
- REP 1.002 Reporting of Patient Costs (page 73) – to reinstate this standard.

3.2.5 Pre-quality assurance check improvements

The main objective in increasing the checks in this review stage was to improve the quality of the data before starting the costing phase. The improvements were:

- The provision of a new summary page to participants highlighting areas for review
- Additional quality assurance tests checking for negative costs in the General Ledger (GL) and other reconciliation checks for each table
- Reconciliation checks throughout the pre-quality assurance document, indicated by a green dot or red cross.

3.3 Reliability of the Hospital Casemix Protocol (HCP) and Private Hospital Data Bureau (PHDB)

In March 2015 a meeting was held between IHPA, DoH and PwC to discuss known 12 issues with the PHDB and HCP datasets. Throughout 2013-14 DoH worked on the known data quality issue in reducing the number of duplicate records in PHDB dataset, which was an excellent step to improving the quality and accuracy of the data.

These issues were identified in Round 17 but are still relevant in Round 18 and have impacted on the accuracy of the costed output.

For further details of how these issues were dealt with in Round 18 please see Appendix B: PHDB and HCP data quality issues for Round 18.

3.4 Stages of the Collection

There were eight stages of the collection for more details about this please refer to Appendix C: Detailed methodology.

A review was performed of all AR-DRGs for flipping. AR-DRG flipping is where the cost weight is higher than expected for the complexity of the AR-DRG as indicated by the last alphabetic letter in the AR-DRG family. For example I04A is a higher complexity than I04B. Therefore the cost weight for I04A is expected to be higher than I04B. If this is not the case then this is referred to as AR-DRG flipping. In Round 18 there were a small number of these instances which were analysed and discussed with the key stakeholders about the appropriate treatment. After discussions with affected stakeholders, including reviewing patient data, it was agreed that a number of these encounters should have been coded to a high complexity AR-DRG and therefore this was changed in the data.

There were a remaining 6 encounters where it was decided with key stakeholders that these records should be removed from the collection, to reverse the AR-DRG flipping, as these were all low cost outliers.

The only flipped AR-DRGs remaining for this collection are P60A&B (P60A - Neonate without Sig OR Proc, Died or Transferred to Acute Facility <5 Days and P60B - Neonate without Sig OR Proc, Died or Transferred to Acute Facility Sameday). This is the same treatment as Round 17 and the reason for not changing these AR-DRGs is P60A is for newborn neonates whereas P60B is for non-newborns.

4 Summary of results

4.1 Summary of Round 18 sample to population

The population of hospitals for the NHCDC is defined as all multi-day private hospitals with at least 200 acute admitted separations. Over the years, participation levels have varied from 59% of separations (Round 11, 2006-07) to a peak of 72% of separations in Round 12 (2007-08) (see table 3 for further details).

In Round 18 there were 235 hospitals eligible to participate. Of these 235 hospitals, 96 participated in Round 18, which represents 41% of the population of in-scope hospitals. This is a 1% increase compared to the Round 17 (financial year 2012-13) participant level (shown in table 3).

The population of separations is defined as all acute admitted separations performed at these 235 hospitals, which were 2,827,996 in 2013-14.

The number of in-scope sample separations in Round 18 was 1,697,311 which represent 60% of the population of in-scope separations. This is an increase of 3% in the sample separations compared to the Round 17 (shown in table 3).

The average number of separations per participant increased by 748 separations (from 11,286 to 12,034) between Rounds 17 and 18.

Table 3 Comparison of separations and hospitals, Round 7 (2002-03) to Round 18 (2013-14)

Key Statistic	Round 7 2002-03	Round 11 2006-07	Round 12 2007-08	Round 13 2008-09	Round 16 2011-12	Round 17 2012-13	Round 18 2013-14
Sample separations	1,240,388	1,297,147	1,607,678	1,648,989	1,775,059	1,650,816	1,697,311
% increase	28%	5%	24%	3%	8%	-7%	3%
Population separations	1,903,975	2,192,314	2,248,324	2,328,814	2,703,667	2,753,670	2,827,996
% sample to population	65%	59%	72%	71%	66%	60%	60%
Sample hospitals	113	82	109	110	105	95	96
% increase	36%	-27%	33%	1%	-5%	-10%	1%
Population hospitals	221	229	229	226	248	244	235
% sample to population	51%	36%	48%	49%	42%	39%	41%
Average number of separations per participant	10,977	15,819	14,749	14,991	16,905	17,377	17,680
Average number of separations per population hospital	8,615	9,573	9,818	10,304	10,902	11,286	12,034
Average length of stay	2.97	2.88	2.62	2.57	2.51	2.53	2.45
% change	N/A	-3.0%	-9.0%	-1.9%	-2.2%	0.5%	-3.1%
Overnight ALoS	unknown	unknown	unknown	unknown	unknown	4.42	4.38
Sameday ALoS	unknown	unknown	unknown	unknown	unknown	1.00	1.00

Round 18 ALoS decreased from 2.53 days to 2.45 days which is a reduction of 3.1% compared to Round 17 (see table 3). A reason for this movement was Round 18 had 15% more same day separations reported compared to Round 17 thus impacting the ALoS given the short stay nature of these patients.

Table 3 shows the ALoS over the past 6 years, with the trend showing a decrease of 18% since 2006. Literature in the public domain supports a reduction in ALoS to hospitals focusing on efficiency strategies for example patient pathways/discharging planning; AR-DRG changing from overnight to same day classifications; and new technologies and medical advancements enabling certain procedures to be performed quicker or with shorten recovery times

4.2 Comparison of cost-buckets to Round 17

4.2.1 Background

In Round 16 the private hospital sector agreed to the publication of cost weights for total costs, operating rooms and specialist procedure suites (combined), critical care, and “other” (representing the remainder of the cost buckets).

In Round 17 the sector agreed to add a separate cost bucket for prostheses as previously this was incorporated into the “other” bucket; and to rename “other” as miscellaneous which included ward nursing, supplies, on-costs, non-clinical costs, depreciation, hotel, pharmacy, allied health, ward medical, pathology, and imaging.

There has been no further change between Round 17 and 18, with the same cost buckets reported.

4.2.2 Movement between Rounds

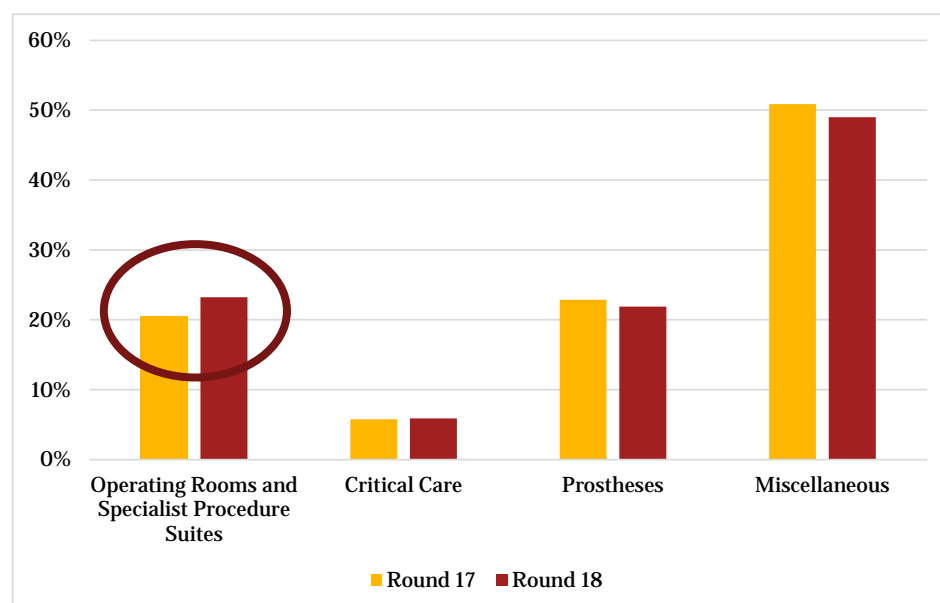
Table 5 and figure 2 illustrate the movement between the Rounds for the cost buckets. These movements were expected as there was an increase in participants using their own feeder data and allocation statistics instead of relying on service weights.

Figure 2 visually shows, as circled, that operating rooms and specialist procedure suites (OR/SPS) the largest movement between Rounds of 2.7%. A potential reason for this changes are the increased use of participant’s own feeder data and allocation statistics providing more accurate cost allocations, changes in service weights between Rounds and increase in same day theatre related separations.

Table 5 Breakdown of cost by cost-bucket group, Round 18 versus Round 17

Cost Bucket	Round 17 2012-13	Round 18 2013-14	Movement
Operating Rooms and Specialist Procedure Suites	20.5%	23.2%	2.7%
Critical Care	5.8%	5.9%	0.1%
Prostheses	22.9%	21.9%	-1.0%
Miscellaneous	50.9%	49.0%	-1.8%
Total	100.0%	100.0%	0.0%

Figure 2 Breakdown of cost by cost-bucket group, Round 18 versus Round 17



4.3 AR-DRG top 20 analyses

This section analyses the top 20 AR-DRGs by the below categories. The first three are the same as presented in the Round 17 public report and number 4 is new for this Round.

1. Highest cost weight;
2. Highest number of population-adjusted separations;
3. Highest cost weighted separations; and
4. Highest ALoS including minimum and maximum range.

An additional analysis of the cost buckets (critical care, operating room/SPS, prostheses and miscellaneous) is undertaken showing the top 20 for each of these buckets.

4.3.1 Top 20 AR-DRGs ranked by highest cost weight

Key findings

As shown in figure 3 (circled) the highest cost weight AR-DRG is A06A – Tracheostomy with ventilation > 95 hours with catastrophic CC. As illustrated in table 6 (boxed) this was ranked number two last year and is anticipated to be ranked as the top one or two AR-DRGs given it is a highly complex and resource intensive patient pathway.

The AR-DRGs listed in table 6 are all predicted to be within this top 20 ranking given that 80% (16 out of 20) are with catastrophic CCs, require ventilation, or have high cost prostheses.

As demonstrated in table 6 (circled) these highly complex patients only represent 0.4% (10,384 population-adjusted separations) of the total population-adjusted separations (2.83m). These AR-DRGs represent 6.3% of the total cost weighted separations. This indicates that these are high cost low volume AR-DRGs.

Consistencies between Round 17 and Round 18

65% (13 out of 20) of the top 20 AR-DRGs for the current year were included in Round 17's results with the top three being ranked in the top four last year. Overall these top 20 AR-DRGs are anticipated to be represented in the top 20 list given their clinical nature, high complexity and resource utilisation.

Key changes in the top 20

In Round 17 the number one ranked AR-DRG was P61Z - Neonate, Admitted Weight <750 grams. The reason for this not being ranked within the top 20 for this Round is it has been masked as it had less than five separations coded to this AR-DRG.

As demonstrated in figure 3 (boxed) A06C – Ventilation > 95 hours without catastrophic CC is new for the Round (ranked 7) the reason for this is in Round 17 it was masked as it had less than five separations.

As shown in table 6 (boxed) A06D - Tracheostomy without Catastrophic CC is ranked 18 for this Round whereas in the previous round it was ranked 62. The reason for this movement is an increase in the critical care cost weight driven by the increase of feeder data being used rather than service weights, which represents a truer cost weight than in prior years.

P06A - Neonate, Admitted weight >2499 grams with Significant OR Procedure with Multi Major Problems was ranked 5 in Round 17 this has not made the top 20 for this Round due to a reduction in critical care weighting impacted by the increase of feeder data being used rather than service weights.

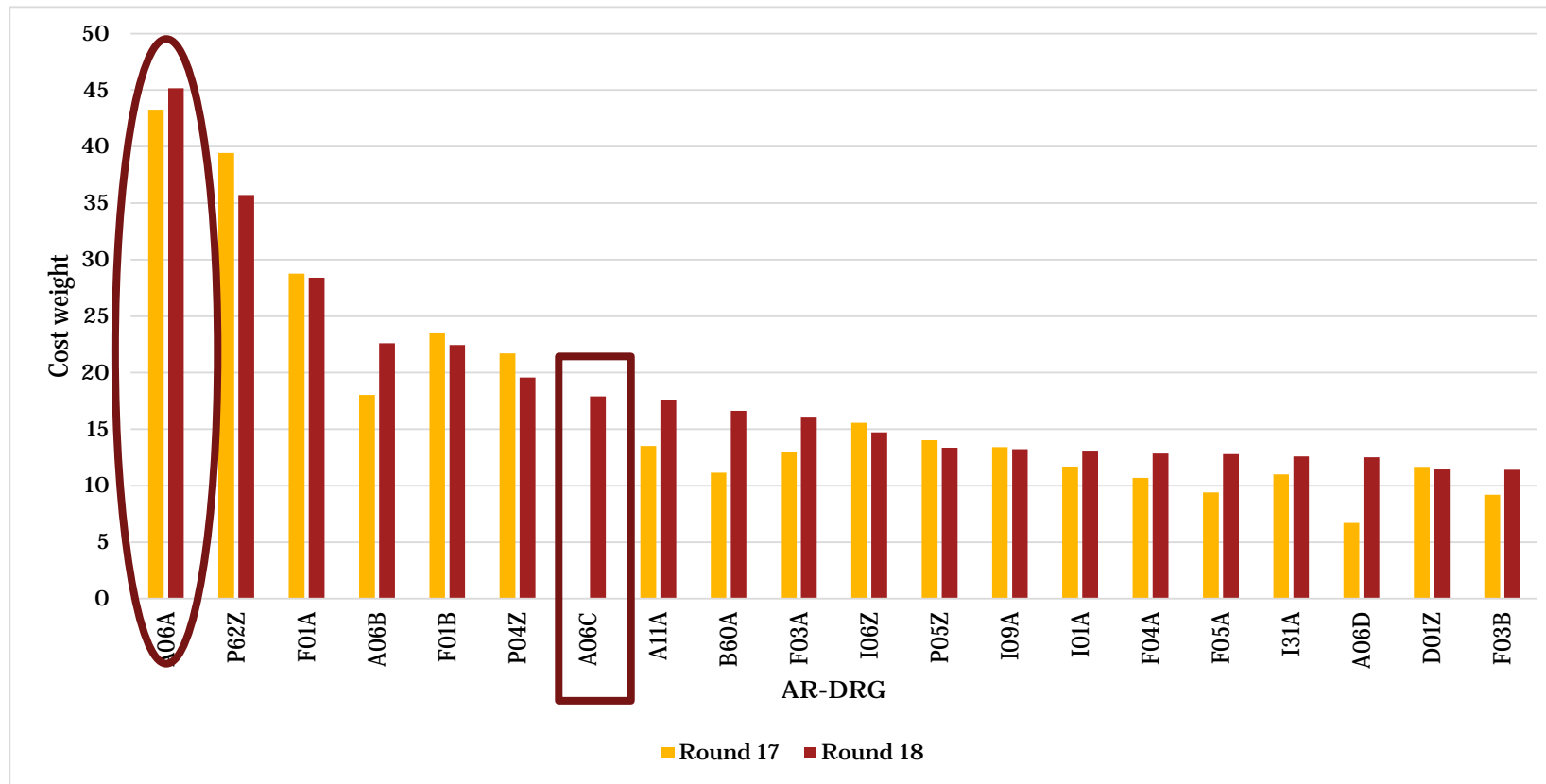
Summary of results

Table 6 Top 20 AR-DRGs ranked by highest cost weight

Top 20 Round 17	Rank Round 18	AR-DRG	AR-DRG Description	Cost weight (a)	No. of population-adjusted seps (b)	Cost weighted seps (c)=(a)x(b)	Number of days (d)	ALoS (days) (e)=(d)/(b)	Std error	% of total population-adjusted seps	% of cost weighted seps	Round 17 cost weight	Rank Round 17
Yes	1	A06A	Tracheostomy W Ventilation >95 hours W Catastrophic CC	45.16	206	9,310	10,780	52.3	2.76	0.0%	0.3%	43.27	2
Yes	2	P62Z	Neonate, AdmWt 750-999 g	35.71	28	1,006	1,494	53.0	4.50	0.0%	0.0%	39.45	3
Yes	3	F01A	Implantation or Replacement of AICD, Total System W Catastrophic CC	28.41	339	9,630	2,942	8.7	0.57	0.0%	0.3%	28.76	4
Yes	4	A06B	Trach W Vent >95 hours W/O Cat CC or Trach/Vent >95 hours W Cat CC	22.61	735	16,614	20,877	28.4	0.84	0.0%	0.6%	18.02	9
Yes	5	F01B	Implantation or Replacement of AICD, Total System W/O Catastrophic CC	22.45	2,302	51,663	5,209	2.3	0.18	0.1%	1.8%	23.46	7
Yes	6	P04Z	Neonate, AdmWt 1500-1999 g W Significant OR Procedure	19.57	23	447	950	41.6	2.38	0.0%	0.0%	21.71	8
No	7	A06C	Ventilation >95 hours W/O Catastrophic CC	17.89	7	128	104	14.6	3.89	0.0%	0.0%	*****	*****
Yes	8	A11A	Insertion of Implantable Spinal Infusion Device W Catastrophic CC	17.61	13	232	454	34.4	4.30	0.0%	0.0%	13.52	13
No	9	B60A	Acute Paraplegia/Quadriplegia W or W/O OR Procs W Cat CC	16.61	15	255	387	25.2	3.73	0.0%	0.0%	11.16	24
Yes	10	F03A	Cardiac Valve Proc W CPB Pump W Invasive Cardiac Investigation W Cat CC	16.11	400	6,441	7,611	19.0	0.65	0.0%	0.2%	12.98	15
Yes	11	I06Z	Spinal Fusion W Deformity	14.72	822	12,108	7,957	9.7	0.49	0.0%	0.4%	15.57	11
Yes	12	P05Z	Neonate, AdmWt 2000-2499 g W Significant OR Procedure	13.37	26	349	693	26.6	3.47	0.0%	0.0%	14.03	12
Yes	13	I09A	Spinal Fusion W Catastrophic CC	13.24	1,226	16,232	15,755	12.9	0.37	0.0%	0.6%	13.41	14
Yes	14	I01A	Bilateral/Multiple Major Joint Proc of Lower Extremity W Revision or W Cat CC	13.11	365	4,781	6,843	18.8	0.77	0.0%	0.2%	11.70	19
No	15	F04A	Cardiac Valve Proc W CPB Pump W/O Invasive Cardiac Inves W Cat CC	12.86	2,014	25,892	27,084	13.4	0.21	0.1%	0.9%	10.69	27
No	16	F05A	Coronary Bypass W Invasive Cardiac Investigation W Reoperation or W Cat CC	12.80	696	8,912	11,104	16.0	0.47	0.0%	0.3%	9.42	32
No	17	I31A	Hip Revision W Catastrophic CC	12.59	325	4,088	6,983	21.5	0.44	0.0%	0.1%	11.01	25
No	18	A06D	Tracheostomy W/O Catastrophic CC	12.52	65	815	780	12.0	2.91	0.0%	0.0%	6.72	62
Yes	19	D01Z	Cochlear Implant	11.43	560	6,401	825	1.5	0.15	0.0%	0.2%	11.67	20
No	20	F03B	Cardiac Valve Proc W CPB Pump W Invasive Cardiac Investigation W/O Cat CC	11.42	217	2,476	2,333	10.8	0.47	0.0%	0.1%	9.20	34
13 in Top 20	Sub-total, top 20 highest cost weight All DRGs			17.12	10,384	177,780	131,165	12.6		0.4%	6.3%		
	Top 20, % of all DRGs			1.00	2,827,996	2,827,996	6,821,124	2.4		100%	100%		
					0.4%	6.3%	1.9%						

Notes: ALoS means average length of stay

Figure 3 Top 20 AR-DRGs ranked by highest cost weight



Note: when a Round 17 bar is missing from the chart, this is because that AR-DRG was masked in Round 17 due to having less than five separations or having less than three hospitals with that AR-DRG.

4.3.2 Top 20 AR-DRGs ranked by highest volume of population-adjusted separations

Key findings

Table 7 and figure 4 shows the highest population-adjusted separations AR-DRG for Round 18; this is a measure of the volume of separations in the whole population (i.e. the number of separations in the Round 18 sample, adjusted using the weights to reflect the whole population).

Table 7 shows for Round 18 R63Z – Chemotherapy is ranked number one (boxed), as per last year's ranking, and is anticipated to be ranked number one considering the frequency required of this treatment.

As presented in table 7 the AR-DRGs listed in the top 20 are likely to be within this ranking given that 60% (12 out of 20) are either high frequency treatments or classified as same day treatments.

As illustrated in table 7 (boxed) these AR-DRGs represent 45% (1,260,640 population-adjusted separations) of the total population-adjusted separations (2.83m population-adjusted separations). As circled in table 7 these AR-DRGs represent 16% (445,386) of the total population-adjusted separations. This indicates that these are high volume low cost AR-DRGs.

Consistencies between Round 17 and Round 18

95% (19 out of 20) of the current rounds top 20 AR-DRGs were included in Round 17's results (see table 7) with the top three being ranked in the same order as last year which were Chemotherapy, Colonoscopy (Sameday) and Haemodialysis. This is expected given the high frequency of treatments required for chemotherapy and haemodialysis patient's pathways.

Key changes in the top 20

As circled in figure 4 the new AR-DRG for top 20 is U60Z - Mental Health Treatment, Sameday, without ECT. This was ranked number 25 in Round 17, and its movement into the top 20 is influenced by the increase in the number of participating hospitals treating patients under this mental health AR-DRG (with an increase in the number of population-adjusted separations of 13,795 this year).

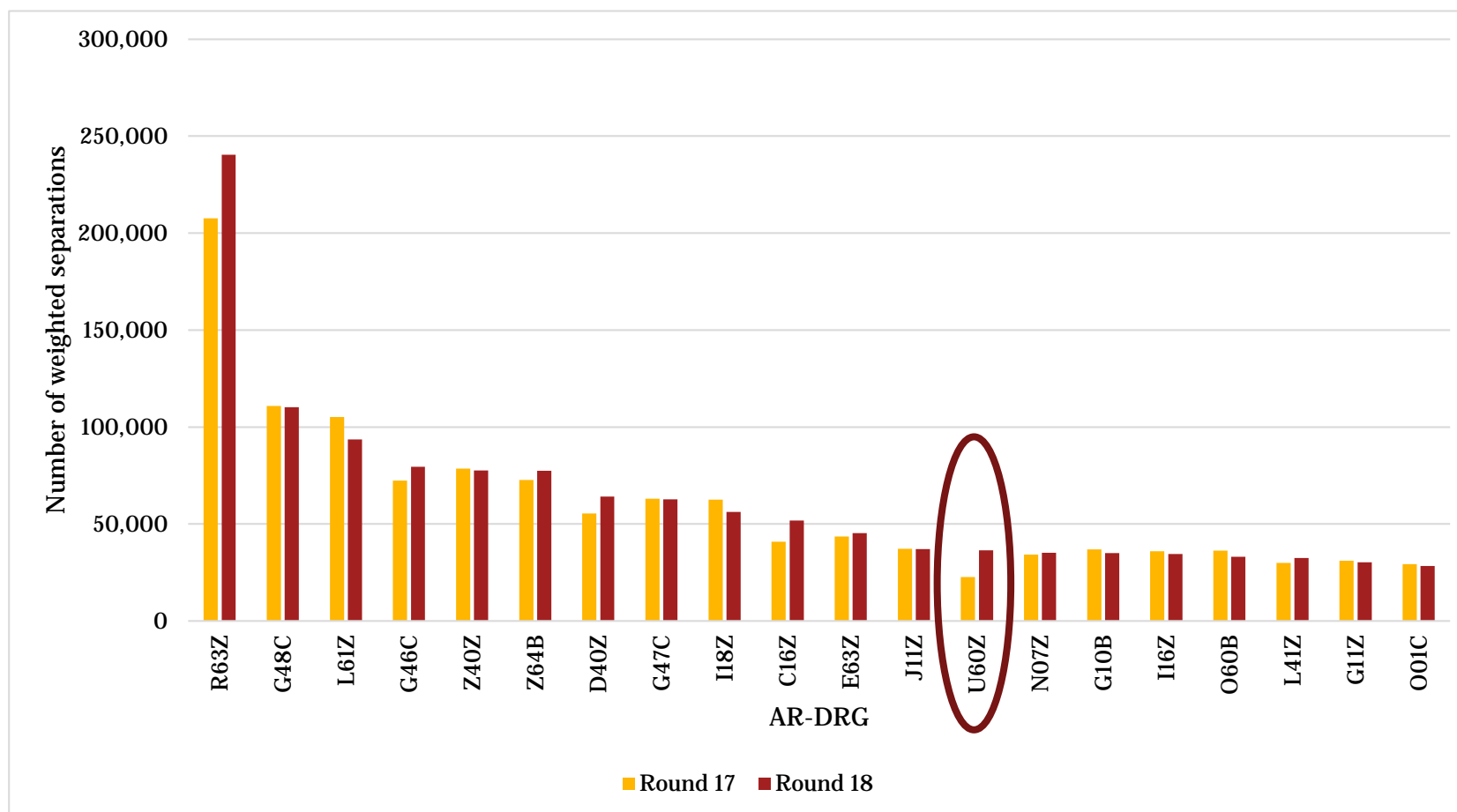
Summary of results

Table 7 Top 20 AR-DRGs ranked by highest volume of population-adjusted separations

Top 20 Round 17	Rank Round 18	AR-DRG	AR-DRG Description	Cost weight (a)	No. of population-adjusted seps (b)	Cost weighted seps (c)=(a)x(b)	Number of days (d)	ALoS (days) (e)=(d)/(b)	Std error	% of total population-adjusted seps	% of cost weighted seps	Round 17 population-adjusted seps	Rank Round 17
Yes	1	R63Z	Chemotherapy	0.20	240,396	47,558	242,821	1.0	0.000	8.5%	1.7%	207,697	1
Yes	2	G48C	Colonoscopy, Sameday	0.23	110,153	24,820	110,154	1.0	0.001	3.9%	0.9%	110,786	2
Yes	3	L61Z	Haemodialysis	0.06	93,520	5,837	93,524	1.0	0.000	3.3%	0.2%	105,160	3
Yes	4	G46C	Complex Gastroscopy, Sameday	0.29	79,456	22,949	79,456	1.0	0.002	2.8%	0.8%	72,419	6
Yes	5	Z40Z	Endoscopy W Diagnoses of Other Contacts W Health Services, Sameday	0.19	77,557	15,056	77,568	1.0	0.001	2.7%	0.5%	78,499	4
Yes	6	Z64B	Other Factors Influencing Health Status, Sameday	0.16	77,415	12,140	77,415	1.0	0.001	2.7%	0.4%	72,613	5
Yes	7	D40Z	Dental Extractions and Restorations	0.39	64,140	25,266	64,448	1.0	0.001	2.3%	0.9%	55,351	9
Yes	8	G47C	Other Gastroscopy, Sameday	0.17	62,687	10,535	62,702	1.0	0.001	2.2%	0.4%	63,075	7
Yes	9	I18Z	Other Knee Procedures	0.48	56,143	26,853	62,774	1.1	0.002	2.0%	0.9%	62,526	8
Yes	10	C16Z	Lens Procedures	0.52	51,801	27,108	52,120	1.0	0.002	1.8%	1.0%	40,917	11
Yes	11	E63Z	Sleep Apnoea	0.17	45,269	7,803	45,701	1.0	0.001	1.6%	0.3%	43,513	10
Yes	12	J11Z	Other Skin, Subcutaneous Tissue and Breast Procedures	0.35	36,975	12,880	40,627	1.1	0.003	1.3%	0.5%	37,193	12
No	13	U60Z	Mental Health Treatment, Sameday, W/O ECT	0.05	36,465	1,756	36,508	1.0	0.000	1.3%	0.1%	22,670	25
Yes	14	N07Z	Other Uterine and Adnexa Procedures for Non-Malignancy	0.53	35,090	18,710	38,912	1.1	0.003	1.2%	0.7%	34,211	16
Yes	15	G10B	Hernia Procedures W/O CC	0.95	34,931	33,308	44,466	1.3	0.004	1.2%	1.2%	36,921	13
Yes	16	I16Z	Other Shoulder Procedures	1.28	34,497	44,277	42,332	1.2	0.005	1.2%	1.6%	35,952	15
Yes	17	O60B	Vaginal Delivery W/O Catastrophic or Severe CC	1.14	33,057	37,783	135,469	4.1	0.005	1.2%	1.3%	36,332	14
Yes	18	L41Z	Cystourethroscopy, Sameday	0.20	32,477	6,466	32,479	1.0	0.001	1.1%	0.2%	29,854	18
Yes	19	G11Z	Anal and Stomal Procedures	0.46	30,287	14,071	38,648	1.3	0.004	1.1%	0.5%	31,009	17
Yes	20	O01C	Caesarean Delivery W/O Catastrophic or Severe CC	1.77	28,325	50,210	137,181	4.8	0.007	1.0%	1.8%	29,303	19
19 in Top 20	Sub-total, 20 highest separation count			0.35	1,260,642	445,386	1,515,305	1.2		45%	16%		
	All DRGs			1.00	2,827,996	2,827,996	6,821,124	2.4		100%	100%		
	Top 20 separation count, % of all DRGs				45%	16%	22%						

Notes:
ALoS means average length of stay

Figure 4 Comparison of top 20 AR-DRGs by highest volume of population-adjusted separations



Note: when a Round 17 bar is missing from the chart, this is because that AR-DRG was masked in Round 17 due to having less than 5 separations or having less than 3 hospitals with that AR-DRG.

4.3.3 Top 20 AR-DRGs ranked by highest cost-weighted separations

Key findings

Table 8 and figure 5 present the top 20 AR-DRGs ranked by highest cost-weight separations. A cost weighted separation refers to the number of population-adjusted separations multiplied by the cost weight for that AR-DRG, and measures the total cost associated with that AR-DRG.

Figure 5 presents (circled) that the highest cost weigh AR-DRG is I04B - Knee Replacement without Catastrophic or Severe CC. This procedure is a common procedure within the sector and therefore is customary to be number 1. Noticeably as can be seen in table 8 (boxed) the number of cost weighted separations has reduced by 11,436 (135,355-123,920) between Rounds.

The AR-DRGs listed in the top 20 (table 8) are predicted to be within this ranking given that 90% (18 out of 20) are either within orthopaedic, neurology or cardiac procedures which require high cost prostheses or high volume treatments like chemotherapy.

As boxed in table 8 these AR-DRGs represent 32% (911,770 cost weighted separations) of the total population-adjusted separations 2.83m. As circled in table 8 these AR-DRGs represent 24% of the total population-adjusted separations. This indicates that these are a mixture of high volume/high cost AR-DRGs.

Consistencies between Round 17 and Round 18

As shown in table 8 the top 3 AR-DRGs (I04B - Knee Replacement without Catastrophic or Severe CC, I03B - Hip Replacement without Catastrophic CC, and I09B - Spinal Fusion without Catastrophic CC) were ranked in the same order as Round 17 which is influenced by the ALoS being above the average and high costs prostheses being used in these orthopaedic and neurology treatments.

Key changes in the top 20

As demonstrated in table 8 referencing the “Rank Round 18” column (circled) the new AR-DRGs for Round 18 was A12Z - Insertion of Neurostimulator Device which was ranked number 22 in Round 17 and D40Z - Dental Extractions and Restorations which was ranked 21 in Round 17. The reason for these movements is an increase in activity for this treatment by participants in the current collection.

Summary of results

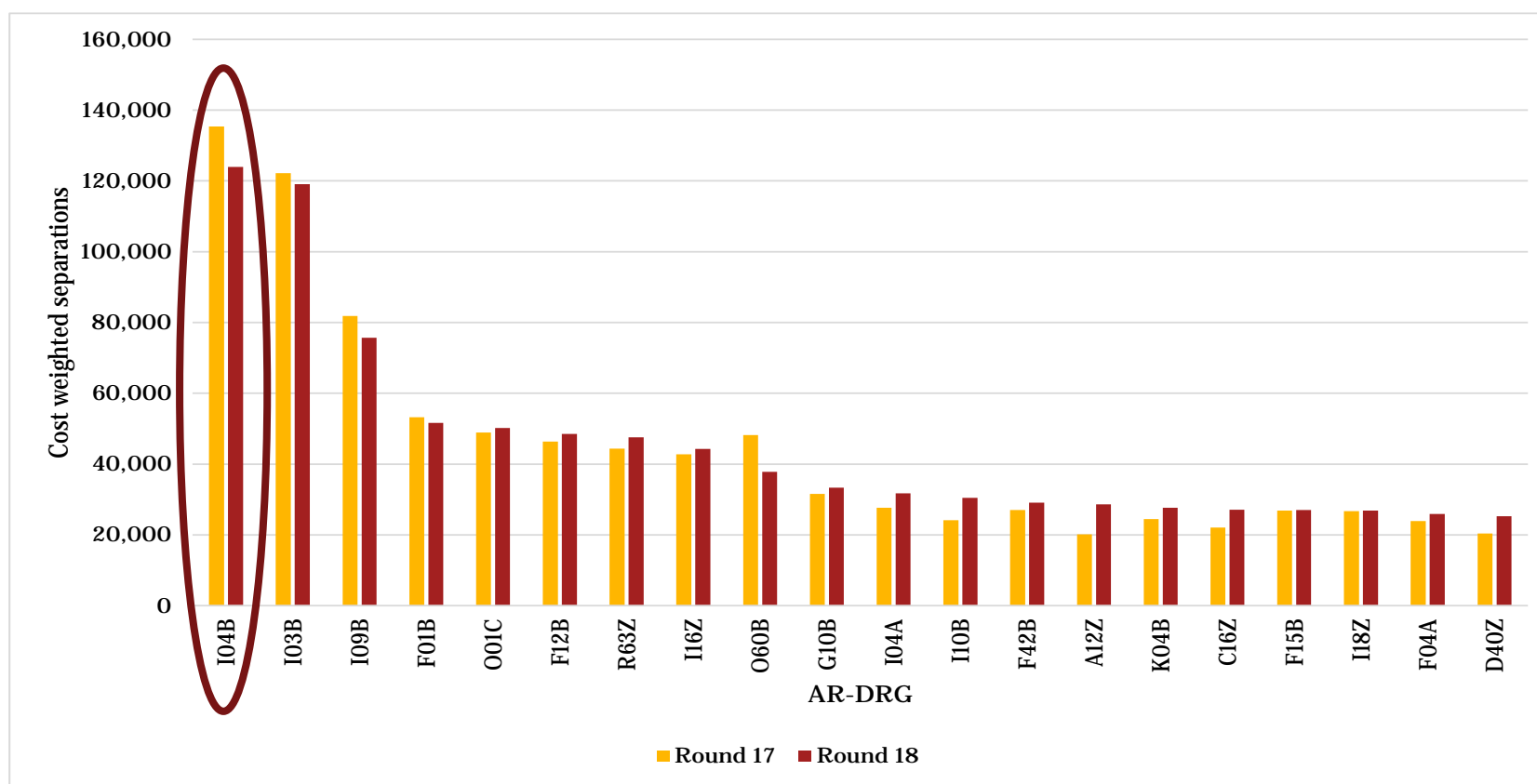
Table 8 Top 20 AR-DRGs ranked by highest cost-weighted separations

Top 20 Round 17	Rank Round 18	AR-DRG	AR-DRG Description	Cost weight (a)	No. of population-adjusted seps (b)	Cost weighted seps (c)=(a)x(b)	Number of days (d)	ALoS (days) (e)=(d)/(b)	Std error	% of total population-adjusted seps	% of cost weighted seps	Round 17 cost weighted seps	Rank Round 17
Yes	1	I04B	Knee Replacement W/O Catastrophic or Severe CC	5.28	23,462	123,920	132,923	5.7	0.01	0.8%	4.4%	135,355	1
Yes	2	I03B	Hip Replacement W/O Catastrophic CC	6.31	18,869	119,045	110,848	5.9	0.02	0.7%	4.2%	122,189	2
Yes	3	I09B	Spinal Fusion W/O Catastrophic CC	7.92	9,554	75,662	59,163	6.2	0.07	0.3%	2.7%	81,805	3
Yes	4	F01B	Implantation or Replacement of AICD, Total System W/O Catastrophic CC	22.45	2,302	51,663	5,209	2.3	0.18	0.1%	1.8%	53,213	4
Yes	5	O01C	Caesarean Delivery W/O Catastrophic or Severe CC	1.77	28,325	50,210	137,181	4.8	0.01	1.0%	1.8%	48,916	5
Yes	6	F12B	Implantation or Replacement of Pacemaker, Total System W/O Catastrophic CC	7.08	6,844	48,490	19,750	2.9	0.05	0.2%	1.7%	46,374	7
Yes	7	R63Z	Chemotherapy	0.20	240,396	47,558	242,821	1.0	0.00	8.5%	1.7%	44,364	8
Yes	8	I16Z	Other Shoulder Procedures	1.28	34,497	44,277	42,332	1.2	0.01	1.2%	1.6%	42,765	9
Yes	9	O60B	Vaginal Delivery W/O Catastrophic or Severe CC	1.14	33,057	37,783	135,469	4.1	0.00	1.2%	1.3%	48,187	6
Yes	10	G10B	Hernia Procedures W/O CC	0.95	34,931	33,308	44,466	1.3	0.00	1.2%	1.2%	31,597	10
Yes	11	I04A	Knee Replacement W Catastrophic or Severe CC	6.30	5,045	31,781	40,805	8.1	0.04	0.2%	1.1%	27,662	11
Yes	12	I10B	Other Back and Neck Procedures W/O Catastrophic or Severe CC	1.93	15,780	30,451	53,340	3.4	0.01	0.6%	1.1%	24,172	16
Yes	13	F42B	Circulatory Disorders W/O AMI W Invasive Cardiac Inves Proc W/O Cat or Sev CC	1.26	23,080	29,137	44,122	1.9	0.01	0.8%	1.0%	27,035	12
No	14	A12Z	Insertion of Neurostimulator Device	10.76	2,665	28,665	7,727	2.9	0.15	0.1%	1.0%	20,164	22
Yes	15	K04B	Major Procedures for Obesity W/O CC	2.37	11,643	27,650	26,771	2.3	0.01	0.4%	1.0%	24,438	15
Yes	16	C16Z	Lens Procedures	0.52	51,801	27,108	52,120	1.0	0.00	1.8%	1.0%	22,062	19
Yes	17	F15B	Interventional Coronary Procs W/O AMI W Stent Implantation W/O Cat or Sev CC	3.16	8,558	27,049	14,932	1.7	0.02	0.3%	1.0%	26,870	13
Yes	18	I18Z	Other Knee Procedures	0.48	56,143	26,853	62,774	1.1	0.00	2.0%	0.9%	26,711	14
Yes	19	F04A	Cardiac Valve Proc W CPB Pump W/O Invasive Cardiac Inves W Cat CC	12.86	2,014	25,892	27,084	13.4	0.21	0.1%	0.9%	23,896	17
No	20	D40Z	Dental Extractions and Restorations	0.39	64,140	25,266	64,448	1.0	0.00	2.3%	0.9%	20,364	21
18 in Top 20	Sub-total, top 20 highest cost-weighted separations			1.35	673,107	911,770	1,324,285	2.0		24%	32%		
	All DRGs			1.00	2,827,996	2,827,996	3,821,124	2.4		100%	100%		
	Top 20 cost-weighted separations, % of all DRGs				24%	32%	19%						

Notes:
ALoS means average length of stay

Round 18 Private Sector Overnight NHCDC
PwC

Figure 5 Comparison of top 20 AR-DRGs by highest cost-weighted separations



Note: when a Round 17 bar is missing from the chart, this is because that AR-DRG was masked in Round 17 due to having less than 5 separations or having less than 3 hospitals with that AR-DRG.

4.3.4 Top 20 AR-DRGs ranked by ALoS

Key findings

Table 9 shows that the AR-DRG with the highest ALoS is P62Z - Neonate, Admitted Weight 750-999 grams (boxed) which was ranked number two last year and is customary to be ranked number one or two given the fact these are highly complex and resource intense patients.

As demonstrated in table 9 the AR-DRGs listed in the top 20 are expected to be within this ranking given that they all are complex patients as they have been coded to AR-DRGs ending in A or B which indicates complexity and comorbidities which typically leads to a long length of stay.

As circled in table 9 these AR-DRGs as we would anticipate represents the minority of separations given that they represent 0.1% (3,536 population-adjusted separations) of the total population-adjusted separations (2.83m population-adjusted separations). As circled in table 9 these AR-DRGs represent 1.6% (45,678 cost weighted separations) of the total population cost weighted separations.

Consistencies between Round 17 and Round 18

70% (14 out of 20) of this Rounds top 20 AR-DRGs were included in Round 17's. As illustrated (boxed light pink) in table 9 using the column "Rank Round 17" the top one and two for this Round were ranked two and three in Round 17.

Key changes in the top 20

The major movements in this top 20 are B60A –Acute Paraplegia/Quadriplegia with or without OR Procs with Cat CC (figure 6 –circled) has moved between Rounds from ranking 5 (Round 17) to ranking 17 for this Round, driven by a reduction in the range of ALoS between Rounds as circled in figure 6.

AR-DRG I61A -Distal Femoral Fractures with CC which was ranked 150 in Round 17 and is now ranked 18. One of the reasons for this is the ALoS nearly doubling between Rounds as shown in table 9 (circled), which indicates that these complications/ comorbidities are influencing the ALoS.

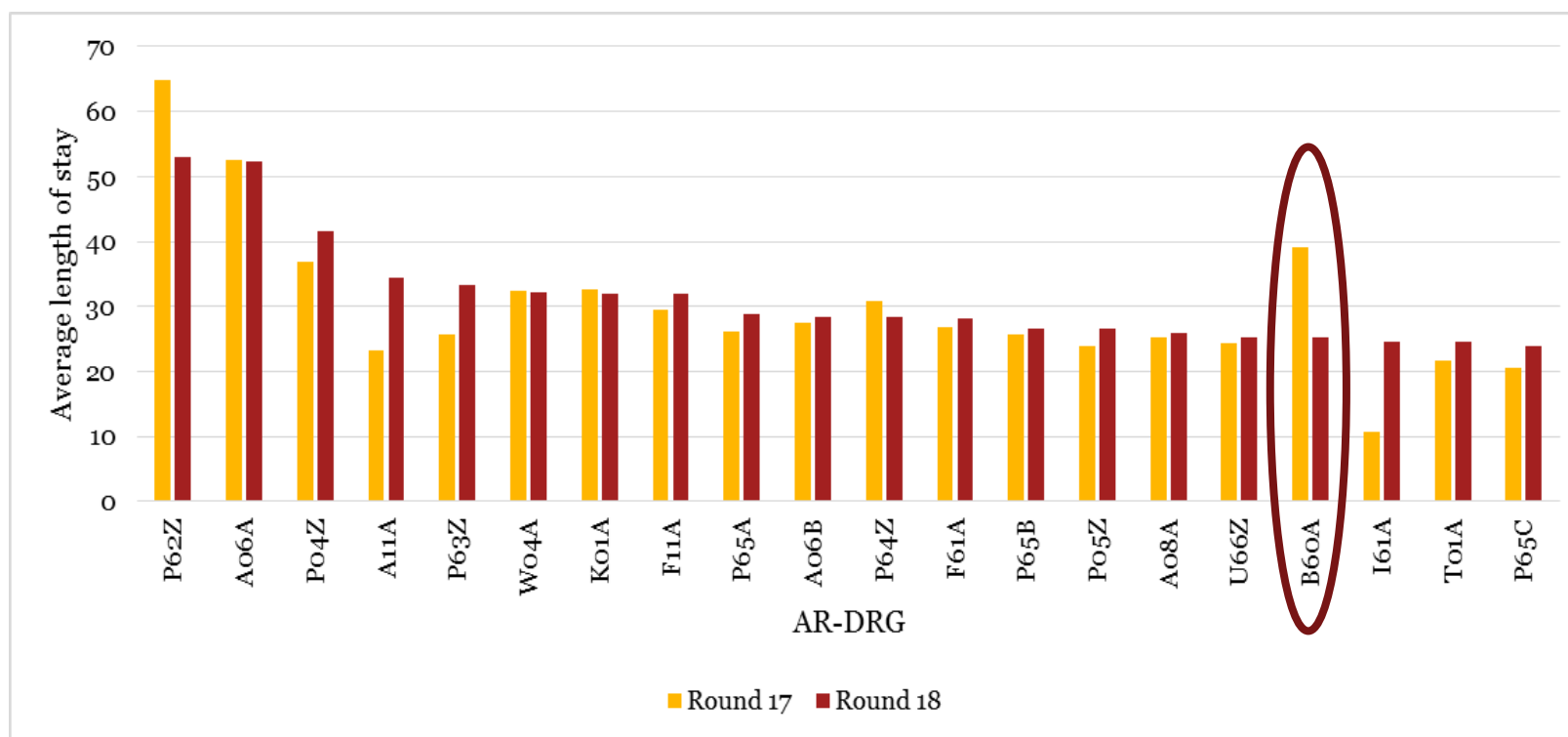
Summary of results

Table 9 Top 20 AR-DRGs ranked by ALoS

Top 20 Round 17	Rank Round 18	AR-DRG	AR-DRG Description	ALoS (days)	Min LoS	Max LoS	Cost weight	No. of population-adjusted seps	No. of Cost weighted seps	Std error	% of total seps	% of CW seps	Round 17 ALoS	Rank Round 17
Yes	1	P62Z	Neonate, AdmWt 750-999 g	53.0	1	105	35.71	28	1,006	4.50	0.0%	0.0%	64.78	2
Yes	2	A06A	Tracheostomy W Ventilation >95 hours W Catastrophic CC	52.3	6	148	45.16	206	9,310	2.76	0.0%	0.3%	52.55	3
Yes	3	P04Z	Neonate, AdmWt 1500-1999 g W Significant OR Procedure	41.6	25	64	19.57	23	447	2.38	0.0%	0.0%	36.93	6
No	4	A11A	Insertion of Implantable Spinal Infusion Device W Catastrophic CC	34.4	6	78	17.61	13	232	4.30	0.0%	0.0%	23.16	27
Yes	5	P63Z	Neonate, AdmWt 1000-1249 g W/O Significant OR Procedure	33.2	10	51	8.82	31	277	1.65	0.0%	0.0%	25.63	18
Yes	6	W04A	Other OR Procs for Multiple Significant Trauma W Catastrophic or Severe CC	32.1	2	74	9.45	12	110	2.71	0.0%	0.0%	32.43	10
Yes	7	K01A	OR Procedures for Diabetic Complications W Catastrophic CC	32.0	4	93	8.99	153	1,376	0.74	0.0%	0.0%	32.74	9
Yes	8	F11A	Amputation for Circ System Except Upper Limb and Toe W Catastrophic CC	31.9	5	106	8.63	69	595	1.17	0.0%	0.0%	29.43	12
Yes	9	P65A	Neonate, AdmWt 1500-1999 g W/O Significant OR Proc W Multi Major Problems	28.8	21	40	9.75	11	110	1.42	0.0%	0.0%	26.15	16
Yes	10	A06B	Trach W Vent >95 hours W/O Cat CC or Trach/Vent >95 hours W Cat CC	28.4	2	181	22.61	735	16,614	0.84	0.0%	0.6%	27.55	13
Yes	11	P64Z	Neonate, AdmWt 1250-1499 g W/O Significant OR Procedure	28.4	1	53	7.51	153	1,152	0.61	0.0%	0.0%	30.83	11
Yes	12	F61A	Infective Endocarditis W Catastrophic CC	28.1	1	62	6.33	76	480	0.55	0.0%	0.0%	26.91	15
Yes	13	P65B	Neonate, AdmWt 1500-1999 g W/O Significant OR Procedure W Major Problem	26.6	1	56	8.46	211	1,788	0.55	0.0%	0.1%	25.68	17
No	14	P05Z	Neonate, AdmWt 2000-2499 g W Significant OR Procedure	26.6	6	58	13.37	26	349	3.47	0.0%	0.0%	24.00	23
Yes	15	A08A	Autologous Bone Marrow Transplant W Catastrophic CC	25.8	13	120	7.91	113	891	0.55	0.0%	0.0%	25.33	19
No	16	U66Z	Eating and Obsessive-Compulsive Disorders	25.2	1	111	4.38	626	2,742	0.15	0.0%	0.1%	24.46	22
Yes	17	B60A	Acute Paraplegia/Quadriplegia W or W/O OR Procs W Cat CC	25.2	6	39	16.61	15	255	3.73	0.0%	0.0%	39.01	5
No	18	I61A	Distal Femoral Fractures W CC	24.7	2	152	4.05	48	193	0.79	0.0%	0.0%	10.78	150
No	19	T01A	OR Procedures for Infectious and Parasitic Diseases W Catastrophic CC	24.5	1	162	8.38	685	5,747	0.44	0.0%	0.2%	21.67	30
No	20	P65C	Neonate, AdmWt 1500-1999 g W/O Significant OR Procedure W Other Problem	24.0	4	61	6.65	302	2,005	0.38	0.0%	0.1%	20.49	36
14 in Top 20	Sub-total, top 20 highest cost-weighted separations All DRGs			28.4			12.92	3,536	45,678		0.1%	1.6%		
	Top 20 cost-weighted separations, % of all DRGs			2.4			1.00	2,827,996	2,827,996		100%	100%		
								0.1%	1.6%					

Notes:
ALoS means average length of stay

Figure 6 Comparison of top 20 AR-DRGs by ALoS



Note: when a Round 17 bar is missing from the chart, this is because that AR-DRG was masked in Round 17 due to having less than 5 separations or having less than 3 hospitals with that AR-DRG.

4.4 Analysis of cost buckets

This section is the analysis of the cost buckets by top 20 AR-DRG. The cost buckets are:

- Critical care;
- Operating room/Specialised Procedure Suite;
- Prostheses; and
- Miscellaneous.

4.4.1 Overall cost buckets Round 17 compared to Round 18

Table 10 shows the break-down of cost buckets and how they have changed between Rounds.

As highlighted in table 10 the operating rooms and specialist procedure suites (OR/SPS) has had the largest movement between Rounds of 2.7%. A potential reason for this change is the increased use of participant's own feeder data and allocation statistics providing more accurate cost allocations, changes in service weights between Rounds and increase in same day theatre related separations.

For Round 18 there was an increase in participant's providing their own feeder data to allocate costs to patients and changes in service weights between Rounds.

Table 10 Overall cost buckets Round 17 compared to Round 18

Cost Bucket	Round 17 2012-13	Round 18 2013-14	Movement
Operating Rooms and Specialist Procedure Suites	20.5%	23.2%	2.7%
Critical Care	5.8%	5.9%	0.1%
Prostheses	22.9%	21.9%	-1.0%
Miscellaneous	50.9%	49.0%	-1.8%
Total	100.0%	100.0%	0.0%

4.4.2 Critical care cost bucket

Key findings

Table 11 demonstrates (boxed) that the highest cost weigh AR-DRG is P62Z - Neonate, Admitted Weight 750-999 grams. This was ranked number two last year and is predicted to be ranked number one or two given the fact this is a highly complex and resource intense patient.

As seen in table 11 the AR-DRGs listed in the top 20 are typical to be within this ranking given that they are either mechanical ventilation or neonatal AR-DRGs.

Consistencies between Round 17 and Round 18

AR-DRGs ranked one and two (circled in figure 7) were in the top three for Round 17. This change is driven by the increased use of critical care feeder data compared to Round 17 which used service weights.

The average cost weight moved by -1.19 between years indicating that this is a relatively stable cost bucket. The biggest reduction was P06A - Neonate, Admitted Weight >2499 g W Significant OR Procedure with Multi Major Problems decreasing its cost weight by -14.19. The biggest increase was A06D - Tracheostomy without Catastrophic CC increasing its cost weight by +4.68. These both relate to increased feeder data and allocation statistics being utilised and service weight changes between Rounds.

Summary of results

Key changes in the top 20

As shown in table 11 (boxed) A06C - Ventilation >95 hours without Catastrophic CC is included in top 20 this year ranked four, this was masked last year as the AR-DRG had less than 5 separations.

As circled in table 11 B60A - Acute Paraplegia/Quadriplegia with or without OR Procs with Cat CC has a cost weight of 3.38 compared to a cost weight of 0.46 in Round 17, driven by the increase of feeder data being used for Round 18 increasing the accuracy of the costed output.

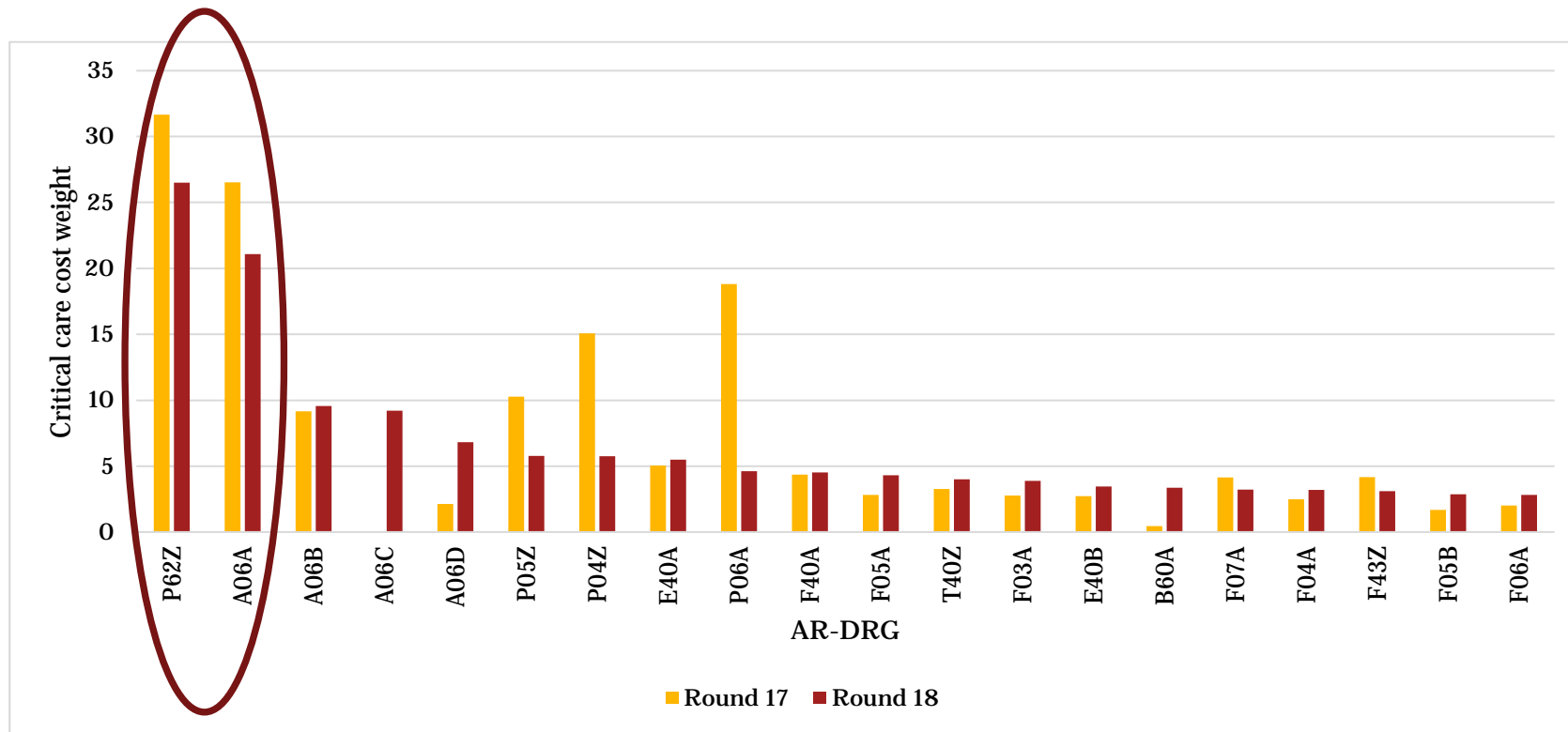
Summary of results

Table 11 Top 20 AR-DRGs for critical care cost bucket

Top 20 Round 17	Rank Round 18	AR-DRG	AR-DRG Description	Critical care cost weight (a)	No. of population-adjusted seps (b)	Overall cost weight (c)	ALoS (days) (e)	% of AR-DRG total cost				Round 17 critical care cost weight
								OR and SPS	Critical care	Prosthesis	Misc.	
Yes	1	P62Z	Neonate, AdmWt 750-999 g	26.49	28	35.71	53.0	0%	74%	0%	25%	31.65
Yes	2	A06A	Tracheostomy W Ventilation >95 hours W Catastrophic CC	21.08	206	45.16	52.3	5%	47%	16%	33%	26.52
Yes	3	A06B	Trach W Vent >95 hours W/O Cat CC or Trach/Vent >95 hours W Cat CC	9.56	735	22.61	28.4	6%	42%	13%	38%	9.17
No	4	A06C	Ventilation >95 hours W/O Catastrophic CC	9.22	7	17.89	14.6	9%	52%	16%	24%	*****
No	5	A06D	Tracheostomy W/O Catastrophic CC	6.82	65	12.52	12.0	12%	54%	8%	26%	2.14
Yes	6	P05Z	Neonate, AdmWt 2000-2499 g W Significant OR Procedure	5.78	26	13.37	26.6	2%	43%	0%	55%	10.28
Yes	7	P04Z	Neonate, AdmWt 1500-1999 g W Significant OR Procedure	5.77	23	19.57	41.6	1%	29%	0%	69%	15.08
Yes	8	E40A	Respiratory System Diagnosis W Ventilator Support W Catastrophic CC	5.50	77	10.69	17.8	0%	51%	7%	41%	5.06
Yes	9	P06A	Neonate, AdmWt >2499 g W Significant OR Procedure W Multi Major Problems	4.62	17	10.59	18.9	5%	44%	1%	50%	18.81
Yes	10	F40A	Circulatory System Diagnosis W Ventilator Support W Catastrophic CC	4.53	31	9.47	18.7	4%	48%	3%	44%	4.36
No	11	F05A	Coronary Bypass W Invasive Cardiac Investigation W Reoperation or W Cat CC	4.31	696	12.80	16.0	17%	34%	14%	36%	2.83
Yes	12	T40Z	Infectious and Parasitic Diseases W Ventilator Support	4.00	22	9.73	18.7	1%	41%	5%	53%	3.26
No	13	F03A	Cardiac Valve Proc W CPB Pump W Invasive Cardiac Investigation W Cat CC	3.90	400	16.11	19.0	15%	24%	26%	35%	2.79
No	14	E40B	Respiratory System Diagnosis W Ventilator Support W/O Catastrophic CC	3.46	13	5.87	8.4	0%	59%	3%	37%	2.74
No	15	B60A	Acute Paraplegia/Quadriplegia W or W/O OR Procs W Cat CC	3.38	15	16.61	25.2	11%	20%	20%	49%	0.46
Yes	16	F07A	Other Cardiothoracic/Vascular Procedures W CPB Pump W Catastrophic CC	3.23	235	10.88	12.0	19%	30%	16%	35%	4.14
No	17	F04A	Cardiac Valve Proc W CPB Pump W/O Invasive Cardiac Inves W Cat CC	3.20	2,014	12.86	13.4	15%	25%	27%	33%	2.49
Yes	18	F43Z	Circulatory System Diagnosis W Non-Invasive Ventilation	3.11	114	6.22	15.2	1%	50%	1%	48%	4.18
No	19	F05B	Coronary Bypass W Invasive Cardiac Investigation W/O Reoperation W/O Cat CC	2.87	476	9.29	11.8	20%	31%	12%	37%	1.70
No	20	F06A	Coronary Bypass W/O Invasive Cardiac Inves W Reoperation or W Cat or Sev CC	2.83	2,178	8.69	10.9	19%	33%	14%	34%	2.03
11 in Top 20	Sub-total, top 20 highest critical care cost-weight DRGs All DRGs			4.53	7,378	13.33	16.1	13%	34%	18%	35%	
	Top 20 Critical Care cost-weight DRGs, % of all DRGs			0.06	2,827,996	1.00	2.4	23%	6%	22%	49%	

- (a) For cost weight (cost bucket specific) calculations please refer to Appendix E
 (b) Separations shown are population-adjusted
 (c) DRG-rank for cost weight across all cost buckets. A rank of 1 means that the DRG has the highest cost weight.
 (d) ALoS means average length of stay

Figure 7 Top 20 AR-DRGs for critical care cost bucket



Note: when a Round 17 bar is missing from the chart, this is because that AR-DRG was masked in Round 17 due to having less than 5 separations or having less than 3 hospitals with that AR-DRG.

4.4.3 Operating room/specialised procedure suite cost bucket

Key findings

Figure 8 shows that the highest cost weight AR-DRG is J01A -Microvas Tissue Transfer for Skin, Subcutaneous Tissue & Breast Disd with Cat/Sev CC (circled). This was ranked number one last year and is accustomed to be ranked number one or two given the fact this procedure utilises a large amount of theatre time.

As presented in table 12 the AR-DRGs listed in the top 20 are customary to be within this ranking given that the majority are coded to AR-DRGs ending in A or B and are all known for consuming high levels of theatre time for example cardiac investigative procedures.

Consistencies between Round 17 and Round 18

AR-DRGs ranked one to six (boxed in table 12) were included in Round 17's top 20 which is expected given the nature of AR-DRGs in the top six and improvements in participants using feeder data and the changes in service weights between Rounds.

The average cost weight moved by +0.47 between years indicating that this is a relatively stable cost bucket. The biggest increase was B60A - Acute Paraplegia/Quadriplegia with or without OR Procs with Cat CC increasing its cost weight by +1.45. This relates to increased feeder data and allocation statistics being utilised and service weight changes between Rounds.

Key changes in the top 20

As demonstrated in table 12 (boxed) B60A - Acute Paraplegia/Quadriplegia with or without OR Procs with Cat CC was ranked 241 for Round 17 however is ranked 14 for Round 18. The reason for this is that the data quality has improved by participants using feeder data for operating room/specialised procedure suite therefore this AR-DRG is now reflecting a more accurate cost of delivery.

Table 12 Top 20 AR-DRGs for operating room/specialised procedure suite cost bucket

Top 20 Round 17	Rank Round 18	AR-DRG	AR-DRG Description	OR and SPS cost weight (a)	No. of population-adjusted seps (b)	Overall cost weight (c)	ALoS (days) (e)	% of AR-DRG total cost				Round 17 OR and SPS cost weight
								OR and SPS	Critical care	Prosthesis	Misc.	
Yes	1	J01A	Microvas Tiss Transf for Skin, Subcutaneous Tiss & Breast Disd W Cat/Sev CC	3.48	104	8.75	12.8	40%	12%	8%	41%	2.52
Yes	2	J01B	Microvas Tiss Transf for Skin, Subcutaneous Tiss & Breast Disd W/O Cat/Sev CC	2.46	235	5.86	8.2	42%	7%	8%	42%	2.18
Yes	3	F03A	Cardiac Valve Proc W CPB Pump W Invasive Cardiac Investigation W Cat CC	2.37	400	16.11	19.0	15%	24%	26%	35%	1.58
Yes	4	F05A	Coronary Bypass W Invasive Cardiac Investigation W Reoperation or W Cat CC	2.12	696	12.80	16.0	17%	34%	14%	36%	1.43
Yes	5	A06A	Tracheostomy W Ventilation >95 hours W Catastrophic CC	2.12	206	45.16	52.3	5%	47%	16%	33%	1.81
Yes	6	F07A	Other Cardiothoracic/Vascular Procedures W CPB Pump W Catastrophic CC	2.12	235	10.88	12.0	19%	30%	16%	35%	1.94
Yes	7	F03B	Cardiac Valve Proc W CPB Pump W Invasive Cardiac Investigation W/O Cat CC	2.02	217	11.42	10.8	18%	21%	31%	30%	1.39
Yes	8	F04A	Cardiac Valve Proc W CPB Pump W/O Invasive Cardiac Inves W Cat CC	1.95	2,014	12.86	13.4	15%	25%	27%	33%	1.56
Yes	9	I06Z	Spinal Fusion W Deformity	1.91	822	14.72	9.7	13%	6%	57%	23%	1.97
No	10	F05B	Coronary Bypass W Invasive Cardiac Investigation W/O Reoperation W/O Cat CC	1.84	476	9.29	11.8	20%	31%	12%	37%	1.33
Yes	11	F07B	Other Cardiothoracic/Vascular Procedures W CPB Pump W Severe or Moderate CC	1.83	120	9.75	9.6	19%	28%	20%	34%	1.77
Yes	12	I02A	Microvascular Tissue Transfer or (Skin Graft W Cat or Sev CC), Excluding Hand	1.81	298	9.10	23.2	20%	7%	15%	58%	1.40
No	13	L03A	Kidney, Ureter and Major Bladder Procedures for Neoplasm W Catastrophic CC	1.79	548	7.64	13.7	23%	23%	10%	44%	1.31
No	14	B60A	Acute Paraplegia/Quadriplegia W or W/O OR Procs W Cat CC	1.79	15	16.61	25.2	11%	20%	20%	49%	0.33
Yes	15	F07C	Other Cardiothoracic/Vascular Procedures W CPB Pump W/O CC	1.76	90	7.29	7.6	24%	26%	14%	36%	1.43
No	16	M01A	Major Male Pelvic Procedures W Catastrophic or Severe CC	1.72	775	3.96	5.0	43%	11%	7%	38%	1.24
No	17	F08A	Major Reconstruct Vascular Procedures W/O CPB Pump W Catastrophic CC	1.70	805	8.79	14.0	19%	14%	27%	39%	1.19
No	18	F06A	Coronary Bypass W/O Invasive Cardiac Inves W Reoperation or W Cat or Sev CC	1.68	2,178	8.69	10.9	19%	33%	14%	34%	1.33
No	19	G01A	Rectal Resection W Catastrophic CC	1.65	1,538	7.74	15.3	21%	17%	13%	49%	1.21
Yes	20	H01A	Pancreas, Liver and Shunt Procedures W Catastrophic CC	1.64	553	8.41	14.6	19%	20%	15%	46%	1.48
13 in Top 20	Sub-total, top 20 highest ORSPS cost-weight DRGs			1.85	12,327	10.47	13.4	18%	24%	22%	36%	
	All DRGs			0.23	2,827,996	1.00	2.4	23%	6%	22%	49%	
	Top 20 OR and SPS cost-weight DRGs, % of all DRGs				0.4%							

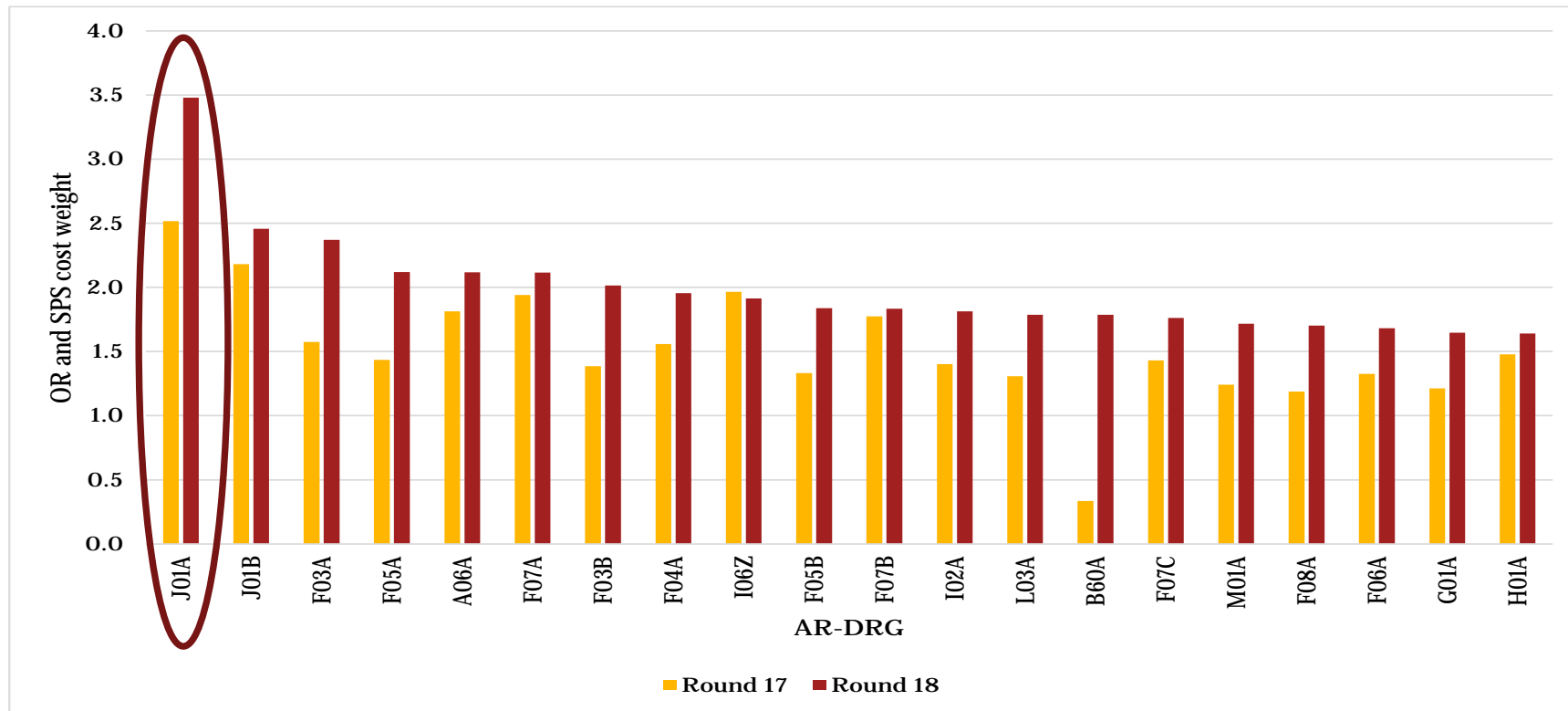
(a) For cost weight (cost bucket specific) calculations please refer to Appendix E

(b) Separations shown are population-adjusted

(c) DRG-rank for cost weight across all cost buckets. A rank of 1 means that the DRG has the highest cost weight.

(d) ALoS means average length of stay

Figure 8 Top 20 AR-DRGs for operating room/specialised procedure suite cost bucket



Note: when a Round 17 bar is missing from the chart, this is because that AR-DRG was masked in Round 17 due to having less than 5 separations or having less than 3 hospitals with that AR-DRG.

4.4.4 Prostheses cost bucket

Key findings

The highest cost weight AR-DRG is F01A - Implantation or Replacement of AICD, Total System with Catastrophic CC as displayed in table 13 and figure 9 (boxed). This was ranked number one last year due to the high cost of the defibrillator prosthesis and increased activity.

As demonstrated in table 13 the AR-DRGs listed in the top 20 are expected to be within this ranking given that 90% (18 out of 20) are known procedures to include an expensive prosthesis.

Additionally as anticipated these highly expensive prosthesis procedures only represent 1.1% (31,590 population-adjusted separations) of the total population-adjusted separations (2.83m population-adjusted separations) circled in table 13.

Consistencies between Round 17 and Round 18

90% (18 out of 20) of the top 20 AR-DRGs were included in Round 17's results with the top 5 being ranked in the top five last year which indicates that these AR-DRGs are consuming similar amounts of prosthetic resources.

The average cost weight moved by -0.22 between years indicating that this is a relatively stable cost bucket. The biggest reduction was F01A - Implantation or Replacement of AICD, Total System W Catastrophic CC reducing its cost weight by -1.89. The biggest increase was to A06A - Tracheostomy W Ventilation >95 hours W Catastrophic CC increasing its cost weight by +5.44. This relates to increased feeder data and allocation statistics being utilised and service weight changes between Rounds.

Key changes in the top 20

F03A - Cardiac Valve Proc W CPB Pump with Invasive Cardiac Investigation with Cat CC (table 13 – circled) was ranked 26 for Round 17 compared to this year ranked at 18. The reason for this is that the data quality has improved by participants using feeder data for prostheses therefore this AR-DRG is now reflecting a more accurate cost of delivery.

Summary of results

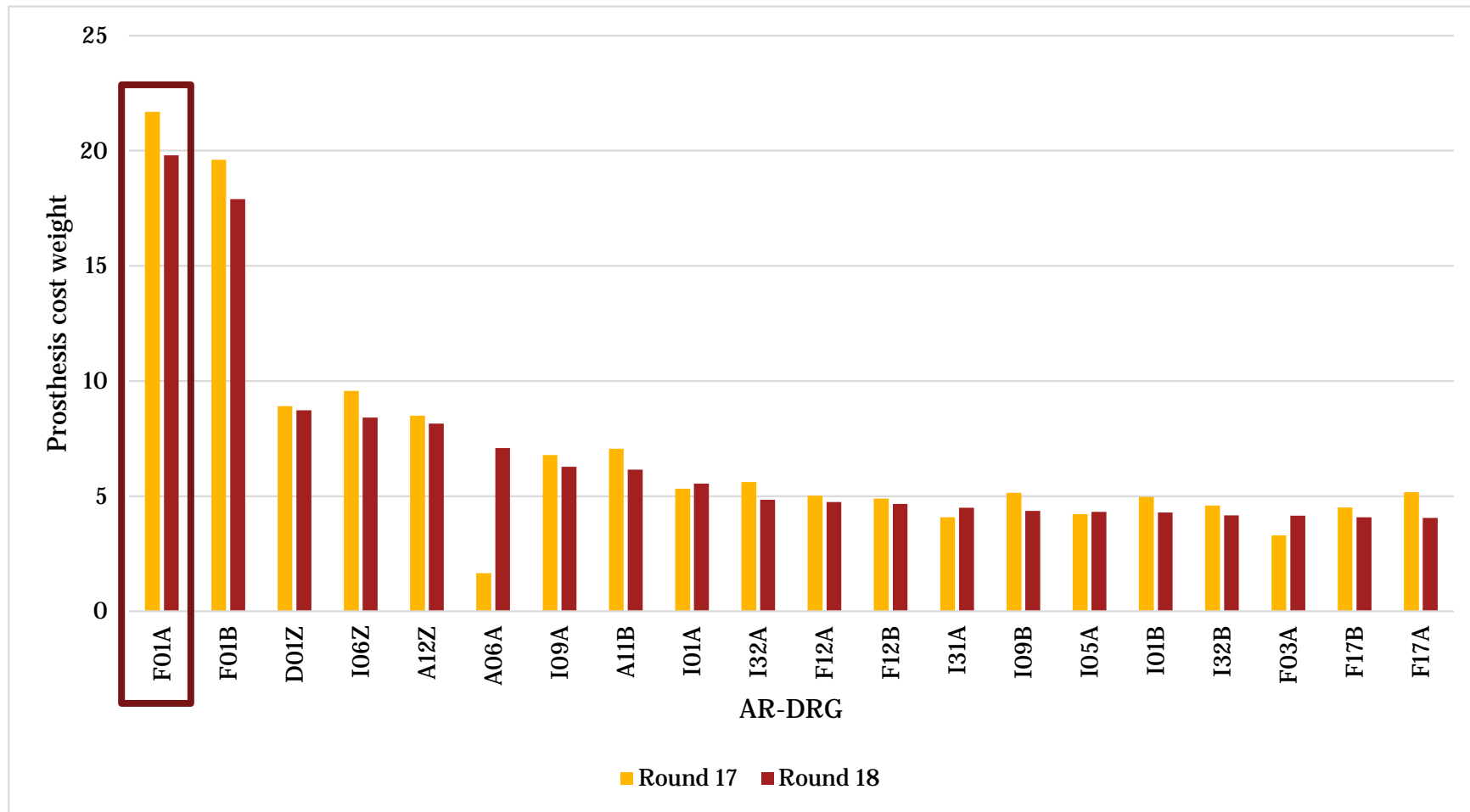
Table 13 Top 20 AR-DRGs for prostheses cost bucket

Top 20 Round 17	Rank Round 18	AR-DRG	AR-DRG Description	Prosthesis cost weight (a)	No. of population-adjusted seps (b)	Overall cost weight (c)	ALoS (days) (e)	% of AR-DRG total cost				Round 17 prosthesis cost weight
								OR and SPS	Critical care	Prosthesis	Misc.	
Yes	1	F01A	Implantation or Replacement of AICD, Total System W Catastrophic CC	19.80	339	28.41	8.7	3%	6%	70%	21%	21.69
Yes	2	F01B	Implantation or Replacement of AICD, Total System W/O Catastrophic CC	17.90	2,302	22.45	2.3	3%	1%	80%	16%	19.61
Yes	3	D01Z	Cochlear Implant	8.73	560	11.43	1.5	6%	0%	76%	17%	8.90
Yes	4	I06Z	Spinal Fusion W Deformity	8.41	822	14.72	9.7	13%	6%	57%	23%	9.57
Yes	5	A12Z	Insertion of Neurostimulator Device	8.15	2,665	10.76	2.9	5%	1%	76%	18%	8.49
No	6	A06A	Tracheostomy W Ventilation >95 hours W Catastrophic CC	7.10	206	45.16	52.3	5%	47%	16%	33%	1.66
Yes	7	I09A	Spinal Fusion W Catastrophic CC	6.27	1,226	13.24	12.9	12%	9%	47%	31%	6.79
Yes	8	A11B	Insertion of Implantable Spinal Infusion Device W/O Catastrophic CC	6.15	48	8.93	4.8	6%	0%	69%	25%	7.06
Yes	9	I01A	Bilateral/Multiple Major Joint Proc of Lower Extremity W Revision or W Cat CC	5.54	365	13.11	18.8	11%	6%	42%	40%	5.32
Yes	10	I32A	Knee Revision W Catastrophic CC	4.84	228	11.05	19.6	10%	4%	44%	42%	5.61
Yes	11	F12A	Implantation or Replacement of Pacemaker, Total System W Catastrophic CC	4.75	653	10.65	13.0	6%	17%	45%	32%	5.02
Yes	12	F12B	Implantation or Replacement of Pacemaker, Total System W/O Catastrophic CC	4.67	6,844	7.08	2.9	7%	7%	66%	21%	4.90
Yes	13	I31A	Hip Revision W Catastrophic CC	4.50	325	12.59	21.5	12%	11%	36%	42%	4.08
Yes	14	I09B	Spinal Fusion W/O Catastrophic CC	4.35	9,554	7.92	6.2	15%	4%	55%	27%	5.15
Yes	15	I05A	Other Joint Replacement W Catastrophic or Severe CC	4.31	484	8.36	9.3	13%	5%	52%	31%	4.23
Yes	16	I01B	Bilateral/Multiple Major Joint Pr of Lower Extremity W/O Revision W/O Cat CC	4.29	1,986	7.60	7.3	12%	3%	56%	29%	4.97
Yes	17	I32B	Knee Revision W Severe CC	4.17	352	8.32	10.6	12%	3%	50%	34%	4.59
No	18	F03A	Cardiac Valve Proc W CPB Pump W Invasive Cardiac Investigation W Cat CC	4.15	400	16.11	19.0	15%	24%	26%	35%	3.30
Yes	19	F17B	Insertion or Replacement of Pacemaker Generator W/O Catastrophic or Severe CC	4.08	2,103	5.40	1.3	6%	1%	76%	17%	4.51
Yes	20	F17A	Insertion or Replacement of Pacemaker Generator W Catastrophic or Severe CC	4.05	128	6.69	6.4	5%	5%	61%	30%	5.17
18 in Top 20		Sub-total, top 20 highest prosthetic cost-weight DRGs		6.17	31,590	10.06	5.9	9%	6%	61%	24%	
		All DRGs		0.22	2,827,996	1.00	2.4	23%	6%	22%	49%	
		Top 20 Prosthesis cost-weight DRGs, % of all DRGs			1.1%							

Notes:

- (a) For cost weight (cost bucket specific) calculations please refer to Appendix E
- (b) Separations shown are population-adjusted
- (c) DRG-rank for cost weight across all cost buckets. A rank of 1 means that the DRG has the highest cost weight.
- (d) ALoS means average length of stay

Figure 9 Top 20 AR-DRGs for prostheses cost bucket



Note: when a Round 17 bar is missing from the chart, this is because that AR-DRG was masked in Round 17 due to having less than 5 separations or having less than 3 hospitals with that AR-DRG.

4.4.5 Miscellaneous cost bucket

Key findings

Table 14 illustrates the highest cost weight AR-DRG is A06A – Tracheostomy with ventilation > 95 hours with catastrophic CC (boxed). This was ranked number one last year and is predicted to be ranked number one or two given the fact this is a highly complex and resource intense patient.

As presented in table 14 the AR-DRGs listed in the top 20 are anticipated to be within this ranking given that they have high cost weights and low volume separations which are resource intensive treatments and have appeared in the top 20 of previous tables through this section.

Additionally these highly complex patients only represent 0.1% (3,778 population-adjusted separations) of the total population-adjusted separations (2.83m population-adjusted separations) circled in table 14.

There was an increase in participants using allocation statistics and feeder data thus improving the quality and accuracy cost allocation of the general ledger to these miscellaneous cost buckets.

Consistencies between Round 17 and Round 18

60% (12 out of 20) of the top 20 AR-DRGs were included in Round 17's results, which was expected given the nature of these cost buckets included in this category.

The average cost weight moved by +1.58 between years indicating that this is a relatively stable cost bucket. The biggest reduction was B60A - Acute Paraplegia/Quadriplegia with or without OR Procs with Cat CC decreasing its cost weight by -1.95. The biggest increase was P04Z - Neonate, Admitted Weight 1500-1999 grams with Significant OR Procedure increasing its cost weight by +7.14. These both relate to increased feeder data and allocation statistics being utilised and service weight changes between Rounds.

Key changes in the top 20

S65A - HIV-Related Diseases with Catastrophic CC is new for Round 18 as last year this was a masked AR-DRG based on having less than 3 hospitals with that AR-DRG (circled in figure 10).

P05Z - Neonate, Admitted Weight 2000-2499 grams with Significant OR Procedure this was ranked 103 in Round 17 however this year it is ranked 12 as there has been an increase in population-adjusted separations for this AR-DRG between years (circled in figure 10).

P65C - Neonate, Admitted Weight 1500-1999 grams without Significant OR Procedure with Other Problem was ranked 45 in Round 17 however this year it is ranked 19 as there has been an increase in population-adjusted separations for this AR-DRG between years (circled in figure 10).

Summary of results

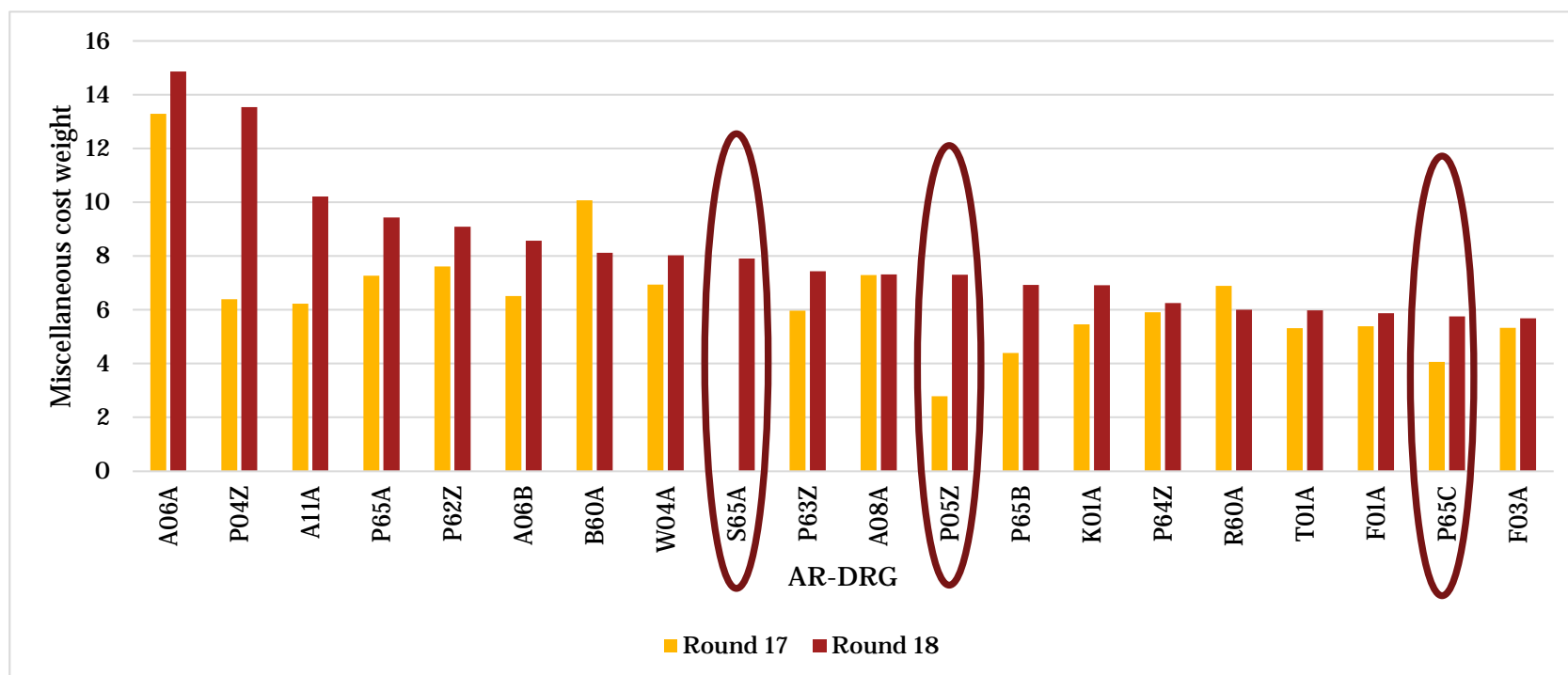
Table 14 Top 20 AR-DRGs for miscellaneous (Misc.) cost bucket

Top 20 Round 17	Rank Round 18	AR-DRG	AR-DRG Description	Misc. cost weight (a)	No. of population -adjusted seps (b)	Overall cost weight (c)	ALoS (days) (e)	% of AR-DRG total cost				Round 17 Misc. cost weight
								OR and SPS	Critical care	Prosthesis	Misc.	
Yes	1	A06A	Tracheostomy W Ventilation >95 hours W Catastrophic CC	14.86	206	45.16	52.3	5%	47%	16%	33%	13.28
Yes	2	P04Z	Neonate, AdmWt 1500-1999 g W Significant OR Procedure	13.54	23	19.57	41.6	1%	29%	0%	69%	6.39
Yes	3	A11A	Insertion of Implantable Spinal Infusion Device W Catastrophic CC	10.21	13	17.61	34.4	5%	15%	23%	58%	6.23
Yes	4	P65A	Neonate, AdmWt 1500-1999 g W/O Significant OR Proc W Multi Major Problems	9.43	11	9.75	28.8	0%	3%	0%	97%	7.27
Yes	5	P62Z	Neonate, AdmWt 750-999 g	9.09	28	35.71	53.0	0%	74%	0%	25%	7.61
Yes	6	A06B	Trach W Vent >95 hours W/O Cat CC or Trach/Vent >95 hours W Cat CC	8.57	735	22.61	28.4	6%	42%	13%	38%	6.51
Yes	7	B60A	Acute Paraplegia/Quadriplegia W or W/O OR Procs W Cat CC	8.12	15	16.61	25.2	11%	20%	20%	49%	10.07
Yes	8	W04 A	Other OR Procs for Multiple Significant Trauma W Catastrophic or Severe CC	8.02	12	9.45	32.1	13%	1%	1%	85%	6.94
No	9	S65A	HIV-Related Diseases W Catastrophic CC	7.91	22	9.06	23.2	1%	10%	1%	87%	-----
Yes	10	P63Z	Neonate, AdmWt 1000-1249 g W/O Significant OR Procedure	7.43	31	8.82	33.2	0%	16%	0%	84%	5.97
Yes	11	A08A	Autologous Bone Marrow Transplant W Catastrophic CC	7.32	113	7.91	25.8	1%	5%	2%	93%	7.29
No	12	P05Z	Neonate, AdmWt 2000-2499 g W Significant OR Procedure	7.30	26	13.37	26.6	2%	43%	0%	55%	2.78
No	13	P65B	Neonate, AdmWt 1500-1999 g W/O Significant OR Procedure W Major Problem	6.93	211	8.46	26.6	0%	18%	0%	82%	4.39
No	14	K01A	OR Procedures for Diabetic Complications W Catastrophic CC	6.91	153	8.99	32.0	10%	6%	7%	77%	5.45
Yes	15	P64Z	Neonate, AdmWt 1250-1499 g W/O Significant OR Procedure	6.26	153	7.51	28.4	0%	17%	0%	83%	5.91
Yes	16	R60A	Acute Leukaemia W Catastrophic CC	6.00	300	6.48	20.0	1%	5%	1%	93%	6.89
No	17	T01A	OR Procedures for Infectious and Parasitic Diseases W Catastrophic CC	5.98	685	8.38	24.5	9%	13%	7%	71%	5.32
No	18	F01A	Implantation or Replacement of AICD, Total System W Catastrophic CC	5.88	339	28.41	8.7	3%	6%	70%	21%	5.39
No	19	P65C	Neonate, AdmWt 1500-1999 g W/O Significant OR Procedure W Other Problem	5.75	302	6.65	24.0	0%	13%	0%	87%	4.06
No	20	F03A	Cardiac Valve Proc W CPB Pump W Invasive Cardiac Investigation W Cat CC	5.68	400	16.11	19.0	15%	24%	26%	35%	5.32
12 in Top 20		Sub-total, top 20 highest miscellaneous cost-weight DRGs		7.19	3,778	15.85	25.5	6%	27%	21%	45%	
		All DRGs		0.49	2,827,996	1.00	2.4	23%	6%	22%	49%	
		Top 20 Miscellaneous cost-weight DRGs, % of all DRGs			0.1%							

Notes:

- (a) For cost weight (cost bucket specific) calculations please refer to Appendix E
- (b) Separations shown are population-adjusted
- (c) DRG-rank for cost weight across all cost buckets. A rank of 1 means that the DRG has the highest cost weight.
- (d) ALoS means average length of stay

Figure 10 Top 20 AR-DRGs for miscellaneous cost bucket



Note: when a Round 17 bar is missing from the chart, this is because that AR-DRG was masked in Round 17 due to having less than 5 separations or having less than 3 hospitals with that AR-DRG.

Appendix A: Analysis performed to determine the minimum sample size

Background

In September 2012 IHPA engaged PwC to review the methodology for calculating the minimum sample size to have a valid and reliable private sector NHCDC collection. This review was requested by the Private sector to ensure the validity and reliability of the collection.

The calculations were based on data received from IHPA, the DoH and PHDB to determine the number of separations, number of hospitals and number of hospital groups required to participate.

The outcome

The conclusion of this re-evaluation based on 2012 data was:

- Approximately 60% of all separations are required in order to achieve a 95% confidence level and 4% acceptable margin of error.
- The 95% confidence level and 4% margin of error parameters have been informed by considering participation levels in historic publications.
- The collection should include approximately 90 hospitals and 10 hospitals 'groups' (of 2 or more hospitals) to be representative.

These minimum targets were used as the condition on which the Round 18 collection would go ahead. It should be noted that these criteria are based on 2012 data and no adjustments have been made to account for any significant sector or market changes for this round 18 collection and associated reports.

For Round 18 the participation rate was 60%, 96 hospitals and 19 groups therefore the collection proceeded.

Minimum participation levels

Data analysis used in determining the minimum participation levels

The following datasets were received and reviewed:

- 1 The published cost weight tables for Round 13;
- 2 A summary of the NHCDC sample for Round 13 and Round 14, by hospital and AR-DRG, for the overnight sector;
- 3 From the Private Hospital Data Bureau dataset (PHDB): a summary of the population levels of activity, showing the total number of separations by hospital in-scope for the collection (at least 200 separations), for Round 13 and Round 14, for the overnight sector;
- 4 From the PHDB dataset: a summary of the population levels of activity, average length of stay, and standard deviation of the length of stay, by hospital and AR-DRG, for all private hospitals, that is, for private overnight hospitals and private day hospitals.

Item 1 above was obtained from the Department of Health (DoH) website¹². Items 2 and 3 above were provided by IHPA. Item 4 above was provided by DoH.

In order for the NHCDC sample to be representative of the patient population and the population of private hospitals, minimum participation levels have been specified in terms of:

- 1 Separation sample size expressed as a percentage of the population levels of activity, where "population" is defined as the total number of separations for hospitals in-scope for the collection. The minimum separation sample size considered to provide sufficient reliability consistent with common statistical practice and historical publication practices was based on the following parameters:

¹²Published cost weight tables for Round 13 on the DoH website http://www.health.gov.au/internet/main/publishing.nsf/Content/Round_13-cost-reports, accessed 3 April 2012

Appendix A: Analysis performed to determine the minimum sample size

- a Standard deviation of costs per AR-DRG;
- b Margin of error in the estimated average cost per AR-DRG; and
- c Statistical confidence that the estimates fall within the specified margin of error.

Parameters (b) and (c) above were informed by reviewing the minimum sample size considered robust enough for publication in the Round 7 to 13 collections and parameter (a) was derived from the Round 13 cost weights.

- 2 The minimum number of hospitals that are required to participate, in aggregate and by hospital characteristic, to ensure that the collection is representative of the population of private hospitals; and
- 3 The minimum number of hospital groups that are required to participate, to ensure that the results represent the population of private hospitals.

Percentage of population separations

A key objective of the collection is to produce estimated costs and cost-weights by classified activity. The percentage of population separations that is required in a sample depends upon the tolerable “margin of error”, statistical confidence¹³ required, and the standard deviation of costs. To obtain an estimate of the average episode cost of a given AR-DRG, say “k”, within a margin of error m and with $x\%$ confidence, the required sample size for AR-DRG(k) is:

sample size of AR – DRG(k)

$$= \left(\frac{(Z - \text{score of } x) \times (\text{standard deviation of episode cost for AR – DRG}(k))}{(\text{margin of error } m)} \right)^2$$

A dataset with a lower margin of error, higher statistical confidence, and higher standard deviation, will require a larger sample size. The standard deviation of each AR-DRG varies, and so the sample size required for each AR-DRG (given the same parameters for error and confidence) will vary. However, given that the NHCDC collection is a voluntary one, it will be impossible to achieve target samples for each AR-DRG. Hence, the sample sizes across all AR-DRGs were aggregated. In performing this aggregation, two weighting methods were investigated:

- 1 Number of separations by AR-DRG;
- 2 Total cost by AR-DRG (number of separations per AR-DRG multiplied by the average cost per AR-DRG).

Summary of separation sample size results for overnight private hospitals

		Confidence level ----->			
		85%	90%	95%	99%
Margin of error per AR-DRG class	1%	87%	88%	90%	92%
	2%	72%	75%	80%	85%
	3%	59%	63%	69%	77%
	4%	49%	53%	60%	69%
	5%	40%	45%	52%	61%
	6%	34%	39%	45%	55%
	7%	29%	33%	39%	49%
	8%	25%	29%	35%	44%
	9%	21%	25%	31%	40%
	10%	19%	22%	27%	36%

Please note: The grey shaded areas are the regions with a participation level lower than the Round 14 collection (37% of separations).

¹³ In this context: the probability that an estimate falls within the margin of error of the true mean.

Outcome of analysis

Based on the above analysis IHPA agreed that for the private overnight NHCDC the minimum target participation rate would be 60% in order to achieve a robust sample¹⁴.

Minimum number of hospitals required

Methodology to calculate minimum number of hospitals required

The formula that is used to produce cost-weights is provided below:

$$\text{Cost - weight of DRG}(k) = \left(\frac{\text{Average cost of DRG}(k)}{\text{Average costs across all DRGs}} \right)$$

Where the average costs are weighted by population levels of activity across all AR-DRG classes and by other hospital characteristics (e.g. hospital size and for-profit / not-for-profit status).

The above formula shows that the cost-weight is influenced by both the average cost of an individual AR-DRG, as well as the overall average cost across all AR-DRGs. The average costs within a given DRG, and across all DRGs, are in turn influenced by the underlying distribution of separations by hospital attribute by which average costs can vary. Therefore, to ensure that the national cost-weights are representative of the Australian population of hospitals, it is important to have a sample that reflects the distribution of separations, and the average costs, across the hospital attributes by which costs can vary.

The study found that there are statistically significant variations in cost between the following hospital attributes:

- State variations in average costs;
- Status (for profit/non-profit);
- Hospital size (+8,000 separations or under 8,000 separations); and
- Region (metropolitan verses non-metropolitan).

To ensure that the average cost per AR-DRG represents a national average, the attributes of the participating hospitals must be such that they represent the hospital attributes by which costs can vary.

Weighting factors can then be applied to re-balance the sample to the population by AR-DRG and hospital attribute. Therefore, the attributes listed above can be used to formulate a sampling frame against which hospitals can be recruited to participate.

Outcome of analysis

Based on the above analysis and to achieve a separation sample size of 60% IHPA agreed that for the private overnight NHCDC the target minimum number of 90 hospitals will be required.

Minimum number of hospital groups required

In order to avoid high skewed data towards the larger hospital groups IHPA agreed that targeting a minimum number of 10 hospital groups which, when combined with individual/independent hospitals.

Minimum targets used for the collection

The minimum targets to be used on which the collection would go ahead.

- Hospitals were requested whether they had an intention to participate;
- The indicative participation rate exceeded the 60%; and
- 90 hospital threshold requirements for the collection to proceed.

¹⁴ Defined as 95% confidence level and 4% acceptable margin of error for the overall average cost. The 95% confidence level and 4% margin of error parameters were informed by considering participation levels in historic publications that were considered acceptable for publication.

Appendix B: PHDB and HCP data quality issues for Round 18

Issue	Issue Description	Comments	Applicable dataset(s)	IHPA & DoH	Round 18 approach
1	No common identifier between PHDB and HCP to pull data from both sources	There is no common identifier with the current data specifications to link PHDB and HCP datasets. In the past, PwC's method of dealing with this has been to link using a combination of patient & episode identification fields e.g. hospital provider number, date of birth, admission/discharge dates. In Round 17 (FY12/13) the PwC team was able to match approximately 85% of records. Relaxing the matching criteria resulted in a higher match rate – but has the potential to cause false positive matches.	HCP & PHDB	Suggestion for future submissions/data specifications (potentially July 2016 onwards) to include a common identifier/linking key and a patient identifier (see item 2).	As with Round 17, used a combination of patient and episode identifiers to link records. Many hospitals had issues linking HCP to their patient administration system, so PHDB was used when appropriate.
2	Patient number / MRN not included in dataset	HCP data does not contain a patient identifier, which is required for costing.	HCP	N/A	See item 1.

Issue	Issue Description	Comments	Applicable dataset(s)	IHPA & DoH	Round 18 approach
3	Duplication of records within PHDB or HCP data	<p>There are a small number of duplicate records in both HCP and PHDB datasets. The number of incidents from previous Rounds has been reduced in PHDB data due to the cleansing work that DoH has performed. However there may be still issues with HCP for example:</p> <ul style="list-style-type: none"> Possible HCP Link identifier – this identifier should not be duplicated, however DoH has identified some duplication in HCP link identifiers (150 records) 	HCP & PHDB	N/A	<p>PwC episode linked identifiers to remove duplicate episodes.</p> <p>Missing HCP records – PwC used PHDB data to fill in HCP gaps where possible and verified with hospitals.</p> <p>Large data gaps/variances were reported and discussed with the participating hospitals (and IHPA) to agree on next steps.</p> <p>The website performed an upload check to identify duplicate episodes and duplicates had to be removed before the file could be submitted.</p>
4.1	Significant error DRGs in the dataset	In Round 17 PwC discovered that HCP has a very high rate of ErrorAR-DRGs. On average, episodes within scope of the Private Overnight collection had an Error AR-DRG (beginning with '9') approximately 8% of the time. The average in the PHDB data is less than 0.5%.	HCP	DoH believes these errors are often related to public hospitals, whereas for private hospitals, the error AR-DRG rate should be low.	PwC investigated the prevalence of this and found it to be reduced in Round 18. Quality of grouping in PHDB was far better than HCP. Hospitals were encouraged to use PHDB where possible.
4.2	Mismatched DRGs in PHDB and HCP dataset (same episode, different AR-DRG)	As above.	HCP & PHDB	N/A	Significant mismatches at the hospital level were reported and discussed with the participating hospitals.

Issue	Issue Description	Comments	Applicable dataset(s)	IHPA & DoH	Round 18 approach
5	Hospitals are submitting data under the same provider number	For example, a large overnight hospital and an associated sameday clinic submit data under same provider number. Clearly only the overnight hospital is relevant to NHCDC. How to differentiate?	PHDB	DoH provided list of which hospitals fell into this category. Only a few instances.	This wasn't a big issue in Round 18. PwC used list to appropriately include/exclude separations. Hospitals also were able to include/exclude separations and parts of the General Ledger.
6	Some episodes are submitted with incorrect Hospital Types (i.e. overnight, sameday facilities)	<p>In the PHDB dataset, Hosp_Type is an attribute of patient episode level data. In Round 17, PwC identified episodes within a facility with different 'Hosp_type' flags. This issue needs to be carefully considered and episode records need to be adjusted for both participating and non-participating hospitals as this impacts the overall participation rate, market share and population adjustments for reporting.</p> <p>It is important to make these hospitals aware that they are using the "hospital type" field incorrectly.</p>	PHDB	There is a category in the declared hospital database that can be used to link to PHDB/HCP to identify hospital type, but this is currently not included in the extracts. DoH may consider adding this category into future extracts.	<p>Identified instances of incorrect use of Hosp_Type field from Round 18 PHDB submissions to IHPA/DoH.</p> <p>An initial review of the PHDB data showed that this issue from Round 17 is not as prevalent for Round 18 participating hospitals.</p>
7	Prosthetics charges and product codes are unclear	<p>In the datasets, there are several fields relating to prosthetics charges and it was unclear which should be used to reflect the actual hospital cost incurred.</p> <p>We note that this issue has the potential to impact on the accuracy of prosthetics-related costing in the final reports.</p>	HCP & PHDB	<p>This is a known issue, DoH advises that there is no best approach and there is some variance in how hospitals use these fields.</p> <p>HCP data is recommended as the best source of truth (rather than PHDB data) for Prosthetics charges for insured patients.</p>	Used the Prosthetics Cost field only.

Issue	Issue Description	Comments	Applicable dataset(s)	IHPA & DoH	Round 18 approach
8	Episode identifier in dataset does not match ID used by hospital	For many hospitals, the episode identifier in PHDB or HCP does not match the episode identifier they provide as part of Data Item 4, which is the basis for encounter information for the NHCDC.	HCP & PHDB	No feasible solution for this issue. APC dataset may contain more information, however without establishment IDs/provider numbers; linking episode information in the APC dataset will be extremely difficult.	Continued matching episodes using a combination of patient and episode identifiers to link PHDB/HCP records. Identified and discuss any discrepancies with the participating hospitals and agree on next steps. As part of the validation checks built into the website, Hospitals were notified if the Episode ID in their Encounter Data didn't match that in PHDB/HCP and were unable to submit data until this has been rectified.
9	Negative or low theatre minutes (<7 mins in duration)	<p>In Round 17, 71 hospitals (from a total of 78 PwC costed hospitals) reported low/negative theatre minutes as part of their PHDB/HCP submissions. On average, 1% of hospital theatre records included low (<7 mins) or negative theatre minutes. This resulted in very low or negative theatre costs being allocated to these episodes.</p> <ul style="list-style-type: none"> PwC discussed this issue with the sector in focus groups in January 2015. Variations exist in hospital PAS data, theatre management/utilisation data and reports designed for PHDB/HCP submissions. 	HCP & PHDB	<p>DoH team is also aware of this issue – health insurers and the sector sees the need for a standard definition/specification of “theatre duration”.</p> <p>Proposed Action: DoH team to ensure that the ‘theatre duration’ field is specified and communicated clearly to private sector hospitals.</p>	This issue was much less prevalent in Round 18.

Issue	Issue Description	Comments	Applicable dataset(s)	IHPA & DoH	Round 18 approach
10	Missing parts of dataset	<p>Months of data may be missing from HCP & PHDB, but hospitals advise that the data was submitted.</p> <p>An initial look at the PHDB data indicates that there are approximately 30 Hospitals where the number of months containing Admission dates did not match the number of months containing Separation dates, so these hospitals may have missing data.</p>	HCP & PHDB	DoH – the data process is very manual. Sometimes sections go missing due to human error.	Identify and discuss any data gaps/discrepancies with the participating hospitals during the pre-costing QA process and agree on next steps.
11	Incompleteness in different fields, and inconsistency of PHDB & HCP data when compared to a hospital's data newly submitted for NHCD	<p>Hospitals' submitted transfer, encounter and feeder data often did not match perfectly with the data obtained from PHDB and HCP.</p> <p>HCP may have better completeness as these submissions are reviewed by health insurers. HCP is more complete for some data elements (such as prosthesis items), but PHDB dataset can be more complete with patient activity data. PwC usually prefers PHDB because it is virtually unchanged when compared with a hospital's original submission and so it has good compatibility with a hospital's data newly submitted for the NHCD. By contrast, one issue with HCP is that it is re-grouped by Health insurers so that sometimes encounters change group compared to the hospital's original submission.</p>	PHDB & HCP	N/A	<p>Reviewed and assess completeness of data based on individual hospital's preference and their ability to provide supplementary data.</p> <p>In general, when records did not match between a hospital's submitted data and PHDB or HCP, records were removed from each until a perfect match was achieved. Records were always only removed with the hospital's permission.</p>

Appendix C: Detailed methodology

Costing methodologies

Hospital costing is the process of identifying the resources and inputs used during an episode and applying the costs of those inputs to the different types of clinical procedures and treatments provided to each patient in a hospital.

There are two main methodologies adopted for hospital cost allocations: cost modelled or patient costed:

Cost modelling

Cost modelling (also known as top down costing) takes the total admitted acute costs for patient areas (such as Wards) and allocates costs to encounters based on an assumed level of consumption using service weights. Service weights are the relative costs of a service for each type of patient care product. Service weights are applied to apportion costs to patient groups defined by their AR-DRG (in the case of acute admitted care).

Patient costing

Patient costing (also known as bottom-up costing) uses some type of activity feeder system to provide actual resource consumption. For example, a prostheses system within a hospital will record what type of prosthesis has been implanted into a patient and the cost. This data is used to allocate costs to patients from the Prostheses patient care area.

Patient level costing yields results that are closer to the true cost of an encounter within a hospital, however due to the dependency on feeder systems, perfect patient level costing can be difficult to achieve.

Stages of the private sector NHCDC

The eight stages of the collection were:

Stage 1 - Expression of interest to participate to primary and secondary collection: All private overnight hospitals that were deemed to be eligible for the collection were sent an invitation to participate in the collection via email. Those hospitals that chose to participate sent an 'Expression of Interest' form to confirm their participation and also indicate whether they wanted to participate in the secondary collection or not. Once this form had been returned those hospitals were sent a confidentiality agreement to sign. If this form was not returned signed then the hospital/hospital group did not receive their participant report and secondary dataset report.

To increase the participation rate to the optimal level of 60% for both the primary and secondary report, hospitals were re contacted to discuss the main benefits of participating in the collection. The result of this was that participation rates for both reports reached the 60% level.

Stage 2 - Data collection: At the commencement of the data collection phase a data specification guide was prepared and distributed to all participants. Hospitals were informed of the data collection timeframes and provided access to a secure website or EDW drop box to upload and submit all relevant files such as the patient activity data items, general ledger data and mapping files. This collection was for both PwC costed hospitals and self-costed hospitals.

Stage 3 – Pre-costing quality assurance (Pre-QA) and review: Pre-costing quality assurance checks were performed on the submitted data, and a pre-costing reasonableness and validation report was generated and provided to all participating hospitals. For Round 18 we added additional checks to the pre-QA report. One of the major changes compared to last year was to flag 7 critical checks which needed to be amended before the costing phase commenced. Unless these critical checks were rectified participants were not allowed to progress to the costing phase.

If the remaining 40 warning checks failed then the NHCDC team worked with stakeholders to rectify these within the time constraints. If these warning checks were not passed hospitals were allowed to progress to the costing phase as these were not deemed critical.

Stage 4 - Costing: The costing phase comprised of performing episode level costing using specialised and well-known costing software for all participating hospitals.

Stage 5 – Post-costing quality assurance (Post-QA) review: Once the hospital/hospital groups had been costed the PwC team reviewed the costing results using our post costing quality assurance review (Post-QA). This included checking for zero or negative cost buckets, outliers in average length of stay or cost and “DRG flipping” which is when the average cost of a lower complexity AR-DRG within a related AR-DRG group is higher than the one with more complexity. If the checks identified a critical issue, then the data was corrected and the hospital would be re-costed.

Stage 6 – Costed Output report: A costed output report was generated at patient level (including AR-DRG and cost buckets) and was shared with the hospitals to review and provide feedback. Once hospitals agreed to the report their results were then final and stage 7 commenced.

Stage 7 – Agreement with stakeholders on AR-DRG flipping and cost weight table: A review was performed of all AR-DRGs for flipping. AR-DRG flipping is where the cost weight is higher than expected for the complexity of the AR-DRG as indicated by the last alphabetic letter in the AR-DRG family. For example I04A is a higher complexity than I04B. Therefore the cost weight for I04A is expected to be higher than I04B. If this is not the case then this is referred to as AR-DRG flipping. In Round 18 there were a small number of these instances which were analysed and discussed with the key stakeholders about the appropriate treatment. After discussions with affected stakeholders, including reviewing patient data, it was agreed that a number of these encounters should have been coded to a high complexity AR-DRG and therefore this was changed in the data.

There were a remaining 6 encounters where it was decided with key stakeholders that these records should be removed from the collection, to reverse the AR-DRG flipping, as these were all low cost outliers.

The only flipped AR-DRG remaining was P60A&B (P60A - Neonate without Sig OR Proc, Died or Transferred to Acute Facility <5 Days and P60B - Neonate without Sig OR Proc, Died or Transferred to Acute Facility Sameday). This is the same treatment as Round 17 and the reason for not changing these AR-DRGs is P60A is for newborn neonates whereas P60B is for non-newborns.

Based on the adjustments described above the cost weight tables were produced and checked for reasonableness and compared to the Round 17 results.

Stage 8 – Reporting: The following reports were produced:

1. Public Published Report for Round 18
2. Participant’s Pack for all participating hospitals
3. Secondary dataset (only for participants that nominated to take part in the secondary collection).

Costing approach for Round 18

Round 18 continued with the focus on improving costing by using feeder system data, such as prosthetics, to allocate costs for the major patient areas in private hospitals. Service weights were used to allocate costs to the smaller cost buckets, such as pharmacy, pathology (if any), and imaging (if any).

For Round 18 there was an increase in hospitals opting to use their own feeder data and allocation statistics rather than relying on service weights or total general ledger to allocate costs.

Data sources

In this round, the following categories of patient level data components have been utilised during the costing process:

Financial data: This includes the general ledger cost centres and account codes, along with mapping of those cost centres to patient care areas and standardised line items. This data set excluded revenue cost centres and/or account codes.

Activity data: This includes the encounter level data (such as patient ID, encounter ID, date of birth etc.) and transfer information identifying the patient’s pathway through the hospital via transfers between

areas such as operating rooms and wards. Participants were given the option to use their own data or use an external source being HCP or PHDB for the encounter date item number 4.

Allocation data: This includes data used to allocate overhead cost centres to patient care areas (such as allocation of Finance or IT department costs to wards and other patient care areas). Typical examples of data used for allocation include FTE counts, number of computers etc. Where no allocation data was submitted, overhead costs were allocated to patient care areas based on their share of total expenses.

Feeder data: This includes data that identifies patient consumption of hospital products or services within a patient care area. For example, a prosthesis feeder might list the prosthetic items received by a patient and the cost of each. This feeder data was used to allocate costs in the general ledger as it identified how much of the prosthesis products each encounter consumed. Using this data source to allocate costs increased the accuracy of the cost allocation. Participants were given the option to use their own data or use an external source being HCP or PHDB for the date items number 7,8,9. Where no feeder data was submitted, patient care area costs were allocated using service weights.

Allocation of patient care area costs to encounters

After overheads were allocated, patient care areas were allocated to encounters. Each patient care area provides a different product or service to patients and therefore the cost allocation methodology was different for each cost bucket.

A list of allocation methods for the Round 18 collection is provided below:

- *Ward Nursing costs* – allocated using fractional bed days. The ‘fractional bed days’ value is derived from the patient transfer file which details the time and date in which patients were transferred in and out of wards.
- *Prostheses costs* – allocated using a prosthesis listing. This identifies the direct cost of the prosthesis used by a patient during their encounter. If no prosthetics listing was provided by the hospital, and no information was made available from PHDB or HCP, these costs were allocated using service weights.
- *Operating room* – allocated using theatre minutes, provided directly from a feeder system. If no operating room data was provided, and no information was made available from PHDB or HCP, these costs were allocated using service weights.
- *Critical care* – allocated using Intensive Care Unit or Critical Care minutes (ICU or CC minutes), provided directly from a feeder system or patient transfer records. If no critical care data was provided, and no information was made available from PHDB or HCP, these costs were allocated using service weights.
- *All other patient care areas:* service weights were used to allocate costs.

Cost bucket or cost components

In the NHCDC, the cost of an episode of acute admitted care is reported by allocating patient level costs to a set of pre-defined cost buckets/cost components. The cost buckets are listed as follows:

- 1 Ward Medical
- 2 Ward Nursing
- 3 Non-clinical Salaries
- 4 Pathology
- 5 Imaging
- 6 Allied Health
- 7 Pharmacy
- 8 Critical Care
- 9 Operating Rooms
- 10 Supplies
- 11 Specialist Procedure Suites
- 12 On-costs
- 13 Prostheses
- 14 Hotel
- 15 Depreciation

Please note that Emergency Department cost bucket was excluded for the private sector NHCDC cost buckets as this collection is for acute admitted only.

Round 18 Private Sector Overnight NHCDC

PwC

Once each of the cost buckets were calculated for an individual patient, the patient's total cost of care was derived as the sum of the above components. A description of the cost buckets are provided in Appendix E: Cost weight tables by AR-DRG.

AR-DRG grouping

24 hospitals submitted activity data using prior version to AR-DRG v6.0x. Therefore these hospitals were regrouped using grouping software to AR-DRG version 6.0x.

Service weights

The 2012-13 service weights were used in Round 18, which are derived from Round 17 public sector NHCDC.

Cost weights

A "cost weight" for a selected AR-DRG is calculated as the average cost for that DRG, expressed as a weight relative to the overall average cost across all AR-DRGs. The national cost weight across all AR-DRGs is equal to 1.00, with higher cost AR-DRGs having a cost weight higher than 1.00. The weight is an indicator of the complexity of the care of the patient and thus the resourcing intensity required. This is often referred to as casemix of a patient or hospital.

Costing standards

Costing was performed in compliance with AHPCS version 3.1.

Analysis and reporting

The costing dataset was constructed from the combined hospital costed outputs. The following adjustments were applied to the dataset:

Neonate adjustment

The costs for newborn infants with zero qualified days, in respect of care type 7 (newborn care), and neonate AR-DRGs were allocated to the delivery AR-DRGs of mothers at the same hospital.

The definition of unqualified days is provided in the National Health Data Dictionary¹⁵: "unqualified days" relates to the first 9 days of a newborn's life, unless the newborn is a second or subsequent live born infant or it requires intensive care. This adjustment has been performed consistent with Round 17 private NHCDC.

Population adjustment process

To ensure the results reflect the full range of Australia's private hospitals, an estimation process is adopted to create representative national costing and activity figures from sample data. The estimation process produces 'population' data by estimating weights, on the basis of acute admitted separations, that are applied to the sample data so that the acute admitted separations equal the total population figures.

The methodology adopted for Round 18 is the same as that adopted in Round 17. As part of consultations with the private hospital sector it was agreed that a market-based approach would be adopted to weight the sample so that the weighted separations and costs of the larger participants did not exceed their actual market share based on separation counts.

The total population was determined as the number of acute separations in 2013-14 obtained from the PHDB. All private acute hospitals in Australia (excluding private day hospital facilities) with more than 200 acute admitted separations during the financial year were included. An issue with the PHDB file was that a number of hospitals missed a monthly PHDB submission (see Appendix B: PHDB and HCP data quality issues for Round 18 for further details). This means that the PHDB was not complete and unsuitable for estimating the population without some form of adjustment for the missing data. Our approach to adjust for missing data was:

- 1 If a hospital participated in Round 18, then the number of separations was based on the number of costed acute admitted separations;

¹⁵ AIHW National Health Data Dictionary, version 16.2, <http://www.aihw.gov.au/WorkArea/DownloadAsset.aspx?id=60129550404>, viewed 17th September 2015

- 2 If a hospital did not participate in the NHCDC, then the number of separations was based on the PHDB. If one of these hospitals missed a monthly PHDB submission, then an annualised estimate at hospital level was taken based on analysis of the average number of separations from the other monthly submissions.

The number of hospitals in the population file for Round 18 is 235.

Appendix D: Standard error range, Round 18 private sector

Standard errors, reported against AR-DRG cost weights included in section 4.3 AR-DRG top 20 and Appendix E: Cost weight tables by AR-DRG, give an indication of the reliability of cost weights. A large standard error indicates a high level of variation in the underlying sample data for that particular AR-DRG, and therefore the cost weight presented is a less reliable estimate of the true underlying cost of a separation in that AR-DRG.

The following table summarises the reliability of AR-DRG cost weights by grouping the standard errors into a number of ranges. Numbers of AR-DRGs and separations falling into standard error ranges provide insight into the global impact of estimation error on cost weights.

Table 15 Number of AR-DRGs by standard error range

Standard error range	Number of AR-DRGs	Separations	Percentage of DRGs (%)	Percentage of total separations (%)
0.000 - 0.039	226	2,509,596	33%	89%
0.040 - 0.099	146	199,448	21%	7%
0.100 - 0.149	77	50,545	11%	2%
0.150 - 0.199	53	29,426	8%	1%
0.200 - 0.399	95	27,797	14%	1%
0.400 +	88	11,107	13%	0%
Total*	685	2,827,919*	100%	100%

* The standard error for some DRGs cannot be estimated due to low separation counts in the sample.

The results above show that 54% (33% + 21%) of AR-DRGs have cost weight estimates with a standard error range of less than 0.1. Around 96% (89% + 7%) of separations are within the subset of AR-DRGs that have standard error less than 0.1.

Appendix E: Cost weight tables by AR-DRG

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Round 18 (2013-14) national consolidation cost weight tables

List of caveats and notes for the Round 18 National Hospital Cost Data Collection (NHCDC) private cost weight tables

Private NHCDC

1. For the NHCDC private sector data note:
 - a. The Private Hospitals Data Bureau (PHDB) data may have been supplied inconsistently by some private hospitals and as a result national definitions such as care type may not be recorded consistently;
 - b. Hospitals may not have provided the general ledger data in the requested format; this may result in some inappropriate allocation of costs i.e. large direct costs such as pharmacy included in overhead cost centres instead of pharmacy cost centres;
 - c. A mixture of patient costing and cost modelling approaches have been adopted for Round 18. Refer to Appendix C: Detailed methodology which describes the costing allocation processes and methodology;
 - d. The version 6.0x service weights have gaps - these weights did not have a weight for Specialist Procedure Suites. The service weights for Operating Rooms were adopted.

Confidentiality rules

To protect the patient confidentiality:

- a. AR-DRGs with less than 5 separations are marked '*****' in the cost weight table; and
- b. If the number of contributing hospitals for a particular AR-DRG is less than three, the figures for this cost weight have been replaced by dashes (----).
- c. The column that showed the number of hospitals associated with an AR-DRG in the Round 17 table has been removed this decision was based on feedback received from the sector in relation to hospitals being identifiable.

Introductory notes to cost weights

These notes provide assistance in interpreting the cost weight tables that follow.

For further information see NHCDC terms can be found in the Australian Hospital Patient Costing Standards (v3.1), which is found at:

<http://www.ihsa.gov.au/internet/ihsa/publishing.nsf/Content/aust-costing-standards-2014-html>).

Additional notes

The sample separations submitted to the NHCDC have been population adjusted in all tables and cost weights except where noted.

Hospitals with less than 200 acute separations or classed as same day facilities were excluded from both sample and population hospitals.

Slight differences may occur between figures in the tables displayed in the Round 18 Cost Report and figures displayed in the attached Cost Weight reports due to rounding.

Cost weight table columns

The following is a brief explanation of each of the 'cost bucket' columns displayed in the cost weight table.

AR-DRG: AR-DRGs or Australian Refined Diagnosis Related Groups is a patient classification scheme that provides a clinically meaningful way of relating the number and types of patients treated in a hospital to the resources required by the hospital.

AR-DRG description: Descriptive text for the AR-DRG code.

Number of population-adjusted separations: This is a measure of the volume of separations in the whole population (i.e. the number of separations in the Round 18 sample, adjusted using the weights to reflect the whole population). A separation is termed to be one complete episode of acute admitted care for a given patient.

Number of days: Number of Days is the sum of lengths of stay of the separations for a given AR-DRG. Length of stay was calculated as the difference between Admission Date and Separation Date, subject to a minimum of 1 day. In other national reporting, length of stay is adjusted to remove leave days, however this adjustment was not applied in this report because most hospitals did not supply leave days. Number of days are population-adjusted.

ALoS (days): The ALoS is calculated by dividing the number of days by the number of separations for each DRG.

Percentage of same day seps incl. in ALoS: This shows of the total ALoS the percentage of separations that were classified as same day patients.

Cost weight (total): The average cost across all AR-DRGs for the total cost is chosen as the denominator for the costs weights, and given a weight of 1. A cost weight of an AR-DRG is calculated as the average total cost for that AR-DRG divided by the average cost across all DRGs.

Example for AR-DRG = "XXX"

Average Cost across All DRGs = \$80

Total Average Cost for DRG:XXX = \$100

"XXX" Total Cost Weight = \$100/\$80 = 1.25

Cost weight (specific cost bucket): A cost weight for an AR-DRG for a specific cost bucket is calculated as the average cost for that AR-DRG and relevant cost bucket, divided by the average total cost across all DRGs.

Example for Critical Care:
AR-DRG = "XXX"

Average Cost across All DRGs = \$80
Total Average Cost for DRG:XXX = \$100
Critical Care Average Cost for DRG: XXX = \$40
"XXX" Critical Care Cost Weight = \$40/\$80 = 0.5

Cost-bucket specific cost weights are shown for:

Operating room and Specialised Procedure Suites

It displays the cost weight for the combined costs, per AR-DRG, of Operating room and Specialist Procedure Suites.

The AHPCS v3.1 definition of this cost bucket is: Standard GL 4C.002 page 40:

Operating room: a designated area of a hospital where significant surgical procedures are carried out under surgical conditions under the supervision of qualified medical practitioner. The operating room must be quipped to deliver general anaesthesia and conform to the College of Anaesthetists and the faculty of Intensive Care standards.

Specialised Procedure Suite: a designated area of the hospital where surgical and non-surgical procedures are performed by an appropriately qualified clinician (including medical scientists).

Critical Care:

The AHPCS v 3.1 definition of this cost bucket is: Standard GL 4A.002 page 38.

Critical Care Unit: separate and self-contained area of a hospital dedicated to the management of patients with life-threatening illnesses, injuries and complications, and monitoring of potentially life-threatening conditions. It provides special expertise and facilities for support of vital functions and uses the skills of medical, nursing and other personnel experienced in the management of these problems. (College of Intensive Care Medicine).

Please note that for costing purposes the Standard GL 4A.002 defines the following units as critical care:

- Intensive Care,
- Coronary Care,
- Cardiothoracic Intensive Care,
- Psychiatric Intensive Care,
- Paediatric Intensive and Neonatal Intensive Care.

High Dependency, special care nurseries and other close observation units wither located within general wards or stand alone will be costed as general wards.

Prostheses:

The AHPCS v 3.1 definition of this cost bucket is (page 87):

The term 'Prostheses,' includes surgically implanted prostheses, human tissue and other medical devices. Implanted prostheses include cardiac pacemakers and defibrillators, cardiac stents, hip and knee replacements and intraocular lenses, as well as human tissues such as human heart valves, corneas, bones (part and whole) and muscle tissue.

Miscellaneous: This column reports the cost weight for the combined costs of all other cost buckets (AHPSC v.3.1 pages 84-90):

Ward Medical: Also known as Medical Clinical Services, this bucket includes the salaries and wages of all medical officers including sessional payments.

Ward Nursing: This bucket includes Nursing salaries and wages reported in Clinical Service areas.

Non-clinical Salaries: This cost bucket includes all other costs of service provision for each inpatient separation.

Pathology: This contains the costs recorded from diagnostic clinical laboratory tests for the diagnosis and treatment of patients and associated salaries.

Imaging: This contains the costs for diagnostic and therapeutic images produced under the direction of a qualified radiographer or suitably qualified technician and reported by a medical practitioner (radiologist) and associated salaries.

Allied Health: Includes clinical services that are delivered by qualified Allied Health professionals who have direct patient contact in areas like audiology, physiotherapy, podiatry etc.

Pharmacy: Covers the area of the hospital responsible for the provision of pharmaceuticals. This includes the purchase, production, distribution, supply and storage of drug products and clinical pharmacy services.

Supplies: 'Supplies' is an abbreviation for the Supplies and Ward Overheads cost bucket. It includes costs for goods and services, medical and surgical supplies, ward and clinical department overheads. In other words, it includes all costs attributed to a ward that are not included in any other cost buckets.

On-costs: Includes superannuation, termination payments, workers compensation, long service leave etc.

Hotel: Includes such items as food service, linen, grocery supplies and recorded as overheads.

Depreciation: Includes depreciation for items that are durable, able to support production for an appreciable period of time and purchased outright or donated.

Standard Error (total cost weight): Standard errors indicate the reliability of cost weights in terms of variation in costs and variation from the sample design.

For any additional information can be accessed at the IHPA website:

(www.iHPA.gov.au)

Appendix E: Cost weight tables by AR-DRG

Table 16 Round 18 (2013-14) national consolidation cost weight tables

AR-DRG	AR-DRG description	Number of population-adjusted seps	Number of days	ALoS (days)	Percentage of sameday seps	Total (a)	OR & SPS cost weight	Critical care cost weight	Prosthesis cost weight	Miscellaneous cost weight	Standard Error (Total Cost Weight)
801A	OR Procedures Unrelated to Principal Diagnosis W Catastrophic CC	1,044	17,168	16.44	13.7%	5.9291	0.5334	0.7070	0.9555	3.7331	0.27
801B	OR Procedures Unrelated to Principal Diagnosis W Severe or Moderate CC	1,315	7,085	5.39	28.7%	2.2632	0.4369	0.1575	0.4859	1.1829	0.14
801C	OR Procedures Unrelated to Principal Diagnosis W/O CC	12,469	27,857	2.23	38.4%	1.3716	0.3899	0.1098	0.3729	0.4989	0.03
960Z	Ungroupable	8,831	15,375	1.74	68.6%	0.8259	0.2476	0.0112	0.0542	0.5129	0.02
961Z	Unacceptable Principal Diagnosis	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
963Z	Neonatal Diagnosis Not Consistent W Age/Weight	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
A01Z	Liver Transplant	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
A03Z	Lung or Heart/Lung Transplant	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
A05Z	Heart Transplant	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
A06A	Tracheostomy W Ventilation >95 hours W Catastrophic CC	206	10,780	52.29	0.0%	45.1562	2.1186	21.0809	7.0954	14.8614	2.76
A06B	Trach W Vent >95 hours W/O Cat CC or Trach/Vent >95 hours W Cat CC	735	20,877	28.42	0.0%	22.6132	1.4559	9.5576	3.0294	8.5702	0.84
A06C	Ventilation >95 hours W/O Catastrophic CC	7	104	14.60	0.0%	17.8946	1.5579	9.2200	2.7781	4.3386	3.89
A06D	Tracheostomy W/O Catastrophic CC	65	780	11.98	9.4%	12.5200	1.4688	6.8222	1.0325	3.1964	2.91
A07Z	Allogeneic Bone Marrow Transplant	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
A08A	Autologous Bone Marrow Transplant W Catastrophic CC	113	2,911	25.84	0.0%	7.9078	0.1032	0.3638	0.1231	7.3176	0.55
A08B	Autologous Bone Marrow Transplant W/O Catastrophic CC	76	547	7.16	34.7%	2.7470	0.4071	0.0005	0.0679	2.2715	0.27
A09A	Renal Transplant W Pancreas Transplant or W Catastrophic CC	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
A09B	Renal Transplant W/O Pancreas Transplant W/O Catastrophic CC	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
A10Z	Insertion of Ventricular Assist Devices	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
A11A	Insertion of Implantable Spinal Infusion Device W Catastrophic CC	13	454	34.39	0.0%	17.6101	0.8422	2.5653	3.9916	10.2111	4.30
A11B	Insertion of Implantable Spinal Infusion Device W/O Catastrophic CC	48	231	4.81	9.2%	8.9278	0.5235	0.0079	6.1478	2.2486	0.67
A12Z	Insertion of Neurostimulator Device	2,665	7,727	2.90	9.5%	10.7557	0.5622	0.0774	8.1528	1.9632	0.15
A40Z	ECMO	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
B01A	Ventricular Shunt Revision W Catastrophic or Severe CC	46	440	9.64	0.0%	3.5509	0.6340	0.3041	0.6901	1.9227	0.37
B01B	Ventricular Shunt Revision W/O Catastrophic or Severe CC	74	264	3.55	0.0%	2.2850	0.5145	0.1069	0.7588	0.9048	0.17
B02A	Cranial Procedures W Catastrophic CC	735	11,904	16.19	0.0%	8.0322	1.1938	1.5583	1.3697	3.9104	0.26
B02B	Cranial Procedures W Severe CC	774	7,037	9.09	0.0%	5.3125	1.0764	0.7816	1.2480	2.2066	0.13
B02C	Cranial Procedures W/O Catastrophic or Severe CC	2,162	14,335	6.63	0.4%	4.2724	0.9713	0.5867	1.0282	1.6862	0.06
B03A	Spinal Procedures W Catastrophic or Severe CC	338	2,931	8.67	0.3%	5.5636	1.0725	0.5774	1.5453	2.3684	0.28
B03B	Spinal Procedures W/O Catastrophic or Severe CC	2,922	9,463	3.24	1.9%	3.4793	0.7623	0.0999	1.5333	1.0838	0.05
B04A	Extracranial Vascular Procedures W Catastrophic CC	123	1,193	9.72	1.3%	4.8165	1.0248	0.9044	0.5409	2.3464	0.32
B04B	Extracranial Vascular Procedures W/O Catastrophic CC	1,056	3,897	3.69	0.6%	2.6883	0.8334	0.4527	0.4114	0.9908	0.07
B05Z	Carpal Tunnel Release	15,370	15,693	1.02	93.5%	0.3177	0.2148	0.0002	0.0027	0.0999	0.00
B06A	Procs for Cerebral Palsy, Muscular Dystrophy, Neuropathy W CC	280	1,545	5.52	34.2%	2.7655	0.5111	0.1757	0.5601	1.5186	0.24
B06B	Procs for Cerebral Palsy, Muscular Dystrophy, Neuropathy W/O CC	4,596	5,407	1.18	64.3%	0.6589	0.3592	0.0072	0.0409	0.2517	0.01
B07A	Peripheral and Cranial Nerve and Other Nervous System Procedures W CC	93	1,024	11.02	8.9%	4.0016	0.5949	0.1000	0.7120	2.5947	0.47
B07B	Peripheral and Cranial Nerve and Other Nervous System Procedures W/O CC	1,566	2,277	1.45	54.5%	0.7771	0.4257	0.0087	0.0476	0.2952	0.02

Appendix E: Cost weight tables by AR-DRG

AR-DRG	AR-DRG description	Number of population-adjusted seps	Number of days	ALoS (days)	Percentage of sameday seps	Total (a)	OR & SPS cost weight	Critical care cost weight	Prosthesis cost weight	Miscellaneous cost weight	Standard Error (Total Cost Weight)
B40Z	Plasmapheresis W Neurological Disease, Sameday	332	332	1.00	100.0%	0.3741	0.0000	0.0000	0.0000	0.3741	0.02
B41Z	Telemetric EEG Monitoring	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
B42A	Nervous System Diagnosis W Ventilator Support W Catastrophic CC	11	122	11.61	0.0%	7.6535	0.4619	1.9847	1.5567	3.6502	2.67
B42B	Nervous System Diagnosis W Ventilator Support W/O Catastrophic CC	9	79	9.05	0.0%	4.0413	0.0562	2.1456	0.0165	1.8231	1.05
B60A	Acute Paraplegia/Quadriplegia W or W/O OR Procs W Cat CC	15	387	25.21	0.0%	16.6122	1.7857	3.3759	3.3311	8.1194	3.73
B60B	Acute Paraplegia/Quadriplegia W or W/O OR Procs W/O Cat CC	15	119	8.08	21.3%	2.7644	0.2999	0.2637	0.5686	1.6322	0.57
B61A	Spinal Cord Conditions W or W/O OR Procedures W Catastrophic or Severe CC	119	1,282	10.81	0.9%	5.8939	0.6604	0.5082	1.6607	3.0646	0.64
B61B	Spinal Cord Conditions W or W/O OR Procedures W/O Catastrophic or Severe CC	391	1,550	3.97	17.5%	3.0223	0.5097	0.1188	1.1744	1.2194	0.20
B62Z	Apheresis	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
B63Z	Dementia and Other Chronic Disturbances of Cerebral Function	1,442	19,127	13.26	1.9%	2.6520	0.0070	0.0424	0.0088	2.5938	0.08
B64A	Delirium W Catastrophic CC	343	6,192	18.05	0.0%	3.5233	0.0142	0.0863	0.0012	3.4216	0.22
B64B	Delirium W/O Catastrophic CC	1,392	11,246	8.08	3.2%	1.6342	0.0057	0.0390	0.0027	1.5868	0.06
B65Z	Cerebral Palsy	117	129	1.10	96.9%	0.2824	0.1005	0.0000	0.0090	0.1730	0.03
B66A	Nervous System Neoplasm W Catastrophic or Severe CC	1,107	14,074	12.71	4.7%	2.6213	0.0240	0.0504	0.0014	2.5455	0.10
B66B	Nervous System Neoplasm W/O Catastrophic or Severe CC	809	4,953	6.12	21.4%	1.3261	0.0341	0.0093	0.0023	1.2805	0.08
B67A	Degenerative Nervous System Disorders W Catastrophic or Severe CC	570	7,685	13.49	1.4%	2.8394	0.0392	0.0451	0.0292	2.7259	0.16
B67B	Degenerative Nervous System Disorders W Moderate CC	453	2,868	6.33	15.9%	1.3269	0.0183	0.0173	0.0121	1.2792	0.08
B67C	Degenerative Nervous System Disorders W/O CC	3,867	7,526	1.95	72.7%	0.3318	0.0075	0.0079	0.0062	0.3103	0.01
B68A	Multiple Sclerosis and Cerebellar Ataxia W CC	134	1,324	9.86	8.6%	3.2414	0.0271	0.1938	0.0007	3.0199	0.34
B68B	Multiple Sclerosis and Cerebellar Ataxia W/O CC	7,566	8,556	1.13	95.3%	0.2662	0.0022	0.0015	0.0005	0.2620	0.00
B69A	TIA and Precerebral Occlusion W Catastrophic or Severe CC	447	3,278	7.34	2.0%	1.5322	0.0102	0.0863	0.0046	1.4311	0.07
B69B	TIA and Precerebral Occlusion W/O Catastrophic or Severe CC	1,605	4,921	3.07	15.0%	0.6648	0.0323	0.0551	0.0085	0.5690	0.02
B70A	Stroke and Other Cerebrovascular Disorders W Catastrophic CC	797	13,838	17.35	0.3%	3.9498	0.0308	0.1545	0.0405	3.7240	0.15
B70B	Stroke and Other Cerebrovascular Disorders W Severe CC	963	9,621	9.99	1.4%	2.0205	0.0105	0.1010	0.0010	1.9080	0.07
B70C	Stroke and Other Cerebrovascular Disorders W/O Catastrophic or Severe CC	1,551	8,041	5.19	9.9%	1.1989	0.0315	0.0680	0.0023	1.0972	0.03
B70D	Stroke and Other Cerebrovascular Disorders, Died or Transferred <5 Days	332	731	2.20	21.4%	0.5244	0.0006	0.0415	0.0011	0.4813	0.03
B71A	Cranial and Peripheral Nerve Disorders W CC	890	4,660	5.24	44.0%	1.1633	0.0177	0.0594	0.0033	1.0829	0.07
B71B	Cranial and Peripheral Nerve Disorders W/O CC	8,810	13,279	1.51	85.0%	0.2385	0.0301	0.0094	0.0053	0.1938	0.01
B72A	Nervous System Infection Except Viral Meningitis W Cat or Sev CC	104	1,969	18.90	3.2%	4.6840	0.0657	0.6702	0.1498	3.7984	0.66
B72B	Nervous System Infection Except Viral Meningitis W/O Cat or Sev CC	376	1,992	5.30	32.0%	1.1712	0.0346	0.0356	0.0087	1.0923	0.08
B73Z	Viral Meningitis	183	998	5.45	2.4%	1.2036	0.0225	0.0361	0.0028	1.1421	0.14
B74A	Nontraumatic Stupor and Coma W CC	123	779	6.36	2.2%	1.4497	0.0052	0.2171	0.0178	1.2095	0.15
B74B	Nontraumatic Stupor and Coma W/O CC	276	548	1.98	2.6%	0.4131	0.0025	0.0717	0.0186	0.3202	0.05
B75Z	Febrile Convulsions	23	26	1.15	36.7%	0.2576	0.0000	0.0000	0.0000	0.2576	0.08
B76A	Seizure W Catastrophic or Severe CC	376	3,423	9.11	1.5%	1.9008	0.0102	0.1555	0.0353	1.6999	0.12
B76B	Seizure W/O Catastrophic or Severe CC	1,136	3,542	3.12	22.5%	0.7368	0.0137	0.0734	0.0044	0.6453	0.04
B77Z	Headache	3,452	9,678	2.80	27.8%	0.5821	0.0409	0.0202	0.0032	0.5177	0.02
B78A	Intracranial Injury W Catastrophic or Severe CC	199	2,753	13.81	0.5%	3.0245	0.0318	0.2010	0.0051	2.7865	0.21
B78B	Intracranial Injury W/O Catastrophic or Severe CC	335	1,988	5.93	5.3%	1.1829	0.0007	0.0260	0.0009	1.1553	0.10
B79A	Skull Fractures W Catastrophic or Severe CC	12	102	8.47	0.0%	1.0857	0.0258	0.0000	0.0000	1.0598	0.30

Appendix E: Cost weight tables by AR-DRG

AR-DRG	AR-DRG description	Number of population-adjusted seps	Number of days	ALoS (days)	Percentage of sameday seps	Total (a)	OR & SPS cost weight	Critical care cost weight	Prosthesis cost weight	Miscellaneous cost weight	Standard Error (Total Cost Weight)
B79B	Skull Fractures W/O Catastrophic or Severe CC	61	260	4.27	16.2%	0.9083	0.0197	0.1598	0.0000	0.7288	0.18
B80Z	Other Head Injury	426	1,755	4.12	22.8%	0.7591	0.0095	0.0055	0.0000	0.7441	0.08
B81A	Other Disorders of the Nervous System W Catastrophic or Severe CC	1,100	12,961	11.78	1.1%	2.2985	0.0259	0.0736	0.0025	2.1964	0.08
B81B	Other Disorders of the Nervous System W/O Catastrophic or Severe CC	3,384	11,627	3.44	36.3%	0.7417	0.0660	0.0197	0.0106	0.6454	0.02
B82A	Chronic and Unspecified Paraplegia/Quadriplegia W or W/O OR Procs W Cat CC	155	2,932	18.90	2.8%	6.4959	0.4068	0.8257	0.4891	4.7743	0.69
B82B	Chronic and Unspecified Paraplegia/Quadriplegia W or W/O OR Procs W Severe CC	165	1,604	9.71	13.1%	2.2545	0.1924	0.1105	0.1461	1.8055	0.32
B82C	Chronic and Unspecified Paraplegia/Quadriplegia W or W/O OR Pr W/O Cat/Sev CC	538	2,664	4.95	31.6%	1.5611	0.2403	0.0868	0.2576	0.9764	0.12
C01Z	Procedures for Penetrating Eye Injury	51	69	1.36	69.6%	1.0459	0.4390	0.0248	0.2514	0.3307	0.23
C02Z	Enucleations and Orbital Procedures	218	334	1.53	34.6%	1.2133	0.5875	0.0202	0.1693	0.4362	0.07
C03Z	Retinal Procedures	11,452	11,765	1.03	83.7%	0.3075	0.1842	0.0003	0.0239	0.0991	0.00
C04Z	Major Corneal, Scleral and Conjunctival Procedures	322	343	1.07	27.2%	1.7831	0.6464	0.0046	0.7218	0.4104	0.05
C05Z	Dacryocystorhinostomy	988	1,016	1.03	54.2%	0.7662	0.4167	0.0033	0.0960	0.2502	0.02
C10Z	Strabismus Procedures	867	869	1.00	86.8%	0.6162	0.4204	0.0009	0.0007	0.1942	0.01
C11Z	Eyelid Procedures	5,612	5,943	1.06	77.3%	0.5946	0.4096	0.0014	0.0043	0.1793	0.01
C12Z	Other Corneal, Scleral and Conjunctival Procedures	2,269	2,293	1.01	91.9%	0.5017	0.3225	0.0002	0.0372	0.1418	0.01
C13Z	Lacrimal Procedures	362	370	1.02	96.5%	0.2445	0.1473	0.0004	0.0018	0.0950	0.01
C14Z	Other Eye Procedures	1,215	1,248	1.03	96.2%	0.3066	0.1949	0.0002	0.0005	0.1110	0.01
C15A	Glaucoma and Complex Cataract Procedures	362	487	1.35	0.0%	1.0422	0.4859	0.0021	0.1036	0.4505	0.03
C15B	Glaucoma and Complex Cataract Procedures, Sameday	777	777	1.00	100.0%	0.5881	0.3493	0.0000	0.0881	0.1507	0.02
C16Z	Lens Procedures	51,801	52,120	1.01	91.7%	0.5233	0.1980	0.0013	0.1964	0.1276	0.00
C60A	Acute and Major Eye Infections W CC	76	731	9.62	11.7%	2.1416	0.0173	0.1334	0.0001	1.9908	0.38
C60B	Acute and Major Eye Infections W/O CC	109	530	4.84	16.8%	0.9997	0.0033	0.0141	0.0004	0.9820	0.09
C61A	Neurological and Vascular Disorders of the Eye W CC	68	344	5.05	8.0%	1.2943	0.0945	0.0042	0.0034	1.1922	0.15
C61B	Neurological and Vascular Disorders of the Eye W/O CC	298	594	1.99	57.3%	0.3982	0.0272	0.0018	0.0000	0.3691	0.03
C62Z	Hyphema and Medically Managed Trauma to the Eye	199	910	4.57	16.5%	0.8350	0.0122	0.0037	0.0000	0.8190	0.10
C63Z	Other Disorders of the Eye	1,179	1,984	1.68	74.3%	0.3691	0.0528	0.0124	0.0179	0.2860	0.03
D01Z	Cochlear Implant	560	825	1.47	1.5%	11.4333	0.7106	0.0410	8.7283	1.9534	0.15
D02A	Head and Neck Procedures W Catastrophic or Severe CC	190	1,245	6.55	5.0%	4.9306	1.4109	1.0442	0.4976	1.9779	0.34
D02B	Head and Neck Procedures W Malignancy or Moderate CC	283	861	3.04	16.3%	2.2046	0.8729	0.2556	0.2292	0.8469	0.18
D02C	Head and Neck Procedures W/O Malignancy W/O CC	1,048	1,466	1.40	34.4%	1.1196	0.5528	0.0676	0.1132	0.3860	0.04
D03Z	Surgical Repair for Cleft Lip or Palate Diagnosis	88	143	1.62	11.7%	1.6799	0.7862	0.1871	0.0225	0.6841	0.20
D04A	Maxillo Surgery W CC	260	541	2.08	20.6%	2.3984	0.9027	0.2054	0.6077	0.6826	0.14
D04B	Maxillo Surgery W/O CC	3,918	5,490	1.40	47.2%	1.4637	0.6167	0.0601	0.3709	0.4160	0.02
D05Z	Parotid Gland Procedures	856	1,749	2.04	2.5%	1.6239	0.9275	0.0533	0.0795	0.5637	0.04
D06Z	Sinus and Complex Middle Ear Procedures	13,345	14,417	1.08	20.8%	0.8573	0.4946	0.0172	0.0356	0.3099	0.01
D10Z	Nasal Procedures	15,463	16,033	1.04	30.0%	0.7006	0.4171	0.0081	0.0211	0.2544	0.00
D11Z	Tonsillectomy and/or Adenoidectomy	24,232	24,930	1.03	25.4%	0.4561	0.2252	0.0035	0.0077	0.2197	0.00
D12Z	Other Ear, Nose, Mouth and Throat Procedures	9,698	10,862	1.12	63.3%	0.7076	0.3743	0.0150	0.0823	0.2358	0.01
D13Z	Myringotomy W Tube Insertion	10,880	10,930	1.00	98.6%	0.2346	0.1314	0.0002	0.0228	0.0803	0.00
D14Z	Mouth and Salivary Gland Procedures	5,721	6,180	1.08	79.4%	0.5499	0.3207	0.0212	0.0262	0.1818	0.01

Appendix E: Cost weight tables by AR-DRG

AR-DRG	AR-DRG description	Number of population-adjusted seps	Number of days	ALoS (days)	Percentage of sameday seps	Total (a)	OR & SPS cost weight	Critical care cost weight	Prosthesis cost weight	Miscellaneous cost weight	Standard Error (Total Cost Weight)
D15Z	Mastoid Procedures	711	978	1.38	4.7%	1.7723	1.0013	0.0245	0.2148	0.5316	0.06
D40Z	Dental Extractions and Restorations	64,140	64,448	1.00	97.9%	0.3939	0.2804	0.0008	0.0023	0.1105	0.00
D60A	Ear, Nose, Mouth and Throat Malignancy W Catastrophic or Severe CC	211	2,717	12.86	14.1%	3.1159	0.0877	0.1024	0.0574	2.8685	0.32
D60B	Ear, Nose, Mouth and Throat Malignancy W/O Catastrophic or Severe CC	748	1,816	2.43	53.3%	0.6966	0.1293	0.0298	0.0127	0.5248	0.05
D61Z	Dysequilibrium	3,944	14,435	3.66	8.0%	0.7826	0.0133	0.0663	0.0234	0.6796	0.02
D62Z	Epistaxis	861	1,745	2.03	53.6%	0.4090	0.0635	0.0100	0.0073	0.3282	0.02
D63Z	Otitis Media and URI	4,685	12,196	2.60	35.5%	0.5523	0.0395	0.0460	0.0075	0.4592	0.02
D64Z	Laryngotracheitis and Epiglottitis	120	297	2.47	21.3%	0.6031	0.0039	0.1417	0.0000	0.4575	0.15
D65Z	Nasal Trauma and Deformity	1,206	1,569	1.30	85.8%	0.3115	0.1152	0.0086	0.0018	0.1859	0.02
D66A	Other Ear, Nose, Mouth and Throat Diagnoses W CC	373	1,118	3.00	31.0%	0.7758	0.0930	0.0606	0.0014	0.6209	0.08
D66B	Other Ear, Nose, Mouth and Throat Diagnoses W/O CC	7,530	8,510	1.13	35.6%	0.2279	0.0793	0.0034	0.0013	0.1439	0.00
D67A	Oral and Dental Disorders Except Extractions and Restorations	639	2,844	4.45	0.0%	1.0078	0.0801	0.0305	0.0258	0.8714	0.06
D67B	Oral and Dental Disorders Except Extractions and Restorations, Sameday	1,999	1,999	1.00	100.0%	0.2359	0.1583	0.0003	0.0017	0.0757	0.01
E01A	Major Chest Procedures W Catastrophic CC	1,246	16,458	13.21	0.0%	6.6021	0.9394	1.5908	0.7657	3.3062	0.18
E01B	Major Chest Procedures W/O Catastrophic CC	1,864	12,702	6.81	1.3%	3.6994	0.7542	0.6232	0.6081	1.7139	0.07
E02A	Other Respiratory System OR Procedures W Catastrophic CC	261	3,987	15.25	2.6%	5.3528	0.6963	0.7316	0.4556	3.4694	0.37
E02B	Other Respiratory System OR Procedures W Severe or Moderate CC	390	1,613	4.14	8.6%	1.9730	0.4821	0.2303	0.2316	1.0290	0.09
E02C	Other Respiratory System OR Procedures W/O CC	7,446	8,727	1.17	10.4%	0.6390	0.2419	0.0485	0.0311	0.3175	0.01
E40A	Respiratory System Diagnosis W Ventilator Support W Catastrophic CC	77	1,372	17.79	0.0%	10.6947	0.0522	5.4970	0.7399	4.4056	1.21
E40B	Respiratory System Diagnosis W Ventilator Support W/O Catastrophic CC	13	109	8.38	0.0%	5.8664	0.0200	3.4565	0.1937	2.1962	0.93
E41Z	Respiratory System Diagnosis W Non-Invasive Ventilation	411	6,076	14.80	0.0%	6.0473	0.0334	2.7094	0.0794	3.2251	0.38
E42A	Bronchoscopy W Catastrophic CC	297	4,559	15.33	0.0%	4.1645	0.3519	0.2380	0.0317	3.5429	0.21
E42B	Bronchoscopy W/O Catastrophic CC	1,489	9,782	6.57	0.0%	1.8060	0.2485	0.0441	0.0851	1.4283	0.05
E42C	Bronchoscopy, Sameday	3,345	3,345	1.00	100.0%	0.2342	0.1493	0.0001	0.0040	0.0808	0.00
E60A	Cystic Fibrosis W Catastrophic or Severe CC	7	55	8.38	0.0%	2.6778	0.0481	0.1000	0.0068	2.5230	0.35
E60B	Cystic Fibrosis W/O Catastrophic or Severe CC	23	174	7.57	0.0%	2.0088	0.0321	0.0257	0.0204	1.9306	0.24
E61A	Pulmonary Embolism W Catastrophic CC	265	2,929	11.05	2.1%	2.8300	0.0176	0.4353	0.0806	2.2965	0.22
E61B	Pulmonary Embolism W/O Catastrophic CC	1,831	9,990	5.46	4.5%	1.3284	0.0083	0.2126	0.0096	1.0978	0.04
E62A	Respiratory Infections/Inflammations W Catastrophic CC	3,656	43,591	11.92	0.7%	2.7206	0.0171	0.2938	0.0261	2.3837	0.05
E62B	Respiratory Infections/Inflammations W Severe or Moderate CC	4,842	35,388	7.31	1.3%	1.5357	0.0055	0.1077	0.0060	1.4165	0.02
E62C	Respiratory Infections/Inflammations W/O CC	4,360	20,284	4.65	5.5%	0.9196	0.0026	0.0308	0.0066	0.8797	0.01
E63Z	Sleep Apnoea	45,269	45,701	1.01	1.2%	0.1724	0.0437	0.0006	0.0000	0.1280	0.00
E64A	Pulmonary Oedema and Respiratory Failure W Catastrophic CC	131	1,477	11.28	1.3%	2.5402	0.0536	0.6004	0.0125	1.8737	0.21
E64B	Pulmonary Oedema and Respiratory Failure W/O Catastrophic CC	217	1,259	5.81	3.9%	1.3957	0.0207	0.3305	0.0016	1.0430	0.11
E65A	Chronic Obstructive Airways Disease W Catastrophic CC	1,807	23,707	13.12	0.2%	2.8703	0.0153	0.4354	0.0419	2.3777	0.10
E65B	Chronic Obstructive Airways Disease W/O Catastrophic CC	7,275	54,486	7.49	3.5%	1.4328	0.0088	0.0792	0.0237	1.3211	0.02
E66A	Major Chest Trauma W Catastrophic CC	176	2,665	15.18	0.0%	3.2508	0.0092	0.3902	0.0015	2.8500	0.20
E66B	Major Chest Trauma W Severe or Moderate CC	455	3,723	8.19	0.8%	1.7684	0.0111	0.1092	0.0128	1.6353	0.09
E66C	Major Chest Trauma W/O CC	250	1,665	6.67	5.1%	1.2054	0.0013	0.0534	0.0058	1.1448	0.10
E67A	Respiratory Signs and Symptoms W Catastrophic or Severe CC	789	5,228	6.62	8.6%	1.6676	0.0509	0.2727	0.0267	1.3172	0.11

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E67B	Respiratory Signs and Symptoms W/O Catastrophic or Severe CC	3,546	6,869	1.94	45.3%	0.5011	0.0845	0.0605	0.0165	0.3396	0.02
E68A	Pneumothorax W CC	125	1,054	8.41	4.3%	2.0059	0.0295	0.3898	0.0102	1.5764	0.22
E68B	Pneumothorax W/O CC	162	416	2.56	12.2%	0.5920	0.0044	0.0917	0.0065	0.4894	0.06
E69A	Bronchitis and Asthma W CC	1,195	7,924	6.63	3.6%	1.3235	0.0132	0.1123	0.0070	1.1909	0.05
E69B	Bronchitis and Asthma W/O CC	2,700	8,267	3.06	29.0%	0.5910	0.0027	0.0298	0.0002	0.5582	0.02
E70A	Whooping Cough and Acute Bronchiolitis W CC	165	850	5.14	1.0%	1.8679	0.0170	0.2336	0.0782	1.5391	0.17
E70B	Whooping Cough and Acute Bronchiolitis W/O CC	379	889	2.34	10.9%	0.6468	0.0007	0.0041	0.0000	0.6421	0.04
E71A	Respiratory Neoplasms W Catastrophic CC	1,315	15,441	11.74	3.2%	2.5596	0.0265	0.0629	0.0248	2.4454	0.09
E71B	Respiratory Neoplasms W/O Catastrophic CC	4,057	19,508	4.81	26.5%	1.0838	0.0284	0.0113	0.0138	1.0303	0.03
E72Z	Respiratory Problems Arising from Neonatal Period	21	44	2.12	13.5%	0.9312	0.0159	0.0000	0.0000	0.9153	0.64
E73A	Pleural Effusion W Catastrophic CC	326	3,239	9.94	9.0%	2.1672	0.0561	0.2096	0.0078	1.8938	0.14
E73B	Pleural Effusion W Severe or Moderate CC	550	3,282	5.96	7.8%	1.2917	0.0502	0.1046	0.0035	1.1334	0.06
E73C	Pleural Effusion W/O CC	688	1,837	2.67	45.8%	0.5571	0.0455	0.0296	0.0050	0.4770	0.04
E74A	Interstitial Lung Disease W Catastrophic CC	187	2,452	13.09	1.5%	3.0271	0.0111	0.3782	0.0022	2.6356	0.23
E74B	Interstitial Lung Disease W Severe or Moderate CC	296	2,547	8.62	0.7%	1.7246	0.0151	0.0587	0.0004	1.6504	0.09
E74C	Interstitial Lung Disease W/O CC	431	2,216	5.14	29.9%	1.0267	0.0156	0.0293	0.0005	0.9813	0.09
E75A	Other Respiratory System Diagnosis W Catastrophic CC	717	8,299	11.58	0.5%	2.4424	0.0127	0.1790	0.0148	2.2359	0.12
E75B	Other Respiratory System Diagnosis W Severe or Moderate CC	1,971	12,893	6.54	3.6%	1.3468	0.0109	0.0753	0.0096	1.2509	0.03
E75C	Other Respiratory System Diagnosis W/O CC	2,242	8,526	3.80	12.1%	0.7476	0.0105	0.0321	0.0010	0.7041	0.02
E76Z	Respiratory Tuberculosis	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
F01A	Implantation or Replacement of AICD, Total System W Catastrophic CC	339	2,942	8.68	0.5%	28.4124	0.9523	1.7806	19.8013	5.8782	0.57
F01B	Implantation or Replacement of AICD, Total System W/O Catastrophic CC	2,302	5,209	2.26	10.0%	22.4461	0.5759	0.2968	17.8956	3.6777	0.18
F02Z	Other AICD Procedures	178	503	2.82	5.8%	6.3671	0.5634	0.7360	3.6362	1.4315	0.91
F03A	Cardiac Valve Proc W CPB Pump W Invasive Cardiac Investigation W Cat CC	400	7,611	19.04	0.0%	16.1107	2.3714	3.9015	4.1533	5.6845	0.65
F03B	Cardiac Valve Proc W CPB Pump W Invasive Cardiac Investigation W/O Cat CC	217	2,333	10.75	0.0%	11.4152	2.0157	2.4299	3.5158	3.4538	0.47
F04A	Cardiac Valve Proc W CPB Pump W/O Invasive Cardiac Inves W Cat CC	2,014	27,084	13.45	0.0%	12.8550	1.9550	3.2030	3.4596	4.2374	0.21
F04B	Cardiac Valve Proc W CPB Pump W/O Invasive Cardiac Inves W/O Cat CC	1,133	10,632	9.38	0.0%	9.1188	1.5964	2.0120	2.5887	2.9218	0.13
F05A	Coronary Bypass W Invasive Cardiac Investigation W Reoperation or W Cat CC	696	11,104	15.95	0.0%	12.8032	2.1207	4.3150	1.8078	4.5597	0.47
F05B	Coronary Bypass W Invasive Cardiac Investigation W/O Reoperation W/O Cat CC	476	5,627	11.83	0.2%	9.2852	1.8384	2.8730	1.1413	3.4324	0.30
F06A	Coronary Bypass W/O Invasive Cardiac Inves W Reoperation or W Cat or Sev CC	2,178	23,763	10.91	0.0%	8.6912	1.6807	2.8280	1.2094	2.9731	0.19
F06B	Coronary Bypass W/O Invasive Cardiac Inves W/O Reoperation W/O Cat or Sev CC	612	5,365	8.77	0.0%	6.8287	1.5328	1.9700	0.8421	2.4838	0.17
F07A	Other Cardiothoracic/Vascular Procedures W CPB Pump W Catastrophic CC	235	2,818	12.00	0.0%	10.8777	2.1161	3.2320	1.7649	3.7646	0.40
F07B	Other Cardiothoracic/Vascular Procedures W CPB Pump W Severe or Moderate CC	120	1,148	9.56	0.0%	9.7534	1.8330	2.7083	1.9138	3.2984	0.76
F07C	Other Cardiothoracic/Vascular Procedures W CPB Pump W/O CC	90	682	7.61	0.0%	7.2916	1.7611	1.9067	1.0235	2.6002	0.49
F08A	Major Reconstruct Vascular Procedures W/O CPB Pump W Catastrophic CC	805	11,280	14.00	0.7%	8.7858	1.7024	1.2700	2.3604	3.4530	0.24
F08B	Major Reconstruct Vascular Procedures W/O CPB Pump W/O Catastrophic CC	2,072	12,194	5.88	1.5%	5.5098	1.1223	0.4406	2.2436	1.7032	0.10
F09A	Other Cardiothoracic Procedures W/O CPB Pump W Catastrophic CC	123	1,431	11.65	0.9%	6.3702	0.8470	1.7985	0.7440	2.9808	0.54
F09B	Other Cardiothoracic Procedures W/O CPB Pump W Severe or Moderate CC	129	668	5.16	6.0%	3.7306	0.7289	0.8437	0.7546	1.4035	0.34
F09C	Other Cardiothoracic Procedures W/O CPB Pump W/O CC	258	544	2.11	9.9%	2.3139	0.6453	0.3105	0.5530	0.8051	0.15
F10A	Interventional Coronary Procedures W AMI W Catastrophic CC	388	3,749	9.67	2.0%	7.0259	0.5773	2.1525	1.8470	2.4490	0.33

Appendix E: Cost weight tables by AR-DRG

AR-DRG	AR-DRG description	Number of population-adjusted seps	Number of days	ALoS (days)	Percentage of sameday seps	Total (a)	OR & SPS cost weight	Critical care cost weight	Prosthesis cost weight	Miscellaneous cost weight	Standard Error (Total Cost Weight)
F10B	Interventional Coronary Procedures W AMI W/O Catastrophic CC	2,893	10,557	3.65	0.8%	4.1098	0.4879	0.8916	1.6420	1.0883	0.05
F11A	Amputation for Circ System Except Upper Limb and Toe W Catastrophic CC	69	2,200	31.93	0.0%	8.6350	1.0437	1.2080	0.8799	5.5034	1.17
F11B	Amputation for Circ System Except Upper Limb and Toe W/O Catastrophic CC	43	904	20.84	5.2%	6.0474	0.7352	0.5670	0.4433	4.3019	0.84
F12A	Implantation or Replacement of Pacemaker, Total System W Catastrophic CC	653	8,485	13.00	0.3%	10.6543	0.6050	1.8575	4.7505	3.4413	0.30
F12B	Implantation or Replacement of Pacemaker, Total System W/O Catastrophic CC	6,844	19,750	2.89	1.1%	7.0845	0.4848	0.4719	4.6665	1.4613	0.05
F13A	Upper Limb and Toe Amputation for Circulatory Sys Disorders W Cat or Sev CC	156	2,312	14.80	1.5%	4.5633	0.6332	0.1819	0.5075	3.2407	0.39
F13B	Upper Limb and Toe Amputation for Circulatory Sys Disorders W/O Cat or Sev CC	173	1,068	6.17	7.7%	1.9032	0.3876	0.0192	0.2535	1.2429	0.15
F14A	Vascular Procs Except Major Reconstruction W/O CPB Pump W Cat CC	874	8,443	9.66	4.0%	4.6010	0.7628	0.5660	1.0142	2.2580	0.20
F14B	Vascular Procs Except Major Reconstruction W/O CPB Pump W Sev or Mod CC	2,178	5,965	2.74	16.3%	2.0566	0.5391	0.0958	0.6405	0.7811	0.05
F14C	Vascular Procs Except Major Reconstruction W/O CPB Pump W/O CC	7,125	10,850	1.52	20.2%	1.6487	0.4711	0.0361	0.6190	0.5225	0.02
F15A	Interventional Coronary Procs W/O AMI W Stent Implantation W Cat or Sev CC	1,964	7,131	3.63	0.6%	4.3376	0.5307	0.9188	1.7244	1.1636	0.10
F15B	Interventional Coronary Procs W/O AMI W Stent Implantation W/O Cat or Sev CC	8,558	14,932	1.74	0.8%	3.1605	0.4775	0.3753	1.5863	0.7213	0.02
F16A	Interventional Coronary Procedures W/O AMI W/O Stent Implantation W CC	226	637	2.82	3.4%	2.5392	0.4553	0.7726	0.5107	0.8006	0.28
F16B	Interventional Coronary Procedures W/O AMI W/O Stent Implantation W/O CC	438	683	1.56	5.0%	1.6719	0.4456	0.2802	0.4576	0.4885	0.08
F17A	Insertion or Replacement of Pacemaker Generator W Catastrophic or Severe CC	128	823	6.41	11.1%	6.6876	0.3507	0.3034	4.0529	1.9806	0.57
F17B	Insertion or Replacement of Pacemaker Generator W/O Catastrophic or Severe CC	2,103	2,678	1.27	36.8%	5.4001	0.3423	0.0539	4.0814	0.9224	0.11
F18A	Other Pacemaker Procedures W CC	115	717	6.22	4.8%	5.9652	0.5445	1.4992	1.9610	1.9606	1.04
F18B	Other Pacemaker Procedures W/O CC	203	359	1.77	6.6%	1.9850	0.4795	0.1921	0.7044	0.6090	0.15
F19Z	Trans-Vascular Percutaneous Cardiac Intervention	354	998	2.82	1.9%	4.3876	0.5386	0.3905	2.3357	1.1227	0.15
F20Z	Vein Ligation and Stripping	8,973	10,452	1.16	26.7%	0.8149	0.4837	0.0040	0.0203	0.3069	0.01
F21A	Other Circulatory System OR Procedures W Catastrophic CC	124	2,892	23.23	9.8%	5.1867	0.4952	0.4949	0.2655	3.9312	0.46
F21B	Other Circulatory System OR Procedures W/O Catastrophic CC	649	4,048	6.23	32.8%	1.9520	0.4476	0.0657	0.1870	1.2517	0.15
F40A	Circulatory System Diagnosis W Ventilator Support W Catastrophic CC	31	574	18.75	0.0%	9.4685	0.4018	4.5330	0.3226	4.2111	0.76
F40B	Circulatory System Diagnosis W Ventilator Support W/O Catastrophic CC	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
F41A	Circulatory Disorders W AMI W Invasive Cardiac Inves Proc W Cat or Sev CC	550	4,281	7.79	0.5%	3.5462	0.2760	1.5751	0.0605	1.6345	0.16
F41B	Circulatory Disorders W AMI W Invasive Cardiac Inves Proc W/O Cat or Sev CC	1,934	7,025	3.63	8.8%	1.8512	0.2559	0.7945	0.0540	0.7467	0.06
F42A	Circulatory Disorders W/O AMI W Invasive Cardiac Inves Proc W Cat or Sev CC	2,544	14,186	5.58	0.0%	2.8216	0.4941	0.9226	0.1076	1.2974	0.07
F42B	Circulatory Disorders W/O AMI W Invasive Cardiac Inves Proc W/O Cat or Sev CC	23,080	44,122	1.91	0.4%	1.2625	0.4287	0.2890	0.0692	0.4756	0.01
F42C	Circulatory Disorders W/O AMI W Invasive Cardiac Inves Proc, Sameday	19,377	19,377	1.00	100.0%	0.5214	0.3086	0.0181	0.0460	0.1486	0.00
F43Z	Circulatory System Diagnosis W Non-Invasive Ventilation	114	1,738	15.24	0.0%	6.2218	0.0691	3.1114	0.0603	2.9809	0.60
F60A	Circulatory Disorders W AMI W/O Invasive Cardiac Inves Proc W Catastrophic CC	371	4,065	10.95	3.7%	2.8156	0.0113	0.7953	0.0015	2.0075	0.22
F60B	Circulatory Disorders W AMI W/O Invasive Cardiac Inves Pr W/O Catastrophic CC	1,540	7,389	4.80	12.2%	1.4223	0.0089	0.5347	0.0100	0.8687	0.07
F61A	Infective Endocarditis W Catastrophic CC	76	2,132	28.14	0.0%	6.3303	0.2428	0.6402	0.1886	5.2587	0.55
F61B	Infective Endocarditis W/O Catastrophic CC	221	2,131	9.66	52.4%	2.0045	0.1108	0.1163	0.0404	1.7370	0.21
F62A	Heart Failure and Shock W Catastrophic CC	3,444	46,832	13.60	0.7%	3.2319	0.0201	0.6711	0.0447	2.4959	0.08
F62B	Heart Failure and Shock W/O Catastrophic CC	7,517	52,503	6.98	3.2%	1.6344	0.0142	0.3425	0.0036	1.2740	0.03
F63A	Venous Thrombosis W Catastrophic or Severe CC	397	3,264	8.21	1.8%	1.7319	0.0241	0.1028	0.0144	1.5907	0.11
F63B	Venous Thrombosis W/O Catastrophic or Severe CC	1,187	4,915	4.14	9.4%	0.7950	0.0154	0.0314	0.0011	0.7470	0.02
F64A	Skin Ulcers in Circulatory Disorders W Catastrophic or Severe CC	283	4,487	15.84	5.7%	3.0891	0.0593	0.0900	0.0416	2.8982	0.21
F64B	Skin Ulcers in Circulatory Disorders W/O Catastrophic or Severe CC	659	4,337	6.58	35.6%	1.2351	0.0527	0.0235	0.0252	1.1337	0.08

Appendix E: Cost weight tables by AR-DRG

AR-DRG	AR-DRG description	Number of population-adjusted seps	Number of days	ALoS (days)	Percentage of sameday seps	Total (a)	OR & SPS cost weight	Critical care cost weight	Prosthesis cost weight	Miscellaneous cost weight	Standard Error (Total Cost Weight)
F65A	Peripheral Vascular Disorders W Catastrophic or Severe CC	390	3,194	8.20	5.5%	1.9596	0.0886	0.1628	0.0787	1.6295	0.13
F65B	Peripheral Vascular Disorders W/O Catastrophic or Severe CC	3,573	6,279	1.76	52.3%	0.5181	0.1352	0.0165	0.0320	0.3344	0.01
F66A	Coronary Atherosclerosis W Catastrophic or Severe CC	521	3,847	7.38	9.3%	1.9143	0.0301	0.5556	0.0202	1.3085	0.16
F66B	Coronary Atherosclerosis W/O Catastrophic or Severe CC	2,292	5,130	2.24	31.5%	0.5373	0.0260	0.1322	0.0027	0.3764	0.02
F67A	Hypertension W Catastrophic or Severe CC	277	2,065	7.46	1.0%	1.4186	0.0355	0.1089	0.0034	1.2707	0.10
F67B	Hypertension W/O Catastrophic or Severe CC	1,731	6,335	3.66	5.6%	0.7200	0.0245	0.0793	0.0068	0.6093	0.02
F68A	Congenital Heart Disease W CC	32	49	1.51	72.7%	0.7413	0.2789	0.0000	0.0000	0.4623	0.14
F68B	Congenital Heart Disease W/O CC	242	269	1.11	89.0%	0.4412	0.2007	0.0466	0.0000	0.1938	0.04
F69A	Valvular Disorders W Catastrophic or Severe CC	435	3,402	7.81	7.6%	1.6772	0.0353	0.2631	0.0384	1.3403	0.12
F69B	Valvular Disorders W/O Catastrophic or Severe CC	2,325	4,525	1.95	41.2%	0.5974	0.0793	0.1249	0.0532	0.3400	0.02
F72A	Unstable Angina W Catastrophic or Severe CC	419	2,811	6.71	3.1%	1.8072	0.0072	0.5770	0.0007	1.2223	0.13
F72B	Unstable Angina W/O Catastrophic or Severe CC	1,483	3,855	2.60	11.9%	0.7721	0.0107	0.2924	0.0001	0.4689	0.03
F73A	Syncope and Collapse W Catastrophic or Severe CC	1,746	14,497	8.30	1.0%	1.7698	0.0112	0.2270	0.0229	1.5086	0.06
F73B	Syncope and Collapse W/O Catastrophic or Severe CC	4,989	15,636	3.13	19.0%	0.9453	0.0407	0.1299	0.1863	0.5884	0.02
F74Z	Chest Pain	12,680	24,394	1.92	28.3%	0.5114	0.0155	0.1691	0.0016	0.3252	0.01
F75A	Other Circulatory System Diagnoses W Catastrophic CC	615	6,979	11.35	1.5%	2.9069	0.0455	0.4578	0.0452	2.3585	0.14
F75B	Other Circulatory System Diagnoses W Severe or Moderate CC	1,740	8,110	4.66	13.9%	1.2375	0.0537	0.2357	0.0183	0.9298	0.04
F75C	Other Circulatory System Diagnoses W/O CC	2,408	4,883	2.03	49.1%	0.6034	0.0897	0.1164	0.0365	0.3608	0.02
F76A	Arrhythmia, Cardiac Arrest and Conduction Disorders W Cat or Sev CC	2,373	17,831	7.51	4.3%	2.2081	0.0364	0.7581	0.0066	1.4071	0.07
F76B	Arrhythmia, Cardiac Arrest and Conduction Disorders W/O Cat or Sev CC	16,787	31,341	1.87	50.4%	0.6079	0.0797	0.1915	0.0102	0.3266	0.01
G01A	Rectal Resection W Catastrophic CC	1,538	23,561	15.32	0.2%	7.7397	1.6464	1.2924	0.9725	3.8284	0.16
G01B	Rectal Resection W/O Catastrophic CC	2,679	20,213	7.54	0.1%	4.2636	1.3369	0.2866	0.7245	1.9156	0.04
G02A	Major Small and Large Bowel Procedures W Catastrophic CC	2,980	45,300	15.20	0.3%	7.0250	1.1954	1.3581	0.6743	3.7973	0.15
G02B	Major Small and Large Bowel Procedures W/O Catastrophic CC	5,988	34,208	5.71	6.3%	2.7754	0.8043	0.1957	0.3824	1.3930	0.03
G03A	Stomach, Oesophageal and Duodenal Procedure W Malignancy or W Catastrophic CC	739	11,006	14.90	0.7%	8.7973	1.5508	1.9771	1.0593	4.2100	0.47
G03B	Stomach, Oesophageal and Duodenal Procedures W/O Malignancy W Sev or Mod CC	579	2,294	3.96	5.3%	2.5321	0.8117	0.3081	0.3341	1.0782	0.09
G03C	Stomach, Oesophageal and Duodenal Procedures W/O Malignancy W/O CC	2,791	6,439	2.31	7.5%	1.6167	0.6908	0.0472	0.2090	0.6698	0.03
G04A	Peritoneal Adhesiolysis W Catastrophic CC	512	7,160	13.98	0.5%	5.9834	0.9630	1.0031	0.4538	3.5636	0.24
G04B	Peritoneal Adhesiolysis W Severe or Moderate CC	1,108	7,082	6.39	2.1%	2.9722	0.7973	0.2434	0.3996	1.5319	0.07
G04C	Peritoneal Adhesiolysis W/O CC	4,152	11,793	2.84	7.4%	1.5866	0.5727	0.0327	0.2776	0.7036	0.02
G05A	Minor Small and Large Bowel Procedures W Catastrophic CC	58	657	11.41	0.0%	4.3665	0.7034	0.6162	0.4724	2.5744	0.71
G05B	Minor Small and Large Bowel Procedures W Severe or Moderate CC	202	1,231	6.09	5.5%	2.1945	0.5811	0.0847	0.1414	1.3872	0.09
G05C	Minor Small and Large Bowel Procedures W/O CC	620	2,581	4.16	13.4%	1.5535	0.5038	0.0065	0.1409	0.9022	0.04
G06Z	Pyloromyotomy Procedure	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
G07A	Appendectomy W Malignancy or Peritonitis or W Catastrophic or Severe CC	1,305	4,424	3.39	0.1%	1.3997	0.4616	0.0805	0.0499	0.8076	0.04
G07B	Appendectomy W/O Malignancy or Peritonitis W/O Cat or Sev CC	4,709	8,829	1.88	1.1%	0.9473	0.3983	0.0048	0.0585	0.4857	0.01
G10A	Hernia Procedures W CC	2,200	7,568	3.44	4.9%	1.9076	0.5436	0.1450	0.3305	0.8885	0.05
G10B	Hernia Procedures W/O CC	34,931	44,466	1.27	21.5%	0.9535	0.3934	0.0055	0.2185	0.3361	0.00
G11Z	Anal and Stomal Procedures	30,287	38,648	1.28	69.2%	0.4646	0.2282	0.0022	0.0282	0.2059	0.00
G12A	Other Digestive System OR Procedures W Catastrophic CC	297	4,426	14.90	4.3%	4.8440	0.5828	0.5426	0.2701	3.4485	0.28

Appendix E: Cost weight tables by AR-DRG

AR-DRG	AR-DRG description	Number of population-adjusted seps	Number of days	ALoS (days)	Percentage of sameday seps	Total (a)	OR & SPS cost weight	Critical care cost weight	Prosthesis cost weight	Miscellaneous cost weight	Standard Error (Total Cost Weight)
G12B	Other Digestive System OR Procedures W Severe or Moderate CC	589	2,688	4.57	25.8%	1.6891	0.3888	0.1026	0.1157	1.0819	0.08
G12C	Other Digestive System OR Procedures W/O CC	1,622	4,342	2.68	35.6%	1.0823	0.3604	0.0540	0.0696	0.5983	0.04
G46A	Complex Gastroscopy W Catastrophic CC	410	5,192	12.68	0.0%	3.6714	0.3156	0.3101	0.2368	2.8088	0.17
G46B	Complex Gastroscopy W/O Catastrophic CC	7,733	24,359	3.15	0.0%	1.0260	0.2411	0.0338	0.0401	0.7109	0.01
G46C	Complex Gastroscopy, Sameday	79,456	79,456	1.00	100.0%	0.2888	0.2003	0.0000	0.0044	0.0841	0.00
G47A	Other Gastroscopy W Catastrophic CC	447	6,038	13.51	0.0%	3.4782	0.1942	0.3926	0.0545	2.8368	0.17
G47B	Other Gastroscopy W/O Catastrophic CC	5,058	18,888	3.73	0.0%	0.9918	0.1548	0.0585	0.0154	0.7631	0.02
G47C	Other Gastroscopy, Sameday	62,687	62,702	1.00	100.0%	0.1681	0.1033	0.0000	0.0003	0.0645	0.00
G48A	Colonoscopy W Catastrophic or Severe CC	985	7,441	7.56	0.2%	2.1440	0.3510	0.1171	0.0363	1.6397	0.09
G48B	Colonoscopy W/O Catastrophic or Severe CC	7,356	16,560	2.25	0.3%	0.7676	0.2228	0.0102	0.0134	0.5212	0.01
G48C	Colonoscopy, Sameday	110,153	110,154	1.00	100.0%	0.2253	0.1472	0.0000	0.0049	0.0732	0.00
G60A	Digestive Malignancy W Catastrophic CC	1,235	13,867	11.22	5.2%	2.5899	0.0395	0.0990	0.0583	2.3931	0.11
G60B	Digestive Malignancy W/O Catastrophic CC	4,991	17,374	3.48	24.3%	0.8636	0.0560	0.0096	0.0414	0.7566	0.02
G61A	GI Haemorrhage W Catastrophic or Severe CC	472	3,975	8.41	4.7%	1.8473	0.0174	0.1296	0.0328	1.6675	0.12
G61B	GI Haemorrhage W/O Catastrophic or Severe CC	1,355	3,529	2.60	20.8%	0.5104	0.0117	0.0285	0.0010	0.4691	0.02
G62Z	Complicated Peptic Ulcer	148	532	3.58	44.6%	0.8299	0.0544	0.1150	0.0254	0.6350	0.13
G63Z	Uncomplicated Peptic Ulcer	96	280	2.91	30.1%	0.6814	0.0386	0.1027	0.0012	0.5388	0.18
G64A	Inflammatory Bowel Disease W CC	236	1,585	6.73	12.1%	1.9645	0.0200	0.0289	0.0098	1.9057	0.13
G64B	Inflammatory Bowel Disease W/O CC	4,909	6,179	1.26	89.9%	0.4044	0.0062	0.0013	0.0005	0.3965	0.01
G65A	GI Obstruction W Catastrophic or Severe CC	974	8,703	8.93	1.7%	2.0240	0.0226	0.1218	0.0359	1.8437	0.09
G65B	GI Obstruction W/O Catastrophic or Severe CC	2,617	9,648	3.69	6.4%	0.7186	0.0078	0.0144	0.0019	0.6945	0.02
G66Z	Abdominal Pain or Mesenteric Adenitis	7,310	18,280	2.50	17.9%	0.4928	0.0119	0.0133	0.0016	0.4660	0.01
G67A	Oesophagitis and Gastroenteritis W Cat/Sev CC	2,127	16,735	7.87	1.4%	1.6210	0.0053	0.1037	0.0121	1.4999	0.05
G67B	Oesophagitis and Gastroenteritis W/O Cat/Sev CC	5,849	17,022	2.91	12.8%	0.5577	0.0061	0.0279	0.0017	0.5221	0.01
G70A	Other Digestive System Diagnoses W Catastrophic or Severe CC	3,955	23,652	5.98	22.7%	1.2818	0.0174	0.0638	0.0159	1.1847	0.03
G70B	Other Digestive System Diagnoses W/O Catastrophic or Severe CC	15,166	39,067	2.58	37.3%	0.5082	0.0337	0.0148	0.0090	0.4508	0.01
H01A	Pancreas, Liver and Shunt Procedures W Catastrophic CC	553	8,073	14.59	0.0%	8.4122	1.6398	1.6522	1.2279	3.8922	0.32
H01B	Pancreas, Liver and Shunt Procedures W/O Catastrophic CC	584	3,656	6.26	2.5%	4.1529	1.0543	0.6580	0.7010	1.7395	0.14
H02A	Major Biliary Tract Procedures W Catastrophic CC	187	2,757	14.77	0.0%	6.0794	0.9377	0.5850	0.7297	3.8268	0.33
H02B	Major Biliary Tract Procedures W Severe CC	96	693	7.25	4.7%	3.2677	0.7952	0.2319	0.4537	1.7869	0.27
H02C	Major Biliary Tract Procedures W/O Catastrophic or Severe CC	228	933	4.08	12.7%	1.9568	0.6223	0.1163	0.2275	0.9907	0.14
H05A	Hepatobiliary Diagnostic Procedures W Catastrophic CC	37	717	19.16	0.0%	5.7198	0.8462	0.6459	0.7672	3.4605	0.89
H05B	Hepatobiliary Diagnostic Procedures W/O Catastrophic CC	483	1,025	2.12	40.3%	1.0298	0.4435	0.0259	0.0926	0.4678	0.06
H06A	Other Hepatobiliary and Pancreas OR Procedures W Catastrophic CC	126	1,497	11.89	3.0%	5.0953	0.3855	0.5058	1.0969	3.1071	0.38
H06B	Other Hepatobiliary and Pancreas OR Procedures W/O Catastrophic CC	599	1,500	2.50	17.7%	2.2738	0.3378	0.0089	1.0697	0.8575	0.09
H07A	Open Cholecystectomy W Closed CDE or W Catastrophic CC	121	1,509	12.46	1.4%	6.1813	1.0393	1.3104	0.6342	3.1975	0.62
H07B	Open Cholecystectomy W/O Closed CDE W/O Catastrophic CC	383	1,944	5.08	0.3%	2.4033	0.8287	0.1270	0.2532	1.1945	0.08
H08A	Laparoscopic Cholecystectomy W Closed CDE or W (Cat or Sev CC)	2,608	11,887	4.56	0.6%	2.2813	0.7100	0.2057	0.2365	1.1291	0.05
H08B	Laparoscopic Cholecystectomy W/O Closed CDE W/O Cat or Sev CC	17,690	27,553	1.56	2.1%	1.1306	0.5073	0.0083	0.1675	0.4476	0.01
H40A	Endoscopic Procedures for Bleeding Oesophageal Varices W Catastrophic CC	12	117	10.05	0.0%	2.6290	0.2900	0.2205	0.0562	2.0623	0.55

Appendix E: Cost weight tables by AR-DRG

AR-DRG	AR-DRG description	Number of population-adjusted seps	Number of days	ALoS (days)	Percentage of sameday seps	Total (a)	OR & SPS cost weight	Critical care cost weight	Prosthesis cost weight	Miscellaneous cost weight	Standard Error (Total Cost Weight)
H40B	Endoscopic Procedures for Bleeding Oesophageal Varices W/O Catastrophic CC	41	162	3.92	29.3%	1.8702	0.2723	0.4971	0.1200	0.9808	0.37
H43A	ERCP Procedures W Catastrophic or Severe CC	532	4,574	8.60	3.7%	2.9621	0.3155	0.2716	0.4020	1.9730	0.12
H43B	ERCP Procedures W/O Catastrophic or Severe CC	2,580	5,572	2.16	24.2%	0.8770	0.2638	0.0067	0.1327	0.4737	0.02
H60A	Cirrhosis and Alcoholic Hepatitis W Catastrophic CC	168	2,427	14.45	2.0%	3.2347	0.1441	0.3121	0.0129	2.7655	0.39
H60B	Cirrhosis and Alcoholic Hepatitis W Severe or Moderate CC	456	1,474	3.23	44.7%	0.6253	0.0616	0.0111	0.0105	0.5421	0.04
H60C	Cirrhosis and Alcoholic Hepatitis W/O CC	408	481	1.18	88.5%	0.2549	0.0738	0.0080	0.0365	0.1366	0.04
H61A	Malignancy of Hepatobiliary System, Pancreas W Catastrophic CC	710	8,349	11.77	2.4%	2.6290	0.0516	0.0678	0.0387	2.4708	0.12
H61B	Malignancy of Hepatobiliary System, Pancreas W/O Catastrophic CC	3,084	12,018	3.90	32.9%	0.9320	0.0586	0.0098	0.0374	0.8262	0.03
H62A	Disorders of Pancreas Except for Malignancy W Catastrophic or Severe CC	303	3,053	10.09	2.8%	2.7011	0.0316	0.6747	0.0878	1.9070	0.29
H62B	Disorders of Pancreas Except for Malignancy W/O Catastrophic or Severe CC	1,605	4,938	3.08	28.0%	0.6399	0.0275	0.0205	0.0212	0.5706	0.03
H63A	Disorders of Liver Except Malig, Cirrhosis, Alcoholic Hepatitis W Cat/Sev CC	498	4,336	8.71	16.2%	1.9091	0.0696	0.1087	0.0410	1.6898	0.11
H63B	Disorders of Liver Excep Malig, Cirrhosis, Alcoholic Hepatitis W/O Cat/Sev CC	1,854	3,547	1.91	70.0%	0.4159	0.0777	0.0017	0.0114	0.3251	0.02
H64A	Disorders of the Biliary Tract W CC	764	4,809	6.29	9.2%	1.3731	0.0263	0.1219	0.0126	1.2123	0.07
H64B	Disorders of the Biliary Tract W/O CC	1,607	3,767	2.34	32.9%	0.4504	0.0303	0.0196	0.0028	0.3978	0.02
I01A	Bilateral/Multiple Major Joint Proc of Lower Extremity W Revision or W Cat CC	365	6,843	18.76	0.0%	13.1055	1.4581	0.8227	5.5395	5.2852	0.77
I01B	Bilateral/Multiple Major Joint Pr of Lower Extremity W/O Revision W/O Cat CC	1,986	14,405	7.25	0.0%	7.5993	0.9494	0.1907	4.2890	2.1703	0.09
I02A	Microvascular Tissue Transfer or (Skin Graft W Cat or Sev CC), Excluding Hand	298	6,914	23.16	2.0%	9.0953	1.8139	0.5991	1.3755	5.3068	0.50
I02B	Skin Graft W/O Catastrophic or Severe CC, Excluding Hand	639	2,205	3.45	39.0%	1.8521	0.6091	0.0431	0.3070	0.8928	0.13
I03A	Hip Replacement W Catastrophic CC	1,422	18,485	13.00	0.3%	7.9642	0.8168	0.5578	3.3741	3.2155	0.11
I03B	Hip Replacement W/O Catastrophic CC	18,869	110,848	5.87	0.0%	6.3091	0.6875	0.0605	3.7389	1.8223	0.02
I04A	Knee Replacement W Catastrophic or Severe CC	5,045	40,805	8.09	0.0%	6.2992	0.7734	0.2444	3.1154	2.1660	0.04
I04B	Knee Replacement W/O Catastrophic or Severe CC	23,462	132,923	5.67	0.0%	5.2817	0.6892	0.0378	2.9120	1.6426	0.01
I05A	Other Joint Replacement W Catastrophic or Severe CC	484	4,502	9.30	0.3%	8.3600	1.0507	0.4212	4.3147	2.5734	0.22
I05B	Other Joint Replacement W/O Catastrophic or Severe CC	3,095	12,333	3.98	0.4%	5.8181	0.8348	0.0686	3.4979	1.4168	0.05
I06Z	Spinal Fusion W Deformity	822	7,957	9.68	0.0%	14.7223	1.9147	0.9409	8.4107	3.4561	0.49
I07Z	Amputation	77	1,691	21.84	2.9%	6.0610	0.9240	0.6309	0.2271	4.2791	0.73
I08A	Other Hip and Femur Procedures W Catastrophic CC	985	18,896	19.19	0.0%	6.8021	0.7411	0.6049	1.2531	4.2029	0.21
I08B	Other Hip and Femur Procedures W/O Catastrophic CC	5,674	26,904	4.74	4.1%	2.4360	0.6449	0.0365	0.5399	1.2147	0.03
I09A	Spinal Fusion W Catastrophic CC	1,226	15,755	12.85	0.0%	13.2426	1.5788	1.2288	6.2692	4.1658	0.37
I09B	Spinal Fusion W/O Catastrophic CC	9,554	59,163	6.19	0.0%	7.9198	1.1644	0.2869	4.3548	2.1136	0.07
I10A	Other Back and Neck Procedures W Catastrophic or Severe CC	2,036	14,643	7.19	0.1%	3.2912	0.8951	0.2510	0.4842	1.6609	0.06
I10B	Other Back and Neck Procedures W/O Catastrophic or Severe CC	15,780	53,340	3.38	2.9%	1.9298	0.6333	0.0299	0.4082	0.8584	0.01
I11Z	Limb Lengthening Procedures	61	229	3.74	2.7%	4.4135	0.8639	0.0073	2.0428	1.4995	0.59
I12A	Infect/Inflam of Bone and Joint W Misc Musculoskeletal Procs W Cat CC	323	7,140	22.13	0.0%	5.8936	0.6282	0.4371	0.4640	4.3643	0.28
I12B	Infect/Inflam of Bone and Joint W Misc Musculoskeletal Procs W Sev or Mod CC	681	7,256	10.66	4.7%	3.0676	0.5132	0.0627	0.3315	2.1603	0.13
I12C	Infect/Inflam of Bone and Joint W Misc Musculoskeletal Procs W/O Sev or Mod CC	2,547	9,277	3.64	26.9%	1.4722	0.4304	0.0108	0.2281	0.8029	0.04
I13A	Humerus, Tibia, Fibula and Ankle Procedures W CC	1,260	9,883	7.84	4.1%	3.9793	0.8239	0.1034	1.1928	1.8593	0.11
I13B	Humerus, Tibia, Fibula and Ankle Procedures W/O CC	12,975	28,297	2.18	18.4%	1.6907	0.5516	0.0031	0.5126	0.6234	0.02
I15Z	Cranio-Facial Surgery	148	865	5.85	6.8%	6.2717	0.9019	0.5881	3.0299	1.7517	0.53
I16Z	Other Shoulder Procedures	34,497	42,332	1.23	5.3%	1.2835	0.5334	0.0051	0.3438	0.4012	0.01

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I17A	Maxillo-Facial Surgery W CC	30	105	3.56	0.0%	2.7398	0.6718	0.1146	0.8680	1.0854	0.61
I17B	Maxillo-Facial Surgery W/O CC	251	393	1.57	26.1%	1.7115	0.6123	0.0648	0.5388	0.4956	0.17
I18Z	Other Knee Procedures	56,143	62,774	1.12	82.0%	0.4783	0.2843	0.0015	0.0166	0.1759	0.00
I19A	Other Elbow or Forearm Procedures W CC	432	2,715	6.28	5.4%	3.4067	0.6506	0.1089	1.0133	1.6339	0.19
I19B	Other Elbow or Forearm Procedures W/O CC	6,911	9,911	1.43	19.3%	1.6599	0.5207	0.0021	0.6602	0.4768	0.02
I20Z	Other Foot Procedures	13,322	21,528	1.62	23.2%	1.2451	0.4355	0.0021	0.3665	0.4410	0.01
I21Z	Local Excision and Removal of Internal Fixation Devices of Hip and Femur	567	885	1.56	32.3%	0.9379	0.4259	0.0083	0.0934	0.4103	0.04
I23Z	Local Excision and Removal of Internal Fixation Devices Excl Hip and Femur	10,639	12,454	1.17	73.1%	0.5624	0.2938	0.0033	0.0743	0.1910	0.01
I24Z	Arthroscopy	2,912	3,345	1.15	53.0%	0.6503	0.3640	0.0010	0.0520	0.2332	0.01
I25A	Bone and Joint Diagnostic Procedures Including Biopsy W CC	145	1,191	8.18	38.7%	2.3591	0.1821	0.0219	0.0231	2.1321	0.23
I25B	Bone and Joint Diagnostic Procedures Including Biopsy W/O CC	265	901	3.40	52.6%	0.8867	0.1773	0.0067	0.0432	0.6596	0.09
I27A	Soft Tissue Procedures W CC	562	3,590	6.38	11.7%	2.4355	0.5120	0.3218	0.1691	1.4327	0.20
I27B	Soft Tissue Procedures W/O CC	8,288	12,681	1.53	43.0%	0.8102	0.3598	0.0043	0.1038	0.3423	0.01
I28A	Other Musculoskeletal Procedures W CC	272	2,292	8.43	6.5%	3.3748	0.5505	0.2227	0.6373	1.9643	0.21
I28B	Other Musculoskeletal Procedures W/O CC	3,770	5,938	1.58	24.6%	1.4985	0.4489	0.0148	0.5681	0.4667	0.02
I29Z	Knee Reconstruction or Revision	10,295	12,105	1.18	5.0%	1.5159	0.6176	0.0012	0.4485	0.4485	0.01
I30Z	Hand Procedures	27,230	29,443	1.08	70.2%	0.6779	0.3588	0.0016	0.1120	0.2055	0.00
I31A	Hip Revision W Catastrophic CC	325	6,983	21.51	0.0%	12.5901	1.5089	1.3569	4.4959	5.2284	0.44
I31B	Hip Revision W/O Catastrophic CC	1,860	15,467	8.32	0.1%	6.7603	0.9773	0.3035	3.2510	2.2284	0.09
I32A	Knee Revision W Catastrophic CC	228	4,465	19.56	0.0%	11.0536	1.1427	0.4784	4.8401	4.5924	0.55
I32B	Knee Revision W Severe CC	352	3,722	10.59	0.0%	8.3181	1.0008	0.2876	4.1727	2.8571	0.32
I32C	Knee Revision W/O Catastrophic or Severe CC	1,554	10,355	6.66	0.0%	6.1336	0.8773	0.1097	3.3048	1.8418	0.12
I60Z	Femoral Shaft Fractures	55	606	11.02	8.1%	2.2809	0.0412	0.0452	0.0029	2.1916	0.61
I61A	Distal Femoral Fractures W CC	48	1,177	24.69	0.0%	4.0507	0.0255	0.3714	0.0000	3.6537	0.79
I61B	Distal Femoral Fractures W/O CC	67	507	7.57	5.9%	1.3769	0.0211	0.0000	0.0000	1.3558	0.30
I63A	Sprains, Strains and Dislocations of Hip, Pelvis and Thigh W CC	120	1,131	9.40	0.0%	1.6147	0.0327	0.0469	0.0008	1.5343	0.20
I63B	Sprains, Strains and Dislocations of Hip, Pelvis and Thigh W/O CC	412	1,328	3.22	12.4%	0.5995	0.0446	0.0001	0.0000	0.5547	0.03
I64A	Osteomyelitis W Catastrophic or Severe CC	163	2,963	18.14	1.0%	3.6589	0.0769	0.0748	0.1326	3.3747	0.29
I64B	Osteomyelitis W/O Catastrophic or Severe CC	394	2,296	5.82	40.4%	1.1538	0.0427	0.0109	0.0623	1.0379	0.11
I65A	Musculoskeletal Malignant Neoplasms W Catastrophic CC	545	8,968	16.45	2.9%	3.4722	0.0341	0.0342	0.0661	3.3378	0.23
I65B	Musculoskeletal Malignant Neoplasms W/O Catastrophic CC	1,810	12,480	6.90	13.1%	1.5631	0.0302	0.0053	0.0146	1.5131	0.05
I66A	Inflammatory Musculoskeletal Disorders W Cat or Sev CC	291	3,548	12.21	12.6%	3.5524	0.0634	0.3287	0.0547	3.1056	0.28
I66B	Inflammatory Musculoskeletal Disorders W/O Cat or Sev CC	8,911	12,146	1.36	91.5%	0.2854	0.0147	0.0035	0.0007	0.2664	0.01
I67A	Septic Arthritis W Catastrophic or Severe CC	71	768	10.88	36.8%	2.5988	0.1936	0.2447	0.1003	2.0602	0.45
I67B	Septic Arthritis W/O Catastrophic or Severe CC	236	1,350	5.71	36.2%	1.1252	0.0446	0.0216	0.0571	1.0019	0.14
I68A	Non-surgical Spinal Disorders W CC	3,826	40,121	10.49	0.0%	2.0157	0.0354	0.0526	0.0062	1.9214	0.04
I68B	Non-surgical Spinal Disorders W/O CC	9,694	42,403	4.37	0.0%	0.8617	0.0542	0.0185	0.0070	0.7821	0.01
I68C	Non-surgical Spinal Disorders, Sameday	24,426	24,426	1.00	100.0%	0.2217	0.1359	0.0002	0.0012	0.0844	0.00
I69A	Bone Diseases and Arthropathies W Catastrophic or Severe CC	508	5,768	11.34	5.0%	2.1229	0.0251	0.0620	0.0109	2.0250	0.13
I69B	Bone Diseases and Arthropathies W/O Catastrophic or Severe CC	4,429	11,363	2.57	59.1%	0.5065	0.0465	0.0051	0.0143	0.4405	0.01

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I71A	Other Musculotendinous Disorders W Catastrophic or Severe CC	377	4,045	10.72	1.2%	1.9847	0.0308	0.0235	0.0008	1.9296	0.12
I71B	Other Musculotendinous Disorders W/O Catastrophic or Severe CC	4,926	11,624	2.36	49.6%	0.4769	0.0738	0.0143	0.0086	0.3803	0.01
I72A	Specific Musculotendinous Disorders W Catastrophic or Severe CC	224	2,190	9.77	7.7%	2.5340	0.0335	0.1905	0.2865	2.0235	0.47
I72B	Specific Musculotendinous Disorders W/O Catastrophic or Severe CC	2,580	6,815	2.64	53.1%	0.5287	0.0718	0.0184	0.0052	0.4334	0.02
I73A	Aftercare of Musculoskeletal Implants/Prostheses W Catastrophic or Severe CC	163	2,231	13.67	1.0%	2.8355	0.0851	0.3692	0.1548	2.2264	0.32
I73B	Aftercare of Musculoskeletal Implants/Prostheses W/O Cat or Sev CC	1,887	6,638	3.52	26.7%	0.6742	0.0752	0.0042	0.0198	0.5750	0.03
I74Z	Injury to Forearm, Wrist, Hand or Foot	2,635	52,326	19.85	45.8%	0.6358	0.1037	0.0080	0.0045	0.5196	0.03
I75A	Injury to Shoulder, Arm, Elbow, Knee, Leg or Ankle W CC	1,134	13,805	12.18	3.4%	2.2692	0.0272	0.0466	0.0054	2.1900	0.08
I75B	Injury to Shoulder, Arm, Elbow, Knee, Leg or Ankle W/O CC	2,534	9,956	3.93	29.6%	0.7464	0.0369	0.0110	0.0096	0.6889	0.03
I76A	Other Musculoskeletal Disorders W Catastrophic or Severe CC	193	2,855	14.80	4.3%	2.7996	0.0689	0.1750	0.0036	2.5521	0.30
I76B	Other Musculoskeletal Disorders W/O Catastrophic or Severe CC	1,449	3,535	2.44	59.5%	0.4904	0.0761	0.0083	0.0102	0.3959	0.02
I77A	Fractures of Pelvis W Catastrophic or Severe CC	697	10,399	14.92	1.1%	2.9289	0.0034	0.0648	0.0172	2.8434	0.12
I77B	Fractures of Pelvis W/O Catastrophic or Severe CC	827	7,137	8.63	1.1%	1.5354	0.0007	0.0152	0.0000	1.5195	0.05
I78A	Fractures of Neck of Femur W Catastrophic or Severe CC	295	4,030	13.65	3.9%	2.2855	0.0071	0.0130	0.0000	2.2654	0.20
I78B	Fractures of Neck of Femur W/O Catastrophic or Severe CC	320	1,750	5.47	15.0%	0.9106	0.0160	0.0043	0.0218	0.8685	0.08
I79A	Pathological Fracture W Catastrophic CC	161	2,890	17.98	0.0%	3.7827	0.0332	0.1178	0.0042	3.6276	0.28
I79B	Pathological Fracture W/O Catastrophic CC	1,303	12,291	9.43	6.6%	1.7325	0.0107	0.0121	0.0084	1.7013	0.06
J01A	Microvas Tiss Transf for Skin, Subcutaneous Tiss & Breast Disd W Cat/Sev CC	104	1,332	12.79	0.0%	8.7467	3.4794	1.0091	0.7144	3.5437	0.48
J01B	Microvas Tiss Transf for Skin, Subcutaneous Tiss & Breast Disd W/O Cat/Sev CC	235	1,922	8.17	1.1%	5.8629	2.4572	0.4301	0.4931	2.4825	0.20
J06A	Major Procedures for Malignant Breast Conditions	10,486	28,505	2.72	7.9%	1.5399	0.6649	0.0194	0.1137	0.7419	0.01
J06B	Major Procedures for Non-Malignant Breast Conditions	11,237	20,410	1.82	23.1%	1.4165	0.7484	0.0112	0.1563	0.5006	0.01
J07A	Minor Procedures for Malignant Breast Conditions	2,853	3,227	1.13	64.6%	0.6102	0.3485	0.0052	0.0125	0.2440	0.01
J07B	Minor Procedures for Non-Malignant Breast Conditions	5,098	5,283	1.04	86.9%	0.4814	0.3172	0.0021	0.0032	0.1590	0.00
J08A	Other Skin Graft and/or Debridement Procedures W CC	1,696	11,294	6.66	20.5%	2.0328	0.5062	0.0902	0.0405	1.3959	0.08
J08B	Other Skin Graft and/or Debridement Procedures W/O CC	22,813	30,090	1.32	70.3%	0.5870	0.3511	0.0022	0.0031	0.2306	0.00
J09Z	Perianal and Pilonidal Procedures	1,453	2,149	1.48	45.2%	0.5700	0.2881	0.0010	0.0035	0.2774	0.01
J10Z	Skin, Subcutaneous Tissue and Breast Plastic OR Procedures	18,802	23,439	1.25	73.2%	0.6384	0.4105	0.0048	0.0080	0.2151	0.01
J11Z	Other Skin, Subcutaneous Tissue and Breast Procedures	36,975	40,627	1.10	89.7%	0.3484	0.2183	0.0019	0.0057	0.1225	0.00
J12A	Lower Limb Procs W Ulcer/Cellulitis W Catastrophic CC	255	5,614	21.98	1.1%	5.2920	0.4822	0.1556	0.3506	4.3037	0.30
J12B	Lower Limb Procs W Ulcer/Cellulitis W/O Cat CC W Skin Graft/Flap Repair	452	5,230	11.57	16.4%	2.6137	0.3073	0.0430	0.0045	2.2589	0.18
J12C	Lower Limb Procs W Ulcer/Cellulitis W/O Cat CC W/O Skin Graft/Flap Repair	440	3,965	9.01	16.8%	2.1140	0.2480	0.0351	0.1015	1.7294	0.15
J13A	Lower Limb Procs W/O Ulcer/Cellulitis W Cat CC or W (Skin Graft and Sev CC)	443	5,112	11.53	4.6%	2.6738	0.4236	0.1025	0.0105	2.1373	0.14
J13B	Lower Limb Procs W/O Ulcer/Cellulitis W/O Cat CC W/O (Skin Graft and Sev CC)	5,127	17,448	3.40	36.3%	0.9443	0.2945	0.0084	0.0051	0.6363	0.02
J14Z	Major Breast Reconstructions	710	4,645	6.55	3.2%	3.8421	1.4139	0.1172	0.5373	1.7736	0.11
J60A	Skin Ulcers W Catastrophic CC	201	3,646	18.15	0.0%	3.3474	0.0360	0.0672	0.0457	3.1984	0.25
J60B	Skin Ulcers W/O Catastrophic CC	817	9,306	11.39	0.0%	2.1151	0.0230	0.0201	0.0400	2.0320	0.09
J60C	Skin Ulcers, Sameday	298	298	1.00	100.0%	0.0296	0.0102	0.0001	0.0009	0.0184	0.01
J62A	Malignant Breast Disorders W CC	1,805	7,583	4.20	17.4%	1.0761	0.0216	0.0116	0.0073	1.0355	0.05
J62B	Malignant Breast Disorders W/O CC	1,639	2,119	1.29	41.8%	0.4636	0.0344	0.0115	0.0017	0.4160	0.02
J63A	Non-Malignant Breast Disorders W CC	91	505	5.55	15.3%	1.2453	0.1284	0.0341	0.0082	1.0746	0.19

Appendix E: Cost weight tables by AR-DRG

AR-DRG	AR-DRG description	Number of population-adjusted seps	Number of days	ALoS (days)	Percentage of sameday seps	Total (a)	OR & SPS cost weight	Critical care cost weight	Prosthesis cost weight	Miscellaneous cost weight	Standard Error (Total Cost Weight)
J63B	Non-Malignant Breast Disorders W/O CC	1,043	1,748	1.68	69.4%	0.4604	0.1469	0.0150	0.0138	0.2846	0.03
J64A	Cellulitis W Catastrophic or Severe CC	2,242	25,776	11.50	0.5%	2.3599	0.0442	0.1182	0.0327	2.1648	0.06
J64B	Cellulitis W/O Catastrophic or Severe CC	7,089	36,968	5.21	9.5%	0.9891	0.0389	0.0122	0.0128	0.9252	0.01
J65A	Trauma to the Skin, Subcutaneous Tissue and Breast W Cat or Sev CC	499	5,364	10.76	1.1%	2.0709	0.0232	0.0401	0.0017	2.0060	0.10
J65B	Trauma to the Skin, Subcutaneous Tissue and Breast W/O Cat or Sev CC	1,424	5,467	3.84	24.3%	0.7570	0.0502	0.0158	0.0016	0.6894	0.03
J67A	Minor Skin Disorders	1,094	4,497	4.11	0.0%	0.9525	0.1060	0.0339	0.0261	0.7865	0.05
J67B	Minor Skin Disorders, Sameday	3,918	3,927	1.00	100.0%	0.2147	0.1284	0.0001	0.0003	0.0858	0.00
J68A	Major Skin Disorders W Catastrophic or Severe CC	188	1,985	10.55	0.0%	2.5066	0.0126	0.1170	0.0267	2.3503	0.19
J68B	Major Skin Disorders W/O Catastrophic or Severe CC	488	2,453	5.02	0.0%	1.0823	0.0171	0.0214	0.0030	1.0408	0.05
J68C	Major Skin Disorders, Sameday	349	349	1.00	100.0%	0.0859	0.0197	0.0000	0.0000	0.0661	0.01
J69A	Skin Malignancy W Catastrophic CC	152	2,463	16.21	0.0%	3.5160	0.0814	0.0348	0.0020	3.3977	0.29
J69B	Skin Malignancy W/O Catastrophic CC	333	2,316	6.96	0.0%	1.5846	0.0395	0.0729	0.0014	1.4709	0.14
J69C	Skin Malignancy, Sameday	488	488	1.00	100.0%	0.1851	0.0890	0.0001	0.0001	0.0959	0.02
K01A	OR Procedures for Diabetic Complications W Catastrophic CC	153	4,904	32.05	0.0%	8.9891	0.8856	0.5399	0.6542	6.9095	0.74
K01B	OR Procedures for Diabetic Complications W/O Catastrophic CC	524	7,201	13.75	2.7%	3.6045	0.4645	0.0540	0.2948	2.7912	0.20
K02A	Pituitary Procedures W CC	142	1,147	8.07	0.0%	4.4179	1.0126	0.8290	0.6720	1.9042	0.24
K02B	Pituitary Procedures W/O CC	158	909	5.77	0.0%	3.8683	0.8552	0.7824	0.7944	1.4363	0.26
K03Z	Adrenal Procedures	268	1,111	4.15	0.4%	2.4960	0.8680	0.2759	0.2529	1.0992	0.11
K04A	Major Procedures for Obesity W CC	3,066	10,510	3.43	2.5%	3.1809	0.7849	0.2746	1.0984	1.0230	0.05
K04B	Major Procedures for Obesity W/O CC	11,643	26,771	2.30	3.9%	2.3748	0.6138	0.0552	1.0046	0.7013	0.01
K05A	Parathyroid Procedures W Catastrophic or Severe CC	153	575	3.75	1.8%	2.3172	0.8675	0.2358	0.1092	1.1048	0.17
K05B	Parathyroid Procedures W/O Catastrophic or Severe CC	2,310	3,141	1.36	3.9%	1.0186	0.5247	0.0374	0.0525	0.4039	0.01
K06A	Thyroid Procedures W Catastrophic or Severe CC	599	1,732	2.89	0.7%	2.4328	1.1005	0.2830	0.1280	0.9213	0.10
K06B	Thyroid Procedures W/O Catastrophic or Severe CC	5,468	8,718	1.59	0.2%	1.3625	0.7303	0.0598	0.0738	0.4986	0.02
K07Z	Obesity Procedures	2,679	10,396	3.88	5.6%	2.0921	1.0538	0.0477	0.0915	0.8992	0.03
K08Z	Thyroglossal Procedures	244	298	1.22	9.2%	0.8920	0.4847	0.0385	0.0226	0.3461	0.04
K09A	Other Endocrine, Nutritional and Metabolic OR Procedures W Catastrophic CC	46	652	14.24	0.0%	5.2272	0.7490	0.4688	0.6460	3.3634	0.75
K09B	Other Endocrine, Nutritional and Metabolic OR Procs W Severe or Moderate CC	46	326	7.12	13.3%	2.6193	0.4968	0.2931	0.4165	1.4130	0.55
K09C	Other Endocrine, Nutritional and Metabolic OR Procedures W/O CC	240	583	2.43	32.2%	1.3570	0.4562	0.0388	0.2625	0.5995	0.11
K40A	Endoscopic or Investigative Proc for Metabolic Disorders W Catastrophic CC	104	1,701	16.31	0.0%	4.0465	0.1954	0.3070	0.0921	3.4520	0.39
K40B	Endoscopic or Investigative Proc for Metabolic Disorders W/O Catastrophic CC	854	3,117	3.65	0.0%	1.0781	0.1948	0.0296	0.0175	0.8363	0.05
K40C	Endoscopic or Investigative Procedure for Metabolic Disorders, Sameday	6,846	6,846	1.00	100.0%	0.2511	0.1602	0.0001	0.0024	0.0884	0.00
K60A	Diabetes W Catastrophic or Severe CC	521	5,611	10.76	1.0%	2.5379	0.0094	0.2812	0.0655	2.1818	0.13
K60B	Diabetes W/O Catastrophic or Severe CC	1,953	8,374	4.29	16.3%	1.5128	0.0099	0.0797	0.5436	0.8796	0.05
K61Z	Severe Nutritional Disturbance	153	1,804	11.80	0.0%	2.4933	0.0067	0.2235	0.0024	2.2607	0.36
K62A	Miscellaneous Metabolic Disorders W Catastrophic or Severe CC	1,758	14,724	8.38	10.1%	1.8539	0.0117	0.1780	0.0142	1.6500	0.10
K62B	Miscellaneous Metabolic Disorders W/O Catastrophic or Severe CC	9,042	15,741	1.74	74.1%	0.4014	0.0241	0.0162	0.0404	0.3206	0.01
K63A	Inborn Errors of Metabolism W CC	34	150	4.37	24.1%	1.7932	0.0089	0.2017	0.3927	1.1899	0.80
K63B	Inborn Errors of Metabolism W/O CC	182	350	1.92	79.4%	0.3759	0.0116	0.0552	0.0030	0.3060	0.06
K64A	Endocrine Disorders W Catastrophic or Severe CC	273	2,753	10.09	12.2%	2.1339	0.0167	0.1574	0.0017	1.9582	0.18

Appendix E: Cost weight tables by AR-DRG

AR-DRG	AR-DRG description	Number of population-adjusted seps	Number of days	ALoS (days)	Percentage of sameday seps	Total (a)	OR & SPS cost weight	Critical care cost weight	Prosthesis cost weight	Miscellaneous cost weight	Standard Error (Total Cost Weight)
K64B	Endocrine Disorders W/O Catastrophic or Severe CC	1,471	3,668	2.49	48.1%	0.5064	0.0218	0.0477	0.0111	0.4257	0.03
L02A	Operative Insertion of Peritoneal Catheter for Dialysis W Cat or Sev CC	41	282	6.94	10.9%	3.6595	0.5369	1.0494	0.3189	1.7543	0.81
L02B	Operative Insertion of Peritoneal Catheter for Dialysis W/O Cat or Sev CC	183	262	1.44	7.3%	0.9604	0.4210	0.0379	0.0963	0.4052	0.10
L03A	Kidney, Ureter and Major Bladder Procedures for Neoplasm W Catastrophic CC	548	7,515	13.71	0.8%	7.6355	1.7858	1.7206	0.7387	3.3905	0.31
L03B	Kidney, Ureter and Major Bladder Procedures for Neoplasm W Severe CC	524	3,932	7.51	1.4%	4.4626	1.3245	0.5569	0.5527	2.0284	0.15
L03C	Kidney, Ureter and Major Bladder Procedures for Neoplasm W/O Cat or Sev CC	1,741	7,888	4.53	5.1%	2.8449	1.0890	0.2061	0.3502	1.1996	0.05
L04A	Kidney, Ureter & Major Bladder Procedures for Non-Neoplasm W Catastrophic CC	460	4,415	9.60	11.5%	4.1085	0.7352	0.5429	0.4201	2.4103	0.23
L04B	Kidney, Ureter and Major Bladder Procedures for Non-Neoplasm W Severe CC	676	2,984	4.41	9.5%	2.4138	0.6642	0.1254	0.4327	1.1915	0.11
L04C	Kidney, Ureter & Major Bladder Procedures for Non-Neoplasm W/O Cat or Sev CC	10,187	17,001	1.67	34.6%	1.1651	0.4940	0.0153	0.2118	0.4440	0.01
L05A	Transurethral Prostatectomy W Catastrophic or Severe CC	444	3,426	7.72	0.0%	2.4450	0.5426	0.1938	0.0305	1.6781	0.10
L05B	Transurethral Prostatectomy W/O Catastrophic or Severe CC	2,859	7,660	2.68	1.4%	1.0477	0.4245	0.0172	0.0024	0.6035	0.01
L06A	Minor Bladder Procedures W Catastrophic or Severe CC	389	2,708	6.95	4.4%	2.6863	0.5153	0.2442	0.2708	1.6561	0.18
L06B	Minor Bladder Procedures W/O Catastrophic or Severe CC	2,775	5,110	1.84	18.5%	1.0263	0.3113	0.0063	0.2635	0.4452	0.03
L07A	Transurethral Procedures Except Prostatectomy W CC	2,069	6,162	2.98	33.0%	1.0777	0.3233	0.0508	0.0618	0.6419	0.04
L07B	Transurethral Procedures Except Prostatectomy W/O CC	14,856	18,485	1.24	52.0%	0.5579	0.2819	0.0027	0.0259	0.2474	0.00
L08A	Urethral Procedures W CC	279	730	2.61	22.8%	0.9976	0.3312	0.0420	0.0493	0.5752	0.08
L08B	Urethral Procedures W/O CC	2,122	2,953	1.39	37.8%	0.5815	0.2841	0.0025	0.0081	0.2868	0.01
L09A	Other Procedures for Kidney and Urinary Tract Disorders W Cat CC	111	2,051	18.44	1.5%	7.2853	1.0508	1.2204	0.5368	4.4773	0.77
L09B	Other Procedures for Kidney and Urinary Tract Disorders W Sev CC	137	422	3.07	13.2%	1.7020	0.5032	0.0832	0.3412	0.7744	0.25
L09C	Other Procedures for Kidney and Urinary Tract Disorders W/O Cat or Sev CC	1,201	1,877	1.56	35.6%	1.5190	0.4258	0.0309	0.6164	0.4460	0.06
L40Z	Ureteroscopy	956	1,447	1.51	48.6%	0.6380	0.2734	0.0024	0.0460	0.3161	0.02
L41Z	Cystourethroscopy, Sameday	32,477	32,479	1.00	100.0%	0.1991	0.1258	0.0002	0.0050	0.0681	0.00
L42Z	ESW Lithotripsy for Urinary Stones	2,280	2,365	1.04	84.0%	0.5421	0.3652	0.0011	0.0070	0.1687	0.01
L60A	Renal Failure W Catastrophic CC	825	11,406	13.83	0.6%	3.5210	0.0545	0.5519	0.0726	2.8420	0.16
L60B	Renal Failure W Severe CC	936	6,826	7.29	2.8%	1.6011	0.0247	0.1385	0.0193	1.4186	0.06
L60C	Renal Failure W/O Catastrophic or Severe CC	1,041	5,315	5.11	15.5%	1.0238	0.0225	0.0678	0.0071	0.9265	0.04
L61Z	Haemodialysis	93,520	93,524	1.00	100.0%	0.0624	0.0062	0.0000	0.0000	0.0562	0.00
L62A	Kidney and Urinary Tract Neoplasms W Catastrophic or Severe CC	622	5,577	8.97	15.7%	2.0638	0.0426	0.0195	0.0429	1.9587	0.15
L62B	Kidney and Urinary Tract Neoplasms W/O Catastrophic or Severe CC	1,294	2,917	2.26	52.9%	0.5617	0.0820	0.0081	0.0185	0.4531	0.03
L63A	Kidney and Urinary Tract Infections W Catastrophic or Severe CC	2,638	27,719	10.51	0.8%	2.0978	0.0162	0.1120	0.0318	1.9378	0.05
L63B	Kidney and Urinary Tract Infections W/O Catastrophic or Severe CC	6,791	30,026	4.42	10.2%	0.8364	0.0149	0.0198	0.0044	0.7973	0.01
L64Z	Urinary Stones and Obstruction	5,236	9,571	1.83	17.5%	0.5608	0.1276	0.0216	0.0530	0.3585	0.01
L65A	Kidney and Urinary Tract Signs and Symptoms W Catastrophic or Severe CC	750	5,721	7.63	4.3%	1.6398	0.0472	0.1082	0.0049	1.4794	0.09
L65B	Kidney and Urinary Tract Signs and Symptoms W/O Catastrophic or Severe CC	4,676	10,499	2.25	28.9%	0.4626	0.0551	0.0073	0.0057	0.3944	0.01
L66Z	Urethral Stricture	808	1,198	1.48	31.1%	0.4083	0.1238	0.0047	0.0063	0.2735	0.02
L67A	Other Kidney and Urinary Tract Diagnoses W Catastrophic or Severe CC	900	5,406	6.01	8.7%	1.4598	0.0684	0.0889	0.0299	1.2726	0.10
L67B	Other Kidney and Urinary Tract Diagnoses W/O Catastrophic or Severe CC	11,450	15,739	1.37	65.0%	0.2618	0.0479	0.0040	0.0072	0.2027	0.00
L68Z	Peritoneal Dialysis	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
M01A	Major Male Pelvic Procedures W Catastrophic or Severe CC	775	3,890	5.02	0.0%	3.9650	1.7163	0.4389	0.2849	1.5249	0.10
M01B	Major Male Pelvic Procedures W/O Catastrophic or Severe CC	4,969	14,991	3.02	0.0%	2.8677	1.5277	0.0626	0.2432	1.0344	0.02

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AR-DRG	AR-DRG description	Number of population-adjusted seps	Number of days	ALoS (days)	Percentage of sameday seps	Total (a)	OR & SPS cost weight	Critical care cost weight	Prosthesis cost weight	Miscellaneous cost weight	Standard Error (Total Cost Weight)
M02A	Transurethral Prostatectomy W Catastrophic or Severe CC	1,017	6,583	6.47	0.2%	2.0243	0.5235	0.1335	0.0733	1.2941	0.07
M02B	Transurethral Prostatectomy W/O Catastrophic or Severe CC	11,517	28,148	2.44	0.4%	1.0116	0.4215	0.0127	0.0032	0.5742	0.01
M03Z	Penis Procedures	2,190	3,004	1.37	58.2%	1.4693	0.3956	0.0052	0.6769	0.3916	0.06
M04Z	Testes Procedures	6,297	7,051	1.12	67.2%	0.5645	0.3351	0.0043	0.0087	0.2164	0.01
M05Z	Circumcision	5,519	5,594	1.01	94.0%	0.3413	0.2259	0.0006	0.0001	0.1147	0.00
M06A	Other Male Reproductive System OR Procedures W CC	327	735	2.24	45.4%	1.3208	0.3259	0.0405	0.2693	0.6851	0.11
M06B	Other Male Reproductive System OR Procedures W/O CC	3,332	3,663	1.10	74.0%	1.0245	0.2719	0.0011	0.4607	0.2908	0.03
M40Z	Cystourethroscopy, Sameday	6,805	6,805	1.00	100.0%	0.1946	0.1326	0.0003	0.0028	0.0590	0.00
M60A	Malignancy, Male Reproductive System W Catastrophic or Severe CC	626	5,875	9.39	10.9%	2.1491	0.0948	0.0238	0.0227	2.0077	0.12
M60B	Malignancy, Male Reproductive System W/O Catastrophic or Severe CC	8,593	10,073	1.17	90.8%	0.2570	0.1073	0.0018	0.0036	0.1443	0.01
M61Z	Benign Prostatic Hypertrophy	1,258	1,761	1.40	79.6%	0.3033	0.1045	0.0102	0.0144	0.1742	0.02
M62Z	Inflammation of the Male Reproductive System	1,125	3,596	3.20	33.3%	0.6630	0.0634	0.0176	0.0143	0.5678	0.03
M63Z	Sterilisation, Male	6,266	6,280	1.00	99.1%	0.2920	0.2114	0.0002	0.0006	0.0798	0.00
M64Z	Other Male Reproductive System Diagnoses	1,281	1,706	1.33	81.1%	0.3196	0.1224	0.0224	0.0073	0.1675	0.02
N01Z	Pelvic Evisceration and Radical Vulvectomy	416	2,546	6.12	0.4%	2.8561	0.9482	0.1816	0.1376	1.5886	0.14
N04A	Hysterectomy for Non-Malignancy W Catastrophic or Severe CC	1,432	6,706	4.68	0.6%	2.3723	0.9249	0.1280	0.1484	1.1710	0.04
N04B	Hysterectomy for Non-Malignancy W/O Catastrophic or Severe CC	13,126	41,940	3.20	0.1%	1.6456	0.7346	0.0087	0.0893	0.8130	0.01
N05A	Oophorectomies and Complex Fallopian Tube Procs for Non-Malig W Cat or Sev CC	287	1,267	4.42	3.7%	2.3088	0.8024	0.1894	0.1333	1.1836	0.12
N05B	Oophorectomies & Complex Fallopian Tube Procs for Non-Malig W/O Cat or Sev CC	4,380	6,879	1.57	18.9%	1.0432	0.5451	0.0063	0.0520	0.4397	0.01
N06A	Female Reproductive System Reconstructive Procs W Catastrophic or Severe CC	1,029	4,242	4.12	2.3%	1.9935	0.6117	0.0788	0.3184	0.9847	0.06
N06B	Female Reproductive System Reconstructive Procs W/O Catastrophic or Severe CC	9,648	22,712	2.35	8.4%	1.3091	0.4481	0.0038	0.2591	0.5981	0.01
N07Z	Other Uterine and Adnexa Procedures for Non-Malignancy	35,090	38,912	1.11	81.2%	0.5332	0.3221	0.0038	0.0256	0.1817	0.00
N08Z	Endoscopic and Laparoscopic Procedures for Female Reproductive System	8,519	9,850	1.16	67.0%	0.6968	0.4074	0.0028	0.0518	0.2348	0.01
N09Z	Conisation, Vagina, Cervix and Vulva Procedures	12,718	14,264	1.12	91.9%	0.3482	0.2082	0.0016	0.0013	0.1371	0.00
N10Z	Diagnostic Curettage or Diagnostic Hysteroscopy	19,242	19,547	1.02	97.4%	0.2940	0.1912	0.0012	0.0005	0.1011	0.00
N11Z	Other Female Reproductive System OR Procedures	6,917	7,919	1.14	96.6%	0.2390	0.0736	0.0068	0.0171	0.1415	0.02
N12A	Uterine and Adnexa Procedures for Malignancy W Catastrophic CC	411	4,052	9.86	0.7%	4.5213	1.0981	0.5846	0.3603	2.4782	0.17
N12B	Uterine and Adnexa Procedures for Malignancy W/O Catastrophic CC	2,126	7,825	3.68	13.2%	1.9348	0.7508	0.0931	0.1042	0.9867	0.04
N60A	Malignancy, Female Reproductive System W Catastrophic CC	207	2,020	9.77	12.3%	2.3682	0.0350	0.0125	0.0500	2.2706	0.20
N60B	Malignancy, Female Reproductive System W/O Catastrophic CC	1,327	4,462	3.36	24.0%	0.9070	0.0401	0.0205	0.0195	0.8268	0.05
N61Z	Infections, Female Reproductive System	229	777	3.39	24.6%	0.6927	0.0347	0.0172	0.0168	0.6240	0.07
N62Z	Menstrual and Other Female Reproductive System Disorders	6,359	7,928	1.25	84.1%	0.2475	0.0939	0.0063	0.0056	0.1417	0.01
O01A	Caesarean Delivery W Catastrophic CC	1,440	12,825	8.90	0.5%	3.3744	0.5760	0.1498	0.0909	2.5577	0.11
O01B	Caesarean Delivery W Severe CC	5,708	33,506	5.87	0.3%	2.2031	0.4908	0.0262	0.0583	1.6277	0.02
O01C	Caesarean Delivery W/O Catastrophic or Severe CC	28,325	137,181	4.84	0.1%	1.7727	0.4428	0.0102	0.0269	1.2927	0.01
O02A	Vaginal Delivery W OR Procedure W Catastrophic or Severe CC	269	1,479	5.50	1.0%	2.1529	0.3801	0.1146	0.0012	1.6570	0.10
O02B	Vaginal Delivery W OR Procedure W/O Catastrophic or Severe CC	833	3,708	4.45	0.3%	1.5050	0.2072	0.0077	0.0022	1.2880	0.03
O03A	Ectopic Pregnancy W CC	42	81	1.95	11.5%	1.2631	0.6273	0.0681	0.0224	0.5454	0.10
O03B	Ectopic Pregnancy W/O CC	500	651	1.30	24.9%	0.7368	0.4124	0.0027	0.0117	0.3099	0.02
O04A	Postpartum and Post Abortion W OR Procedure W Catastrophic or Severe CC	67	253	3.76	34.4%	1.5155	0.4291	0.0855	0.0372	0.9638	0.24

Appendix E: Cost weight tables by AR-DRG

AR-DRG	AR-DRG description	Number of population-adjusted seps	Number of days	ALoS (days)	Percentage of sameday seps	Total (a)	OR & SPS cost weight	Critical care cost weight	Prosthesis cost weight	Miscellaneous cost weight	Standard Error (Total Cost Weight)
O04B	Postpartum and Post Abortion W OR Procedure W/O Catastrophic or Severe CC	701	1,033	1.47	73.2%	0.4791	0.2134	0.0142	0.0001	0.2515	0.02
O05Z	Abortion W OR Procedure	8,979	9,202	1.02	92.9%	0.2900	0.1736	0.0006	0.0012	0.1146	0.00
O60A	Vaginal Delivery W Catastrophic or Severe CC	4,128	21,288	5.16	0.1%	1.5088	0.0978	0.0213	0.0006	1.3892	0.02
O60B	Vaginal Delivery W/O Catastrophic or Severe CC	33,057	135,469	4.10	0.1%	1.1430	0.0632	0.0082	0.0003	1.0713	0.00
O60C	Vaginal Delivery Single Uncomplicated W/O Other Condition	5,070	18,100	3.57	0.2%	0.8945	0.0441	0.0049	0.0001	0.8454	0.01
O61Z	Postpartum and Post Abortion W/O OR Procedure	2,597	7,766	2.99	13.2%	0.6441	0.0133	0.0119	0.0011	0.6178	0.01
O63Z	Abortion W/O OR Procedure	406	535	1.32	30.4%	0.2641	0.0100	0.0008	0.0000	0.2532	0.02
O64A	False Labour Before 37 Weeks or W Catastrophic CC	1,858	4,930	2.65	19.4%	0.4827	0.0007	0.0018	0.0000	0.4801	0.03
O64B	False Labour After 37 Weeks W/O Catastrophic CC	720	759	1.05	61.2%	0.0880	0.0000	0.0007	0.0000	0.0873	0.00
O66A	Antenatal and Other Obstetric Admission	6,383	17,839	2.79	0.0%	0.6198	0.0296	0.0066	0.0016	0.5819	0.02
O66B	Antenatal and Other Obstetric Admission, Sameday	4,005	4,005	1.00	100.0%	0.0475	0.0061	0.0003	0.0000	0.0411	0.00
P01Z	Neonate, Died or Transferred <5 Days of Admission W Significant OR Procedure	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
P02Z	Cardiothoracic/Vascular Procedures for Neonates	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
P03Z	Neonate, AdmWt 1000-1499 g W Significant OR Procedure	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
P04Z	Neonate, AdmWt 1500-1999 g W Significant OR Procedure	23	950	41.61	0.0%	19.5685	0.2643	5.7669	0.0003	13.5370	2.38
P05Z	Neonate, AdmWt 2000-2499 g W Significant OR Procedure	26	693	26.57	0.0%	13.3706	0.2647	5.7796	0.0220	7.3043	3.47
P06A	Neonate, AdmWt >2499 g W Significant OR Procedure W Multi Major Problems	17	325	18.92	0.0%	10.5870	0.5528	4.6218	0.1464	5.2660	3.67
P06B	Neonate, AdmWt >2499 g W Significant OR Procedure W/O Multi Major Problems	41	332	8.16	5.7%	4.4525	0.2237	1.9843	0.0000	2.2445	0.86
P60A	Neonate, Died or Transferred <5 Days of Adm, W/O Significant OR Proc, Newborn	642	1,093	1.70	47.8%	0.2411	0.0000	0.0360	0.0000	0.2051	0.02
P60B	Neonate, Died or Transf <5 Days of Adm, W/O Significant OR Proc, Not Newborn	64	111	1.74	26.8%	0.7652	0.0000	0.4038	0.0000	0.3614	0.16
P61Z	Neonate, AdmWt <750 g	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
P62Z	Neonate, AdmWt 750-999 g	28	1,494	53.01	17.9%	35.7096	0.1239	26.4913	0.0000	9.0943	4.50
P63Z	Neonate, AdmWt 1000-1249 g W/O Significant OR Procedure	31	1,045	33.22	0.0%	8.8192	0.0000	1.3903	0.0000	7.4289	1.65
P64Z	Neonate, AdmWt 1250-1499 g W/O Significant OR Procedure	153	4,349	28.37	1.8%	7.5110	0.0016	1.2540	0.0000	6.2554	0.61
P65A	Neonate, AdmWt 1500-1999 g W/O Significant OR Proc W Multi Major Problems	11	324	28.78	0.0%	9.7480	0.0000	0.3146	0.0000	9.4335	1.42
P65B	Neonate, AdmWt 1500-1999 g W/O Significant OR Procedure W Major Problem	211	5,621	26.61	0.0%	8.4643	0.0016	1.5366	0.0000	6.9261	0.55
P65C	Neonate, AdmWt 1500-1999 g W/O Significant OR Procedure W Other Problem	302	7,235	23.99	0.0%	6.6475	0.0012	0.8938	0.0000	5.7525	0.38
P65D	Neonate, AdmWt 1500-1999 g W/O Significant OR Procedure W/O Problem	372	7,251	19.49	0.0%	4.6765	0.0000	0.6766	0.0000	3.9999	0.24
P66A	Neonate, AdmWt 2000-2499 g W/O Significant OR Proc W Multi Major Problems	33	512	15.45	0.0%	5.7520	0.0000	1.0037	0.0000	4.7483	1.12
P66B	Neonate, AdmWt 2000-2499 g W/O Significant OR Procedure W Major Problem	282	4,623	16.37	1.2%	5.1844	0.0000	1.0534	0.0000	4.1310	0.30
P66C	Neonate, AdmWt 2000-2499 g W/O Significant OR Procedure W Other Problem	1,529	19,461	12.73	0.1%	3.3646	0.0004	0.5468	0.0000	2.8174	0.11
P66D	Neonate, AdmWt 2000-2499 g W/O Significant OR Procedure W/O Problem	783	4,307	5.50	2.7%	1.1863	0.0008	0.1992	0.0000	0.9863	0.07
P67A	Neonate, AdmWt >2499 g W/O Significant OR Procedure W Multi Major Problems	136	1,353	9.92	0.0%	3.0695	0.0112	0.8160	0.0000	2.2423	0.37
P67B	Neonate, AdmWt >2499 g W/O Significant OR Procedure W Major Problem	1,170	8,325	7.12	2.1%	1.8922	0.0002	0.2892	0.0000	1.6028	0.08
P67C	Neonate, AdmWt >2499 g W/O Significant OR Procedure W Other Problem	5,708	33,216	5.82	0.4%	1.2599	0.0004	0.1590	0.0000	1.1005	0.03
P67D	Neonate, AdmWt >2499 g W/O Significant OR Procedure W/O Problem	26,081	104,297	4.00	3.1%	0.3530	0.0005	0.0139	0.0000	0.3386	0.00
Q01Z	Splenectomy	132	918	6.95	0.0%	5.2400	0.8228	1.2888	1.0004	2.1279	1.30
Q02A	Other OR Procedure of Blood and Blood Forming Organs W Cat or Sev CC	402	3,544	8.81	17.7%	3.0602	0.4167	0.2329	0.3125	2.0982	0.19
Q02B	Other OR Procedure of Blood and Blood Forming Organs W/O Cat or Sev CC	1,596	3,034	1.90	52.3%	0.8980	0.3317	0.0496	0.1149	0.4018	0.04
Q60A	Reticuloendothelial and Immunity Disorders W Catastrophic or Severe CC	1,636	8,024	4.90	46.4%	1.3618	0.0242	0.0571	0.0213	1.2592	0.08

Appendix E: Cost weight tables by AR-DRG

AR-DRG	AR-DRG description	Number of population-adjusted seps	Number of days	ALoS (days)	Percentage of sameday seps	Total (a)	OR & SPS cost weight	Critical care cost weight	Prosthesis cost weight	Miscellaneous cost weight	Standard Error (Total Cost Weight)
Q60B	Reticuloendothelial and Immunity Disorders W/O Cat or Sev CC W Malignancy	1,891	3,123	1.65	81.9%	0.2714	0.0020	0.0037	0.0014	0.2644	0.02
Q60C	Reticuloendothelial and Immunity Disorders W/O Cat or Sev CC W/O Malignancy	9,740	12,453	1.28	89.7%	0.1885	0.0189	0.0033	0.0001	0.1661	0.00
Q61A	Red Blood Cell Disorders W Catastrophic or Severe CC	2,739	15,728	5.74	20.4%	1.3102	0.0745	0.0954	0.0115	1.1288	0.05
Q61B	Red Blood Cell Disorders W/O Catastrophic or Severe CC	27,193	35,313	1.30	79.5%	0.2723	0.0734	0.0035	0.0031	0.1923	0.00
Q62Z	Coagulation Disorders	2,298	5,088	2.21	74.0%	0.4055	0.0180	0.0178	0.0017	0.3680	0.02
R01A	Lymphoma and Leukaemia W Major OR Procedures W Catastrophic or Severe CC	161	2,353	14.62	0.0%	7.8352	0.9538	0.9193	0.8619	5.1002	0.59
R01B	Lymphoma and Leukaemia W Major OR Procedures W/O Catastrophic or Severe CC	365	1,290	3.53	22.7%	1.7740	0.5028	0.1616	0.1495	0.9601	0.10
R02A	Other Neoplastic Disorders W Major OR Procedures W Catastrophic CC	94	1,184	12.64	0.0%	6.0643	1.3937	0.8991	0.5593	3.2122	0.70
R02B	Other Neoplastic Disorders W Major OR Procedures W Severe or Moderate CC	250	1,611	6.45	1.1%	3.0600	0.9286	0.3096	0.2660	1.5558	0.17
R02C	Other Neoplastic Disorders W Major OR Procedures W/O CC	1,535	6,533	4.26	4.5%	2.0968	0.7417	0.1930	0.1494	1.0127	0.06
R03A	Lymphoma and Leukaemia W Other OR Procedures W Catastrophic or Severe CC	259	5,226	20.18	1.9%	6.6672	0.4594	0.3675	0.5279	5.3124	0.37
R03B	Lymphoma and Leukaemia W Other OR Procedures W/O Catastrophic or Severe CC	1,415	2,825	2.00	56.6%	0.8940	0.2782	0.0269	0.0562	0.5326	0.04
R04A	Other Neoplastic Disorders W Other OR Procedures W CC	482	1,898	3.94	32.1%	1.6826	0.4224	0.1034	0.2128	0.9440	0.14
R04B	Other Neoplastic Disorders W Other OR Procedures W/O CC	3,739	6,365	1.70	43.5%	1.1320	0.3852	0.0771	0.2852	0.3846	0.04
R60A	Acute Leukaemia W Catastrophic CC	300	5,989	19.97	14.8%	6.4817	0.0848	0.3022	0.0953	5.9993	0.27
R60B	Acute Leukaemia W/O Catastrophic CC	2,340	4,964	2.12	81.3%	0.4492	0.0157	0.0014	0.0063	0.4258	0.03
R61A	Lymphoma and Non-Acute Leukaemia W Catastrophic CC	894	17,424	19.50	0.0%	5.3953	0.0831	0.3690	0.0496	4.8935	0.18
R61B	Lymphoma and Non-Acute Leukaemia W/O Catastrophic CC	6,464	28,634	4.43	0.0%	1.3785	0.0245	0.0089	0.0121	1.3330	0.02
R61C	Lymphoma and Non-Acute Leukaemia, Sameday	16,212	16,215	1.00	100.0%	0.1449	0.0163	0.0001	0.0002	0.1283	0.00
R62A	Other Neoplastic Disorders W CC	773	5,790	7.49	21.1%	1.5914	0.0661	0.0473	0.0183	1.4597	0.09
R62B	Other Neoplastic Disorders W/O CC	744	1,729	2.32	62.8%	0.5536	0.1081	0.0042	0.0123	0.4290	0.03
R63Z	Chemotherapy	240,396	242,821	1.01	99.6%	0.1978	0.0124	0.0008	0.0041	0.1805	0.00
R64Z	Radiotherapy	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
S60Z	HIV, Sameday	61	61	1.00	100.0%	0.1008	0.0200	0.0000	0.0000	0.0808	0.02
S65A	HIV-Related Diseases W Catastrophic CC	22	499	23.16	0.0%	9.0583	0.1299	0.9287	0.0916	7.9081	1.95
S65B	HIV-Related Diseases W Severe CC	9	93	9.93	0.0%	3.2092	0.0400	0.0000	0.0000	3.1691	1.52
S65C	HIV-Related Diseases W/O Catastrophic or Severe CC	15	64	4.20	0.0%	1.0906	0.0145	0.0000	0.0000	1.0761	0.19
T01A	OR Procedures for Infectious and Parasitic Diseases W Catastrophic CC	685	16,825	24.55	0.6%	8.3845	0.7626	1.0644	0.5759	5.9816	0.44
T01B	OR Procedures for Infectious and Parasitic Diseases W Severe or Moderate CC	744	7,986	10.74	5.7%	2.9133	0.4285	0.2042	0.1373	2.1432	0.15
T01C	OR Procedures for Infectious and Parasitic Diseases W/O CC	1,349	7,185	5.32	18.0%	1.5265	0.3330	0.0268	0.1361	1.0306	0.09
T40Z	Infectious and Parasitic Diseases W Ventilator Support	22	410	18.69	0.0%	9.7295	0.1321	3.9989	0.4420	5.1566	1.12
T60A	Septicaemia W Catastrophic CC	1,172	17,273	14.74	1.4%	3.8281	0.0641	0.6207	0.0611	3.0821	0.13
T60B	Septicaemia W/O Catastrophic CC	1,825	13,455	7.37	6.1%	1.6399	0.0315	0.0997	0.0270	1.4816	0.05
T61A	Postoperative and Post-Traumatic Infections W Catastrophic or Severe CC	757	7,536	9.95	2.2%	2.0201	0.0565	0.0598	0.0401	1.8636	0.09
T61B	Postoperative and Post-Traumatic Infections W/O Catastrophic or Severe CC	2,544	13,094	5.15	6.1%	0.9613	0.0294	0.0242	0.0305	0.8772	0.03
T62A	Fever of Unknown Origin W CC	1,335	7,277	5.45	2.2%	1.2189	0.0131	0.0312	0.0042	1.1704	0.04
T62B	Fever of Unknown Origin W/O CC	1,275	3,754	2.94	8.8%	0.6244	0.0098	0.0095	0.0013	0.6038	0.02
T63Z	Viral Illness	1,728	5,469	3.17	6.6%	0.6938	0.0059	0.0495	0.0084	0.6300	0.03
T64A	Other Infectious and Parasitic Diseases W Catastrophic CC	131	2,119	16.19	0.0%	3.8690	0.0454	0.2385	0.2400	3.3451	0.36
T64B	Other Infectious and Parasitic Diseases W Severe or Moderate CC	195	1,528	7.85	9.1%	1.7158	0.0353	0.0257	0.1137	1.5412	0.15

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AR-DRG	AR-DRG description	Number of population-adjusted seps	Number of days	ALoS (days)	Percentage of sameday seps	Total (a)	OR & SPS cost weight	Critical care cost weight	Prosthesis cost weight	Miscellaneous cost weight	Standard Error (Total Cost Weight)
T64C	Other Infectious and Parasitic Diseases W/O CC	326	1,136	3.48	32.3%	0.7701	0.0431	0.0171	0.0401	0.6698	0.06
U40Z	Mental Health Treatment, Sameday, W ECT	1,174	1,174	1.00	100.0%	0.0716	0.0296	0.0000	0.0000	0.0421	0.00
U60Z	Mental Health Treatment, Sameday, W/O ECT	36,465	36,508	1.00	100.0%	0.0482	0.0004	0.0000	0.0003	0.0474	0.00
U61A	Schizophrenia Disorders W Mental Health Legal Status	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
U61B	Schizophrenia Disorders W/O Mental Health Legal Status	322	6,327	19.64	0.0%	2.5095	0.0131	0.0242	0.0000	2.4722	0.12
U62A	Paranoia & Acute Psych Disorder W Cat/Sev CC or W Mental Health Legal Status	9	186	20.89	0.0%	3.6754	0.0011	0.0000	0.0000	3.6743	1.24
U62B	Paranoia & Acute Psych Disorder W/O Cat/Sev CC W/O Mental Health Legal Status	66	757	11.46	0.0%	1.4819	0.0000	0.0089	0.0000	1.4730	0.15
U63A	Major Affective Disorders Age >69 or W (Catastrophic or Severe CC)	665	15,199	22.84	0.0%	3.8940	0.0474	0.0132	0.0024	3.8310	0.15
U63B	Major Affective Disorders Age <70 W/O Catastrophic or Severe CC	2,726	53,778	19.73	0.0%	2.6153	0.0229	0.0141	0.0027	2.5757	0.05
U64Z	Other Affective and Somatoform Disorders	753	12,641	16.79	0.0%	2.3013	0.0184	0.0174	0.0257	2.2399	0.11
U65Z	Anxiety Disorders	1,335	7,300	5.47	0.0%	0.8745	0.0263	0.0193	0.0001	0.8288	0.04
U66Z	Eating and Obsessive-Compulsive Disorders	626	15,776	25.22	0.0%	4.3833	0.0016	0.0013	0.0000	4.3804	0.15
U67Z	Personality Disorders and Acute Reactions	1,304	24,993	19.16	0.1%	2.4971	0.0493	0.0055	0.2103	2.2320	0.09
U68Z	Childhood Mental Disorders	35	286	8.19	0.0%	1.1224	0.0013	0.0000	0.0000	1.1211	0.16
V60A	Alcohol Intoxication and Withdrawal W CC	50	530	10.71	31.6%	1.1872	0.0016	0.0098	0.0000	1.1758	0.21
V60B	Alcohol Intoxication and Withdrawal W/O CC	202	720	3.57	50.1%	0.4725	0.0004	0.0023	0.0000	0.4697	0.05
V61Z	Drug Intoxication and Withdrawal	339	1,121	3.30	75.1%	1.1886	0.0078	0.0180	0.0046	1.1582	0.08
V62A	Alcohol Use Disorder and Dependence	1,063	19,922	18.74	0.0%	2.0796	0.0015	0.0009	0.0002	2.0770	0.04
V62B	Alcohol Use Disorder and Dependence, Sameday	5,316	5,316	1.00	100.0%	0.0263	0.0000	0.0000	0.0000	0.0263	0.00
V63Z	Opioid Use Disorder and Dependence	71	1,343	18.82	1.4%	1.8413	0.0021	0.0015	0.0000	1.8378	0.19
V64Z	Other Drug Use Disorder and Dependence	2,941	5,832	1.98	93.3%	0.6178	0.0000	0.0000	0.0000	0.6178	0.01
W01Z	Ventilation or Cranial Procedures for Multiple Significant Trauma	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
W02A	Hip, Femur & Limb Pr for Mult Signif Trauma, Incl Implantation W Cat/Sev CC	44	801	18.03	0.0%	9.3730	1.3603	0.4603	2.1030	5.4494	0.98
W02B	Hip, Femur & Limb Pr for Mult Signif Trauma, Incl Implantation W/O Cat/Sev CC	22	314	14.21	0.0%	6.7260	0.9994	0.4485	2.1050	3.1730	1.05
W03Z	Abdominal Procedures for Multiple Significant Trauma	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
W04A	Other OR Procs for Multiple Significant Trauma W Catastrophic or Severe CC	12	374	32.10	0.0%	9.4545	1.2196	0.0821	0.1291	8.0237	2.71
W04B	Other OR Procs for Multiple Significant Trauma W/O Catastrophic or Severe CC	10	79	7.91	0.0%	4.1317	0.9516	0.1900	0.8753	2.1147	1.40
W60Z	Multiple Trauma, Died or Transferred to Another Acute Care Facility <5 Days	13	25	1.87	37.5%	1.1466	0.1389	0.4745	0.0000	0.5332	0.36
W61A	Multiple Trauma W/O Significant Procedures W Catastrophic or Severe CC	56	861	15.37	0.0%	3.7679	0.0264	0.1529	0.0024	3.5862	0.34
W61B	Multiple Trauma W/O Significant Procedures W/O Catastrophic or Severe CC	64	654	10.17	0.0%	1.8448	0.0180	0.0756	0.0000	1.7511	0.25
X02A	Microvascular Tiss Transfer or (Skin Graft W Cat/Sev CC) for Injuries to Hand	371	816	2.20	34.6%	1.5067	0.7493	0.0100	0.1243	0.6231	0.08
X02B	Skin Graft for Injuries to Hand W/O Catastrophic or Severe CC	968	1,277	1.32	56.8%	0.5966	0.3222	0.0010	0.0098	0.2637	0.02
X04A	Other Procedures for Injuries to Lower Limb W Catastrophic or Severe CC	248	2,046	8.24	5.3%	2.8264	0.4603	0.0940	0.3979	1.8743	0.30
X04B	Other Procedures for Injuries to Lower Limb W/O Catastrophic or Severe CC	1,014	2,126	2.10	35.2%	0.9334	0.3286	0.0023	0.1601	0.4423	0.05
X05A	Other Procedures for Injuries to Hand W CC	224	806	3.60	23.2%	1.1612	0.3676	0.0142	0.0324	0.7470	0.08
X05B	Other Procedures for Injuries to Hand W/O CC	2,604	3,043	1.17	61.9%	0.5023	0.2742	0.0008	0.0237	0.2035	0.01
X06A	Other Procedures for Other Injuries W Catastrophic or Severe CC	1,282	10,040	7.83	8.1%	2.9297	0.5134	0.3166	0.3888	1.7109	0.11
X06B	Other Procedures for Other Injuries W/O Catastrophic or Severe CC	6,814	12,821	1.88	33.4%	1.0547	0.3828	0.0191	0.2188	0.4339	0.02
X07A	Skin Graft for Injuries Ex Hand W Microvascular Tiss Tfr or W (Cat or Sev CC)	393	5,577	14.18	5.2%	3.7874	0.5720	0.0836	0.2090	2.9228	0.25
X07B	Skin Graft for Injuries Ex Hand W/O Microvascular Tiss Tfr W/O Cat or Sev CC	641	3,835	5.99	20.4%	1.6960	0.4161	0.0130	0.0263	1.2406	0.09

Appendix E: Cost weight tables by AR-DRG

AR-DRG	AR-DRG description	Number of population-adjusted seps	Number of days	ALoS (days)	Percentage of sameday seps	Total (a)	OR & SPS cost weight	Critical care cost weight	Prosthesis cost weight	Miscellaneous cost weight	Standard Error (Total Cost Weight)
X40Z	Injuries, Poisoning and Toxic Effects of Drugs W Ventilator Support	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
X60A	Injuries W Catastrophic or Severe CC	1,171	11,655	9.95	1.4%	1.9553	0.0328	0.0245	0.0048	1.8932	0.06
X60B	Injuries W/O Catastrophic or Severe CC	2,784	10,556	3.79	23.9%	0.7090	0.0335	0.0126	0.0014	0.6616	0.02
X61Z	Allergic Reactions	360	751	2.08	22.6%	0.5257	0.0101	0.1538	0.0016	0.3602	0.06
X62A	Poisoning/Toxic Effects of Drugs and Other Substances W Cat or Sev CC	179	1,508	8.43	2.2%	1.9820	0.0122	0.5161	0.0012	1.4525	0.22
X62B	Poisoning/Toxic Effects of Drugs and Other Substances W/O Cat or Sev CC	383	861	2.25	29.4%	0.4262	0.0062	0.0664	0.0003	0.3533	0.04
X63A	Sequelae of Treatment W Catastrophic or Severe CC	843	5,792	6.87	6.0%	1.6734	0.0721	0.2162	0.0522	1.3329	0.09
X63B	Sequelae of Treatment W/O Catastrophic or Severe CC	4,825	11,661	2.42	28.5%	0.5626	0.0861	0.0257	0.0360	0.4148	0.01
X64A	Other Injury, Poisoning and Toxic Effect Diagnosis W Cat or Sev CC	58	575	9.96	2.9%	2.0499	0.0398	0.0289	0.1803	1.8009	0.32
X64B	Other Injury, Poisoning and Toxic Effect Diagnosis W/O Cat or Sev CC	221	516	2.33	26.1%	0.4450	0.0130	0.0147	0.0000	0.4173	0.05
Y01Z	Ventilation for Burns and Severe Full Thickness Burns	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
Y02A	Other Burns W Skin Graft W CC	19	229	11.84	8.6%	4.0778	0.4894	0.0000	0.0007	3.5877	0.89
Y02B	Other Burns W Skin Graft W/O CC	53	133	2.49	28.9%	0.9509	0.3132	0.0038	0.0523	0.5815	0.12
Y03Z	Other OR Procedures for Other Burns	64	170	2.68	58.1%	0.6241	0.2253	0.0143	0.0017	0.3829	0.07
Y60Z	Burns, Transferred to Another Acute Care Facility <5 Days	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
Y61Z	Severe Burns	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****
Y62A	Other Burns W CC	35	401	11.51	0.0%	2.4813	0.0305	0.0328	0.0051	2.4129	0.41
Y62B	Other Burns W/O CC	23	70	3.03	19.4%	0.3859	0.0232	0.0202	0.0004	0.3422	0.08
Z01A	OR Procedures W Diagnoses of Other Contacts W Health Services W Cat/Sev CC	1,360	3,519	2.59	66.6%	1.3223	0.2910	0.0980	0.3288	0.6046	0.12
Z01B	OR Procedures W Diagnoses of Other Contacts W Health Services W/O Cat/Sev CC	6,907	10,845	1.57	58.5%	0.9710	0.3071	0.0819	0.2536	0.3285	0.04
Z40Z	Endoscopy W Diagnoses of Other Contacts W Health Services, Sameday	77,557	77,568	1.00	100.0%	0.1941	0.1268	0.0001	0.0004	0.0669	0.00
Z60A	Rehabilitation W Catastrophic CC	1,740	28,493	16.38	0.0%	2.9958	0.0022	0.0019	0.0010	2.9907	0.05
Z60B	Rehabilitation W/O Catastrophic CC	5,660	60,063	10.61	0.0%	2.0150	0.0007	0.0002	0.0011	2.0131	0.02
Z60C	Rehabilitation, Sameday	14,839	14,839	1.00	100.0%	0.1342	0.0000	0.0000	0.0000	0.1342	0.00
Z61A	Signs and Symptoms	3,573	16,258	4.55	0.0%	1.0179	0.0279	0.0356	0.0036	0.9508	0.02
Z61B	Signs and Symptoms, Sameday	2,826	2,831	1.00	100.0%	0.2540	0.1480	0.0011	0.0035	0.1014	0.01
Z63A	Other Surgical Follow Up and Medical Care W Catastrophic CC	345	4,690	13.59	0.5%	2.5126	0.0098	0.1339	0.0013	2.3676	0.16
Z63B	Other Surgical Follow Up and Medical Care W/O Catastrophic CC	2,054	9,610	4.68	9.2%	0.8255	0.0126	0.0339	0.0045	0.7746	0.04
Z64A	Other Factors Influencing Health Status	5,136	11,076	2.16	0.0%	0.7804	0.1382	0.0330	0.1179	0.4913	0.02
Z64B	Other Factors Influencing Health Status, Sameday	77,415	77,415	1.00	100.0%	0.1568	0.0587	0.0003	0.0245	0.0733	0.00
Z65Z	Congenital Anomalies and Problems Arising from Neonatal Period	18	24	1.35	27.4%	0.5164	0.0589	0.0000	0.0000	0.4575	0.10
Total		2,827,996	6,821,124	2.41	57.8%	1.0000	0.2323	0.0589	0.2187	0.4901	0.00

