National Costing Collection Pricing Programme

MINISTRY OF HEALTH
MANATŪ HAUORA

New Zealand Casemix Framework For Publicly Funded Hospitals

including

WIESNZ1~~2~~3 Methodology

and

Casemix Purchase Unit Allocation

for the

2013/14 Financial Year

Specification for Implementation on NMDS

Authors: The NCCP Casemix – Casemix Cost Weights Project Group

Table of Contents

Version Updates to Casemix Framework Document (WIESNZ13) – Summary of changes between versions

Version 1.0 (created October 2012)

Version 1.1 (created November 2012)

- Added Appendix 5 XPUs Identified in this Document

Version 1.2 (created May 2013)

- 4.3.1 Adjustment of Medical AR-DRGs with Radiotherapy – updated wording 'AR-DRG' to 'NZ DRG'
- 5.2.2 Publicly Funded Agencies – added '1236 Ministry of Health' to agency table. SAS program updated.
- 5.2.6 Disability and Health of Older People Events – corrected typo at bullet (l) HOP1043 corrected to HOP1045
- 5.2.36 Designated Hospital for Casemix Revenue – removed facility 8303 Belverdale Hospital from table and added it to table in Retired Facility Codes
- 5.4 Identifying DHB Casemix-Funded Events for Inter-DHB Inpatient Flow Calculations – updated wording 'The Agency Code' to 'The Funding Agency Code'
- Appendix 4: New Zealand Casemix History, Unit Prices used in Purchasing – added the 2013/14 price for medical/surgical
- Appendix 5: XPUs Identified in this Document – added HOP1045

Version 1.3 (created June 2013)

- 4.3.1 Adjustment of Medical AR-DRGs with Radiotherapy – corrected a typo on code 1503000. Updated code to 1500300.

1 Purpose of this Document

This document provides the definitions for inclusion of hospital events in casemix funding together with information related to the calculation of cost weights for these events and the assignment of events to purchase units. WIESNZ12WIESNZ13 uses AR-DRG6.0x which is based on ICD-10-AM 6thth Edition codes. A new set of cost weights are provided in the WIESNZ12WIESNZ13 weights table.

This document is the latest in a succession of annual updates that describe New Zealand's casemix funding environment. The documents from earlier years can be viewed on the Ministry of Health website: http://www.nzhis.govt.nz/moh.nsf/pagesns/300 http://www.health.govt.nz/nz-health-statistics/data-references/weighted-inlier-equivalent-separations

The membership of the project group during the development of this document is provided in Appendix 3. Appendix 4 contains a history of the New Zealand casemix environment since 1998/99, and Appendix 5 contains a list of excluded purchase units (XPUs) and Appendix 6 contains a list of the acronymsdefinitions usedappearing in this document.

2 Changes Effected in this Version

This version includes the following major changes from the previous year:

- Five facilities from the casemix eligible facility list have been retired
- Revision of purchase unit mappings for Disability and Health of Older People
- Revision of mechanical ventilation co-payment eligibility for AR-DRGs E40A/B
- Adjusted Radiotherapy exclusion rule to include new XPUs
- New NZ DRG developed for O66T *SFLP for Twin to Twin Transfusion*
- New NZ DRG developed for F03M *Transcatheter Pulmonary Valve Implant*
- Implemented AR-DRG v6.0x, which contains an additional 10 DRGs
- Revised exclusion rule for Primary Maternity
- Further guidance is provided for events where the LOS is greater than 365 days
-
- ~~Three new procedure codes have been added to the Aggregated Gastroenterology Block.~~
- ~~ERCP, Colonoscopy and Gastroscopy exclusions are limited to events with at most three procedure codes. This rule has been further restructured to be independent of the order of procedure coding, and to assign their XPUs by a cost hierarchy, see 5.2.29.~~
- ~~Adjusted Skin LesionProcedures(MS02016) exclusion rule so events excluded can have at most four procedure codes.~~
- ~~Adjusted Ophthalmology Injections (S40004) exclusion rule to include events where both eyes have been injected in the same event.~~
- ~~Weight schedule – adjusted low boundary points and introduced one day weights for AR-DRGs F10B and O01B.Weights for the NZDRGs C03W and J11W have been recalculated to reflect new outpatient pricing for FY 12/13.~~
- ~~Adjusted the heading descriptions for Surgical Termination of Pregnancy1st and 2nd Trimester.~~
- ~~Adjusted Scoliosis rule in Box 1c changed 'or' to 'and' in the second "OR" statement.~~
- ~~Added a statement that the agency field referred to in this document is the funding agency. Funding agency is a new field that is added to NMDS from 1 July 2012.~~
- ~~A new health specialty code for General Practitioners has been added. G01 will be mapped to M05 for the purposes of the WIES calculations.~~
- ~~Following a restructure within the Ministry of Health during November 2011, Information Delivery and Operations Group has been merged with another group and re-named Information Group. This name change has been included in Version 1.1 of this document~~.

A more detailed list of changes arising during this most recent review is given in 3.2.1.

~~2.1 Areas for Further Investigation~~

~~2.1.1 Purchase Unit Allocation for Primary Maternity~~

~~These rules will be reviewed to ensure the excluded purchase unit allocation is correct. New work on service specifications and purchase units occurred early in the 2011/12 year and may lead to further amendments.~~

2.1.2 Neonatal and Maternity Exclusion Rules

Events discharged from health specialties for well born babies, with a specified DRG, or more than two diagnosis codes or any procedure codes have historically been included in W06.03 Neonatal casemix. Now that maternity is included in casemix, these events will be examined to decide if they might be included in Maternity casemix instead, reducing the need for the complex Neonatal inclusion rule.

2.1.3 Surgical Termination of Pregnancy – 2nd Trimester (S30009) – 14 to 25 weeks

This rule will be reviewed due to the inconsistencies between the service specification and the ICD-10-AM 6th Edition Coding Standards.

This was reviewed as part of the 2011 work programme, however was deemed to be complex and further investigations are required to understand how this service is provided.

2.1.4 Mechanical Ventilation Eligibility

The list of those DRGs that are eligible and ineligible for mechanical ventilation co-payments and those that are eligible for the co-payment only where >96 hours is reported will be reviewed.

A review of the mechanical ventilation co-payment eligibility for AR-DRG B42A/B *Nervous System Diagnosis W Ventilator support W or W/O CC*was completed and adjustments will be determined in the 2012 work programme.

3 Introduction

This report specifies the final version of the 20132/143 FY[1] WIESNZ12 WIESNZ13 methodology for casemix purchasing to be used by DHBs. It is the same format as the document used in earlier years, but unlike the framework in 08/09, 09/10 and 10/11,WIESNZ12WIESNZ13 is based on the DRG schedule AR-DRG v6.0AR-DRG v6.0x and clinical coding in ICD-10-AM 6thth Edition.

The intent of this document is to specify the casemix methodology used by DHBs so that case weighted discharge values can be calculated for all National Minimum Data Set (NMDS) events by the Ministry of Health. Further variables are also defined, as required, to identify casemix purchased Purchase Units (PUs), sometimes also referred to as Service Units, case complexity (for future costing work), and the cost weight version used. Publicly funded events excluded from casemix purchasing are identified and where possible the correct non casemix PU applicable to the event is defined, allowing these events to be combined with the National Non-Admitted Patient Data Collection (NNPAC).

A secondary purpose of this document is to provide a definitive explanation of the DHB casemix purchasing framework for use throughout the health sector. As such, additional information beyond that required by the Information Group (IG) (MoH) for implementation in the NMDS is provided both as a background and to identify areas that may be subject to revision for future funding arrangements.

[1] Financial Years run from 1 July through to 30 June of the following calendar year and are abbreviated by stringing together the last two digits of the portions of calendar years in question, i.e. 00/01, 01/02, and 02/03 represent the 3 consecutive financial years from 1 July 2000 through 30 June 2003.

This specification is described as much as possible in plain English. There are, however, references to lists of The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM 6th Edition), Diagnosis Related Groups (DRGs[2]) and other lists of coded variables from the NMDS Data Dictionary. Such lists, including logical conjunctions of different sets of variables, are provided to exactly identify what is included (or excluded) in the English definition.

The NMDS cost weight file (.ndw file) is distributed by the Information Group for each file loaded into the NMDS. The file contains the results of the WIES calculation process for each record within the file that is successfully loaded.

It gives the cost weight, purchase unit and DRG for each event and a subset of information from the record that was used to calculate each of these. The file comprises of a header record containing file information, and a cost weight transaction record for each record loaded into the NMDS.

Note that the terms *Hospital and Health Service (HHS)* and *DHB provider arm* may be used interchangeably throughout this document.

3.1 Background

DHBs are responsible for funding their provider arms from their MoH funding packages, using the form of a service level agreement and price volume schedule agreed between a DHB and its provider arm. DHB purchasing intentions, including volume targets, are notified to the MoH in district annual plans. DHBs purchase a range of inpatient events from their provider arms, some of which are funded using this casemix framework, principally medical/surgical events. This document extends the existing casemix and cost weight methodology, known as Weighted Inlier Equivalent Separations (WIES), with amendments for New Zealand from WIESNZ121 to ~~WIESNZ12~~WIESNZ13. The version for implementation from 1 July 20132 is known as ~~WIESNZ12~~WIESNZ13.

The casemix purchase units appearing in this schedule are those used in DHB price volume schedules and are derived from a mapping of Health Service Speciality codes as set out in this document, see 5.3.

3.2 Recent History of Changes to this Casemix Framework

3.2.1 Changes from WIESNZ12 to WIESNZ13

The WIESNZ13 casemix framework is based on ICD-10-AM 6th Edition and AR-DRG v6.0x. The framework associated with WIESNZ13 is the same as WIESNZ12 except for the following:

- Five facilities have been retired from the casemix eligible facilities list as they provide no casemix-funded activity. The facilities are: 4212, 5814, 5818, 5819 and 5820, see 5.2.36

[2] Two slightly different DRG versions are in use within the methodology. The DRG version currently in use within the NZ health sector is AR-DRG version 6.0x and all DRG tests on NMDS events refer to this version. However, for the purposes of applying costweights, some AR-DRGs are not clinically homogeneous and in these cases an AR-DRG may be reallocated to a different 'WIES' or 'NZ' DRG referred to in this document as ~~NZdrg60~~NZdrg60x. The ~~NZdrg60~~NZdrg60x DRGs contain all the AR-DRGs as well as four additional NZ DRG codes (not used in AR-DRG) for the purpose of applying the appropriate costweights to NMDS events.

- Revised purchase unit mappings for Disability and Health of Older People, see 5.2.6
- The DRGs E40A *Respiratory System Diagnosis W Ventilator Support W Catastrophic CC* and E40B *Respiratory System Diagnosis W Ventilator Support W/O Catastrophic CC* did not have the correct MV designation.~~,~~ Their designation has been changed from 'D' to 'I' ineligible, see 4.4.1
- Adjusted the Radiotherapy exclusion rule to include new XPU assignment, see 5.2.25
- A new NZ-specific DRG O66T has been developed for *SFLP for Twin to Twin Transfusion Syndrome*, see 4.3.2
- A new NZ-specific DRG has been developed for F03M *Transcatheter Pulmonary Valve Implant* (Melody Valve), see 4.3.2
- The cost weights apply to the DRG set AR-DRG v6.0x which reinstates 10 DRG complexity splits from AR-DRG v5.0. The 10 reinstated DRGs expanded the 10 DRGs in AR-DRG v6.0 to 20 in AR-DRG v6.0x for maternity, mental health and breast malignancies, see 4.2
- Revised Primary Maternity wording to allow for developments arising from the new Primary Maternity Service Specifications and revised Purchase Unit structure, see 5.2.16
- Guidance has been provided for the exceptionally rare cases where the LOS exceeds 365 days, see 4.1.1.

~~3.2.1~~3.2.2 Changes from WIESNZ11 to WIESNZ12

The WIESNZ12 casemix framework ~~is~~was based on ICD-10-AM 6th~~th~~ Edition and AR-DRG v6.0. WIESNZ12 ~~is~~was the same as WIESNZ11 except for the following:

- Added three procedure codes 3049103, 3049104 [975], 9029701 [880] to the Aggregated Gastroenterology Block~~, see 5.2.29~~. Procedure codes 3049103, 3049104 [975] ~~have been~~were added to ERCP block and procedure code 9029701 [880] ~~h~~was ~~been~~ added to the Gastro block.
- ERCP, Colonoscopy and Gastroscopy exclusions are limited to events with at most three procedure codes. The rule ~~h~~was ~~been~~ further restructured to be independent of the order of procedure coding, and to assign their XPUs by a cost hierarchy.
- Adjusted Skin Lesion Procedures (MS02016) exclusion rule so events excluded can have at most four procedure codes. This means the skin graft condition is no longer needed~~, see5.2.34~~.
- Adjusted Ophthalmology Injections (S40004) exclusion rule to include events where both eyes have been injected in the same event, and there are at most three procedures~~, see 5.2.33~~.
- Weight schedule – adjusted low boundary points and introduced one day weights for AR-DRGs F10B *Interventional Coronary Procedures W AMI W/O Catastrophic CC* and O01B*Caesarean Delivery W/O Catastrophic or Severe CC.* Weights for the NZDRGs C03W and J11W ~~have been~~were recalculated to reflect new outpatient pricing for FY 12/13.
- Adjusted the heading descriptions for Surgical Termination of Pregnancy 1st~~st~~ and 2nd~~nd~~ Trimesters to align them with the ICD-10-AM classification parameters.
- ~~o~~ Adjusted Scoliosis rule in Box 1c– changed 'or' to 'and'(in the second "OR" statement) so the description ~~is~~was consistent with the SAS programming, ~~see 4.4.4.~~

- From 1 July 2012 a new field (Funding Agency) ~~will be~~was added to the NMDS. When 'agency' is used in this document it refers to the~~is new~~ field – Funding Agency.
- A new health specialty code for General Practitioners (G01) ~~has been~~was added for records with an event end date (discharge date) on or after 1 July 2012. Events with a G01 health specialty code that fall into casemix ~~will be~~are mapped to health specialty code M05 (Emergency Medicine). Events that fall outside of casemix ~~will be~~are assigned an excluded purchase unit in the same way as all other excluded NMDS events.
- Following a restructure within the Ministry of Health during November 2011, Information Delivery and Operations Group ~~has been~~ merged with another group and re-named Information Group (IG). This name change ~~has been~~ was included in Version 1.1 of the~~is~~ WIESNZ12 document.

~~3.2.2 Changes from WIESNZ10 to WIESNZ11~~

~~The WIESNZ11 casemix framework is based on ICD-10-AM 6th Edition and AR-DRG6.0. The cost weights WIESNZ11 are adapted to AR-DRG v6.0.~~

- ~~Capsule endoscopies are allocated to M25008 (ICD-10-AM 6th Edition has a specific procedure code).~~
- ~~The NZ DRG L61Y *Peritoneal Dialysis*was retiredas a new AR-DRG6.0 DRGwas created L68Z *Peritoneal Dialysis.*~~
- ~~The NZ DRG B04M *Extracranial Vascular Procedures* was retireddue to new procedure codes created in ICD-10-AM 6th Edition, which group to one of theDRGs B04A or B04Bin AR-DRG6.0.~~
- ~~The NZ DRGs D06A *Mastoid Procedures* and D06B *Other Sinus and Complex Middle Ear Procedures*were retired as new DRGs were created in AR-DRG6.0, DRGD15Z *Mastoid Procedures*and *D06Z Sinus and Complex Middle Ear Procedures* respectively.~~
- ~~The NZ DRGs K04A *Major Procedures for Obesity W/O Laparoscopy* and K04B *Major Procedures for Obesity W Laparoscopy*were retired and replaced with new AR-DRG6.0 DRGs that are split by 'with CC' or 'without CC' K04A *Major Procedures for Obesity W CC* and K04B *Major Procedures for Obesity W/O CC.*~~
- ~~AR-DRG6.0 codes were added to the list of those DRGs that are ineligible for mechanical ventilation co-payments and those that are eligible for the co-payment only where >96 hours is reported.~~
- ~~Low birth weight babies (<400grams) – AR-DRG6.0 assigns babies with an admission weight between 100 to 399 grams, (along with the appropriate diagnosis codes) to the correct DRGs. In earlier versions of WIES mapping was carried out as part of the NMDS load process.~~
- ~~The exclusion rule for non-cancer pharmacotherapy was removed because ICD-10-AM 6th Edition classification rules and guidelines did not allow the PCT drugs to be uniquely identified amongst all pharmacotherapy.~~
- ~~In earlier versions of AR-DRG there was a problem grouping neonatal events for babies who were over 28 days old and admission weight was over 2500g and had a diagnosis originating in the perinatal period – this was resolved with AR-DRG6.0.~~
- ~~In AR-DRG6.0 spinal cord stimulators have their own DRGs so these can be identified appropriately in WIESNZ11.~~

- ~~A new exclusion rule was created for Skin Lesion Procedures (MS02016) to facilitate the government's wish to see more minor surgery carried out in community settings where possible. These events are assigned to NZDRG J11W*Sameday Skin Lesion Procedures*, see5.2.34and 5.2.37.~~
- ~~A new exclusion rule was created for Ophthalmology Injections (S40004)of therapeutic agent (Avastin) into posterior chamber of eye. These events are assigned to NZDRG C03W*Sameday Ophthalmology Injections of Therapeutic Agent*, see5.2.33and 5.2.36.~~
- ~~Radiotherapy same day exclusion rule was revised so that High Dose Rate (HDR) brachytherapy events were not included in therule, hence remaining casemix funded.~~
- ~~The exclusion rule for Sleep Apnoea was removed.~~
- ~~Excluded events in the Health Specialty range D40-D44were mapped to DSS214 AT&R Young Physically Disabled, previously mapped to HOP214 AT&R Older People.~~
- ~~The exclusion rules for ERCPs, Colonoscopies and Gastroscopies were revised and a new excluded purchase unit was included to identify sameday events with combined Colonoscopy and Gastroscopy, see 5.2.29.~~
- ~~The co-payment rule for Electrophysiology Studies (EPS) was revised. The rule is no longer dependent on DRG but is facility specific.~~
- ~~Secondary and Tertiary Maternity are all casemix funded in 2011/12 and New Zealand weights have been developed (see cost weight schedule – Appendix 1 page41).~~
- ~~Horowhenua hospital (4313) was added as a valid facility code for events submitted with a dental health specialty code(S20) only. St Marks Road Surgical Centre (8977) and Rotorua Eye Clinic (8979) were also added to the valid facility table see5.2.35.~~

3.3 Elements of the 2012 Casemix Work Programme

Listed below are some of the specific issues raised and considered that have not already been outlined:

- Casemix eligible facilities list – eleven facilities were proposed for removal from the list. Five have been removed as they provide no casemix funded activity. The remaining six facilities require further investigation before considering any proposal that they be excluded from Casemix funding
- HDR Brachytherapy – analysis of DHB reported costs showed that there is adequate casemix funding for HDR Brachytherapy, therefore no changes were made
- Proposal to split Maxillo-facial surgery from other Plastics. It was determined that the separation of Maxillo-facial specialists events from the wider Plastics specialty requires development outside the scope of the Casemix Project Group's usual work
- Neurostimulation Device (A12Z *Insertion of Neurostimulator Device*). Analysis of the implant costs across the different health conditions, for which the procedure can be performed, showed the correct level of implant costs in the DRG A12Z, though it was not reflecting the variance by health condition
- Transcatheter Aortic Valve Implantation (TAVI). TAVI cases were checked that the expected level of implant costs had been reported in the event level cost data. No changes were required.

3.33.4 Areas for Change in the Future

The current cost weight schedule is now based solely on New Zealand cost and other data elements.

The current cost weight schedule is now based solely on New Zealand costs and other data elements. This allows changes to be made to the way weights are developed as cost profiles and other aspects of New Zealand's hospital data becomes better understood.

3.3.13.4.1 Emergency Department Discharges

NMDS has expanded its range of event end type codes to identify ED discharges and this may be used in future cost weight studies. This work will be linked to a review of the SD designation for DRGs.

It is by now well understood that the cost profiles for short stay ED events are significantly lower than for inpatients events. This remains an area of concern as the sector continues to seek more accurate revenue in relation to cost profiles. Identification of short stay ED events would have to be based on the Event End Type field in NMDS. However this field is not used either consistently or completely in relation to other indicators of where an event took place in the hospital. Consequently efforts to develop an ED weight for certain DRGs have now been curtailed. However, there are other health sector interests that are related to this problem, namely the concerns raised in relation to the 3-hour rule for admissions by the Ministry of Health Elective Services team and the Common Counting TAG. Consequently, short stay events will be investigated in terms of both counting and weighting.

3.3.2 WIES Eligible Facilities

There is interest in reviewing the list of facilities that are casemix eligible. This has been put on hold until the Role Delineation Model (RDM) has been completed and a wider study of rural facilities has been undertaken by the National Health Board (NHB).

4 WIESNZ12WIESNZ13 Calculation

The following section describes the derived variables required, the DRG reallocation tests applied (AR-DRG => NZdrg60x DRG), the Mechanical Ventilation calculation, other co-payments, the matching of events with appropriate cost weights and the WIESNZ12WIESNZ13 case weight calculation. In what follows the phrases *case weight*, *cost weight*, and *costweight* may be used interchangeably. The table of information required to apply these calculations is provided in the WIESNZ12WIESNZ13 file attached in Appendix 1: Table of 13/14 FY DRG Cost Weights and Associated Variables for Calculating WIESNZ13Appendix 1page 41, the file is also available from Ministry of Health website:http://www.nzhis.govt.nz/moh.nsf/pagesns/300 http://www.health.govt.nz/nz-health-statistics/data-references/weighted-inlier-equivalent-separations

4.1 Derived Variables Required in Calculation

The following derived variables are used in the WIESNZ12WIESNZ13 calculation.

4.1.1 Length of Stay

The Length of Stay (LOS) calculation used in the methodology is the same as prior versions. It has a maximum of 365 days and minimum of 1 day applied, as well as having any Event Leave Days subtracted from the total elapsed days between admission and discharge dates. The minimum of 1 day is applied to deal with the few cases where Event Leave Days are equal to the difference between the admission and discharge dates. Note that for WIES calculations, same day events are only those where the admission and discharge days have the same date. Hence, the calculated LOS equals the difference in integer days between the discharge and admission dates, minus any Event Leave Days. Further, this is set to 365 if the LOS is greater than 365 or is set to 1 if the LOS=0.

Note that LOS is calculated from two dates now provided to the NMDS in date:time format. LOS is intended to represent the integer number of days between the event end date and the event start date and so we use only the date part of this format in calculating the LOS for an event.

In the extremely rare cases where the length of stay of casemix-funded events exceeds 365 days by a significant number of days, it is recommended that the service DHB should statistically discharge the patient at 364 days as this will then allow the funding to flow using the normal channels.

4.2 Changes between AR-DRG v6.0 and AR-DRG v6.0x

WIESNZ13 includes changes from AR-DRG v6.0 to AR-DRG v6.0x. AR-DRG v6.0x reinstated 10 DRGs from AR-DRG v5.20. These additional 10 DRGs are from maternity, mental health and breast malignancies. Listed below are the differences between AR-DRG v6.0 and AR-DRG v6.0x:

AR-DRG v6.0 DRGs are:
Maternity: O01A, O01B, O60Z, O64Z, O66Z
Mental Health: U61Z, U63Z, V60Z
Breast Malignancies: J06Z, J07Z

AR-DRG v6.0x DRGs are:
Maternity: O01A, O01B, O01C, O60A, O60B, O60C, O64A, O64B, O66A, O66B
Mental Health: U61A, U61B, U63A, U63B, V60A, V60B
Breast Malignancies: J06A, J06B, J07A, J07B

See the attachment below for the complete list of AR-DRGs/NZ DRGs v6.0x


AR-DRGs v6.0x.xlsx

4.24.3 DRG Reallocations

Details of the DRG shifts prior to the case weight calculation are given in this section. These events, however, should **not** have the original AR-DRG overwritten, and to this end the SAS code in Appendix 2 creates a new variable, NZdrg60x, to hold the reassigned DRG appropriate for the case weight calculation. This WIES DRG, or

NZdrg60x, contains the unmapped AR-DRGs as well as the additional NZ DRG codes not used in AR-DRG for the purpose of applying the appropriate cost weights to NMDS events.

As in previous years adjustments are made to the original AR-DRG grouping when setting the NZdrg60x field medical DRGs where the event includes radiotherapy, which are mapped to the AR-DRG v6.0x for Radiotherapy.

The following subsections detail the tests for the allocation of AR-DRGs to NZdrg60x DRGs for the purposes of the WIESNZ12WIESNZ13 case weight calculation.

4.2.14.3.1 Adjustment of Medical AR-DRGs with Radiotherapy

Events with medical DRGs and an ICD-10-AM 6th th Edition procedure code 1500000, 150030000 [1786], 1510000, 1510300 [1787], 1522400, 1523900, 1525400, 1526900 [1788], 1560000, 1560001, 1560002, 1560003, 15620004 [1789] (i.e. all external beam therapies) are mapped to the ARNZ-DRG R64Z *Radiotherapy*. Medical DRGs are those where the number part of the DRG code is greater than or equal to 60 (the format of DRG codes is AnnA).

4.2.24.3.2 NZ DRG Allocation

Two new NZ specific DRGs have been developed due to new technology and treatment regimes. These are:

O66T *SFLP for Twin to Twin Transfusion Syndrome*

Analysis showed a small number of events within a large throughput pair of DRGs, in this case O66A and O66B. The costs of the new treatment method are swamped by the costs of these other events. It was decided to develop a NZ specific DRG O66T for this new treatment regime, with weights based on the reported costs without adjustment.

These events are identified as those which have a principal diagnosis of O430 *Placental transfusion syndromes* and one of the first 30 ICD-10-AM 6th Edition procedure codes must be 9048800 [1330] *Endoscopic ablation of vessels of placenta*.

F03M *Transcatheter Pulmonary Valve Implant (Melody Valve)*

Analysis of melody valve implant cases showed the implant costs were both inadequately reported and the events for these cases formed only a small proportion of the current throughput for the DRGs they appear in, namely F04 A, F04B, F03A, and F03B.

However, the use of this new technology is expected to increase. To adequately recompense for this, it was decided to develop a NZ specific DRG F03M, and set weights by adjusting the event level cost data to show the current actual cost of the implant.

These events are identified as those having the two ICD-10-AM 6th Edition procedure codes 3848807 [637] *Replacement of pulmonary valve with bioprosthesis* and 3827003 [637] *Percutaneous balloon pulmonary valvuloplasty* occurring on the same day in the first 30 procedure code reported.

Excluded events for Ophthalmology Injections and Skin Lesion Procedures are assigned to their own NZDRG, refer to 5.2.37 and 5.2.38.

4.2.34.3.3 All other AR-DRGs

All AR-DRGs v6.0x not reallocated in the above tests are given the same DRG code, i.e. the NZdrg60x DRG is set to the same value as the AR-DRG 6.0x.

4.34.4 Adjusted Mechanical Ventilation Days

The WIESNZ12WIESNZ13 calculation includes a component for Adjusted Mechanical Ventilation Days used to calculate the mechanical ventilation (MV) co-payment. However, in some DRGs the majority of events include mechanical ventilation and the cost of this is already reflected in the case weight for that DRG. Therefore these DRGs have their adjusted MV days set to zero.

4.3.14.4.1 DRGs Excluded from Mechanical Ventilation Days

Each of the following NZDRGs has their event's Adjusted Mechanical Ventilation Days set to zero and are ineligible for a MV co-payment.
(A01Z, A03Z, A05Z, B42A, B42B, C03W, E40A, E40B, J11W, L61Z, L68Z, P01Z, P02Z, P03Z, P04Z, P05Z, P60A, P60B, P61Z, P62Z, P63Z, P64Z, P65A, P65B, P65C, P65D, P66A, P66B, P66C, P66D, P67A, P67B, P67C, P67D, T40Z, X40Z,960Z, 961Z). These DRGs are flagged as 'I' in the field mvelig in the WIESNZ12WIESNZ13 table.
For DRGS A06A, A06B, A06C, A06D, A07Z, A08A, A08B, A10Z, A40Z, F40A, F40B, and W01Z the hours of ventilation need to be > 96 to qualify the event for a mechanical ventilation co-payment). These DRGs are flagged as '4' in the field mvelig in the WIESNZ12WIESNZ13 table.

The DRGs P06A and P06B are flagged as 'E' in the field mvelig in the WIESNZ12WIESNZ13 table.

4.3.24.4.2 Calculation of Mechanical Ventilation Days from Hours

For all other AR-DRGs, Adjusted Mechanical Ventilation Days is calculated in the following way:

- If hours of ventilation are less than 6 then Adjusted Mechanical Ventilation Days is set to zero.
- If hours of ventilation are 6 or more then Adjusted Mechanical Ventilation Days are calculated by adding 12 hours to the hours reported, dividing the result by 24 and rounding up to integer days.

4.44.5 General Calculation

For the WIESNZ12WIESNZ13 calculation, each NMDS event is initially allocated its NZdrg60x and this DRG is then matched to the file containing the NZdrg60x cost weights and other associated variables.

NZdrg60x DRGs are flagged as Sameday, Oneday or other DRGs in this file by the SOflag (Same Day/One Day WIES DRG Flag), but events are classed as same day, one day, or multiday as determined from admission and discharge dates or from LOS. The development of the weight schedule has followed the same pattern as before, though the calculation continues to be presented in an easier format. It uses

per diem rates for both high and low outliers, inlier weight, a one day weight, and a same day weight.

The base WIES weight for sameday episodes (inlier and low outlier), one-day episodes (inlier and low outliers), and multiday inliers can be read directly from the WIESNZ12WIESNZ13 weights table using the appropriate column and row. The base WIES weight for multiday low outliers can be calculated by multiplying the per diem weight given in the WIESNZ12WIESNZ13 weights table by the patient's (length of stay – 1) and adding the one day weight. The base WIES weight for high outliers is obtained by multiplying the number of high outlier days by the high outlier per diem weight (from table) and adding the multiday inlier weight (from table). Technical details are provided in the following sections.

An event's LOS is compared with the NZdrg60x DRGs low and high LOS boundary points to determine the inlier category (Low, Inlier, High) and which particular cost weight should be applied to it. In the following sections, shortened variable names from the WIES DRG weights file are used. Note that in the following table *NZ-DRG6x* is synonymous with AR-DRG v6.0AR-DRG v6.0x, while DRG_NZ, WIES DRG and NZdrg60x are synonymous for this classification when adapted to New Zealand.

Variable (Column Heading)	Label	Description
New Zealand DRG	NZ-DRG6x	AR-DRG v6.0AR-DRG v6.0x as adapted for New Zealand
Mechanical ventilation	Mvelig	This describes the way mechanical ventilation severity co-payments are calculated for the NZ-DRG6x. Options are :- D: funded provided at least 6 hours of ventilation is provided. Patients attract a daily rate of 0.7729 WIES E: patients are funded an additional 3.1323 WIES 4: funded for each day of mechanical ventilation after 4 days. Patients attract a daily rate of 0.7729 WIES. I: ineligible for mechanical ventilation co-payments
Other co-payments	Copay	Some groups of patients attract additional funds in recognition of their higher costs. For New Zealand there are co-payments for AAA stent, ASD, EPS and scoliosis implants for eligible facilities. See Box 1b and 1c.Now coelig.
Low inlier boundary	Lb	The low length of stay boundary for inliers. Patients with a length of stay of less than the low boundary are classed as low outliers. For most DRG_NZs the low boundary has been set at a third of the estimated average length of stay for the DRG_NZ. Boundaries are truncated to the nearest whole number.
High inlier boundary	Hb	The high length of stay boundary for inliers. Patients with a length of stay greater than the high boundary are classed as high outliers. For most DRG_NZs the high boundary has been set at three times the estimated average length of stay for the DRG_NZ. Boundaries are rounded to the nearest whole number.
Inlier average length of stay	alos	The average length of stay (days) for inliers.
NZ-DRG6x designation	Sd_od	Flag for designated sameday (S) or one day (N) NZ-DRG6xs

Variable (Column Heading)	Label	Description
Same day weight	Sd	The same day weight is used to allocate WIES to episodes where patients are admitted and discharged on the same day. Depending upon the NZ-DRG6x, same day patients may be either low outliers or inliers:- Designated Same day NZ-DRG6xs The same day weight is based on the costs of same day patients. Non-Same Day NZ-DRG6xs with a low boundary of zero days The same day weight is set at the multiday inlier weight. Non-Same Day NZ-DRG6xs with a low boundary of 1 day The same day weight is set based on the average cost of inliers. For medical DRGs the weight is set at half of the inlier average cost and for procedural DRGs is based on 100% of theatre and prosthesis costs and 50% of the average of other costs. Non-Same Day NZ-DRG6xs with a low boundary of 2 days or more (low outliers) The same day weight is set at half of the multiday inlier costs based on 100% of theatre and prosthesis costs and 50% of the average of other costs, divided by the low boundary.
One day weight	Od	The one day weight is used to allocate WIES to episodes where patients have a length of stay of one but who were not discharged on the same day as they were admitted. Depending upon the NZ-DRG6x, one day patients may be either low outliers or inliers:- Designated Same day NZ-DRG6xs The one day weight is based on the costs of all inliers excluding same day patients. If the patient is an inlier they attract the full multiday inlier weight. If the patient is a low outlier they attract the low outlier per diem weight. Designated One day NZ-DRG6xs The one day weight is based on the costs of patients with a length of stay of one day. Non-Same/One Day NZ-DRG6xs with a low boundary of 1 day or less The one day weight is set at the multiday inlier weight. Non-Same/One Day NZ-DRG6xs with a low boundary of 2 days or more (low outliers) The one day weight is based on 100% of theatre and prosthesis costs and 50% of the average of other costs, divided by the low boundary.

Variable (Column Heading)	Label	Description
Multiday low outlier per diem weight	Lo_pd	The low outlier multiday per diem weight is used to allocate WIES to low outliers who have a length of stay of at least two days. Not all NZ-DRG6xs have low outliers. No weight is reported in these cases. For most NZ-DRG6xs the weight is derived from the average cost of multiday inliers excluding prosthesis and theatre costs, divided by the low boundary. The WIES value for low outliers is calculated by multiplying the low outlier multiday per diem weight by the patient's length of stay less one day and then adding the one day weight, i.e. Low outlier WIES = od + (LOS – 1)*lo_pd
Inlier weight	md_in	The inlier multiday weight is used to allocate WIES to inliers that have a length of stay of at least two days. For designated NZ-DRG6xs, same day/one day patients are excluded when deriving the inlier multiday weight.
High outlier per diem	ho_pd	The high outlier multiday per diem weight is used to allocate additional WIES for all days of stay in excess of the high boundary after adjusting for any MV co-payment days. The high outlier multiday per diem rate is based on the average cost of inliers excluding all prosthesis and theatre costs according to the formula:- High factor * (av inlier cost excl prosthesis and theatre costs) / alos Where the high factor is set at 0.7 for surgical NZ-DRG6xs, and 0.8 for medical NZ-DRG6xs to recognise the days at the end of a patients stay are less resource intensive than days at the beginning of a patients stay. However, some variations exist on this pattern, and the high factor may be set higher than one for some high cost NZ-DRG6xs. In addition, maximum and minimum criteria are also used.

4.4.14.5.1 Calculating ~~WIESNZ12~~WIESNZ13

To calculate the WIES weight allocated to a patient proceed as follows:-

- Calculate the WIES co-payment for MV (mv_copay) using the precalculated adjusted mechanical ventilation days (adjmvdays) see 4.4 and 4.5.2 (see Box 1);
- Calculate the co-payment for AAA, ASD, EPS and scoliosis events (see Boxes 1b and 1c);
- Calculate the base WIES allocation using the NZdrg60x DRG and the patient's length of stay adjusted for mechanical ventilation per diem. This can be done using the appropriate weights from the ~~WIESNZ12~~WIESNZ13 weights table; and
- Add the base WIES payment and co-payments (see Box 3).

The steps are described in detail with technical specifications provided in the following boxes.

4.4.24.5.2 Co-payment for Mechanical Ventilation

Technical specifications for mechanical ventilation co-payments are given in Box 1.

To be eligible for a mechanical ventilation co-payment the patient must have had at least six hours of continuous mechanical ventilation and have been allocated to an NZdrg60x DRG that is eligible for a mechanical ventilation co-payment. NZdrg60x DRGs are classed as either:

- Eligible for daily co-payments of 0.7729 WIES (column mvelig =“D” in the WIESNZ12WIESNZ13 weights table);
- Eligible for a co-payment of 3.1323 (column mvelig = “E” in the WIESNZ12WIESNZ13 weights table);
- Eligible for daily co-payments at 0.7729 WIES for ventilated days in excess of four days (96 hours) mechanical ventilation (column mvelig = “4” in the WIESNZ12WIESNZ13 weights table); or
- Ineligible for co-payments (column mvelig = “I” in the WIESNZ12WIESNZ13 weights table).

Box 1: Calculating Mechanical Ventilation Co-payments

```
Select mv_elig
        case “D” then
                if (hours on mechanical ventilation is greater than or equal to 6) then
                        Adjmvday = round ((hours mechanical ventilation +12)/24)
                        mv_copay = adjmvday × 0.7729
                    else
                        adjmvday = 0
                        mv_copay = 0
                go to box 1b

        case “E” then
                if (hours on mechanical ventilation is greater than or equal to 6 ) then
                        Adjmvday = round((hours mechanical ventilation +12)/24)
                        mv_copay = 3.1323
                    else
                        adjmvday = 0
                        mv_copay = 0
                go to box 1b

        case “4” then
                if (hours on mechanical ventilation > 96) then
                        Adjmvday = round((hours mechanical ventilation +12)/24) – 4
                        mv_copay = adjmvday × 0.7729
                    else
                        adjmvday = 0
                        mv_copay = 0
                go to box 1b

        otherwise do
                adjmvday = 0
                mv_copay = 0
                go to box 1b
```

Note that additional WIES payments for high outliers do not start until the LOS exceeds high boundary outlier days (column hb in WIESNZ12WIESNZ13 table) plus adjusted mechanical ventilation days (“adjmvday” in the technical specifications Box 1).

4.4.34.5.3 Co-payment for AAA and ASD

Technical specifications for abdominal aortic aneurysm (AAA) and atrial septal defect (ASD) stent co-payments are given in Box 1b in this section. Note that changes to the list of valid agencies will be made by the Cost Weights Group following advice from the providing DHB.

To be eligible for a AAA co-payment of 5.4077 WIES the facility recorded for the event must be one of the facilities listed and one of the first 30 ICD-10-AM 6th th Edition procedure code must be 3311600 [762] *Endovascular repair of aneurysm*, and the event must fall into one of the following DRGs~~; F08A or F08B.~~ F08A *Major Reconstruct Vascular Procedures W/O CPB Pump W Catastrophic CC* or F08B *Major Reconstruct Vascular Procedures W/O CPB Pump W/O Catastrophic CC.*

To be eligible for an ASD co-payment of 1.1460 WIES the facility recorded for the event must be one of the facilities listed and one of the first 30 ICD-10-AM 6th th Edition procedure codes must be 3874200 [617]*Percutaneous closure of atrial septal defect*, and the event must fall into the DRG F19Z *Trans-Vascular Percutaneous Cardiac Intervention*.

Box 1b: Calculating AAA and ASD Co-payments

When event falls into DRG F08A or F08B and
When facility is in ('3260','3214','5311','4911','5811','4011','4211')
and any of the first 30 recorded procedures = '3311600' then aaa_pay = 5.4077
else aaa_pay = 0;

When event falls into DRG F19Z and
When facility is in ('3260','5311','5811', '4011','4211')
and any of the first 30 recorded procedures = '3874200' then asd_pay = 1.1460
else asd_pay = 0;

go to box 1c

4.4.44.5.4 Co-payment for Scoliosis Implants and Electrophysiological Studies

Scoliosis Implants

This rule applies to all events and is not associated with any specific DRGs. However, the DRGs the co-payment appears on will generally be confined to a small group. The co-payment value is 6.1491 WIES.

To be eligible for a scoliosis co-payment, the age at admission must be less than 19 years and the facility must be:
3260 (Auckland City), 5811 (Wellington), or 4211 (Dunedin) and
EITHER the NZdrg60 must be 'I06Z'
OR the NZdrg60 must be 'I09A' and either one of the first 2 diagnoses is in 'M41','Q763','Q675','M962','M963','M965' or one of the first 3 procedures is in '4031600','4867800','4868100','4868400', '4868700','4869000' OR for any other NZdrg60x both the diagnosis and procedure criteria shown above must apply.

Electrophysiological Studies (EPS)

To be eligible for an EPS co-payment of 2.2266 WIES, the facility recorded for the event must be one of the facilities listed and one of the first 30 ICD-10-AM 6th th

Edition procedure codes must be 3820900 [665] *Cardiac electrophysiological study, ≤ 3 catheters* or3821200 [665] *Cardiac electrophysiological study, ≥ 4 catheters*.

Box 1c: Calculating Scoliosis and EPS Co-payments

When age at admission < 19 years and when facility is in ('3260','5811','4211')
and event falls into DRG I06Z

OR event falls into DRG I09A and either any of the first 2 recorded diagnoses in ('M41','Q763','Q675','M962','M963','M965') or any of the first 3 recorded procedures in ('4031600','4867800','4868100','4868400','4868700','4869000')

OR any of the first 2 recorded diagnoses in ('M41','Q763','Q675','M962','M963','M965') and any of the first 3 recorded procedures in ('4031600','4867800','4868100','4868400', '4868700','4869000')

then scol_pay = 6.1491
else scol_pay = 0;

When facility is in ('3260','5311','5811','4011')
and any of the first 30 recorded procedures is '3820900' or '3821200' then eps_pay = 2.2266
else eps_pay = 0
go to box 2a

~~4.4.5~~4.5.5 Base WIES

To calculate a patient's base WIES proceed as follows to determine:

- The patient's NZdrg60x
- The patient's length of stay (LOS)
- The patient's length of stay category (LOS_cat: "S"= same day, "O"= one day, "M"= multiday)
- The number of mechanical ventilation co-payment days ("adjmvday" see Box 1a)
- The co-payment, if any for AAA or ASD (see Box 1b) EPS or scoliosis (see Box1 c)
- The patient's inlier status ("I"= inlier, "L"= low outlier, "H"= high outlier).

The patient's length of stay and length of stay category are derived from the admission date, discharge date and leave days. A maximum length of stay of one year (365 days) is used. Technical specifications are given in Box 2a.

Box 2a: Determining Length of Stay Category and Maximum Length of Stay

Sameday='Y' if admission date = discharge date
else sameday='N'

If (sameday = 'Y') then
LOS_cat = "S"
go to step/box 2b
else if (sameday = 'N') and (LOS less than or equal to 1) then
LOS_cat = "O"
go to step/box 2b
else
LOS_cat = "M"
go to step/box 2b

The patient's inlier status is determined by comparing the patient's length of stay with the inlier boundaries for the NZdrg60x to which the patient is allocated. The low inlier

(lb) and the high inlier (hb) boundaries are given in the ~~WIESNZ12~~WIESNZ13 weights table.

A patient is classified as an inlier when their length of stay is greater than or equal to the low inlier boundary (lb) and less than or equal to the sum of the high inlier boundary plus any mechanical ventilation co-payment days (hb + adjmvday). Patients with a length of stay less than the low inlier boundary are classified as low outliers.

Patients with a length of stay greater than the sum of the high inlier boundary and mechanical ventilation co-payment days are classified as high outliers. Technical specifications are given in Box 2b below.

Box 2b: Calculate Inlier Status

```
If LOS <lb then
        Inlier = "L"
        go to box 2c

else if LOS > (hb + adjmvday) then
        Inlier = "H"
        go to box 2c
else
        Inlier = "I"
        go to box 2c
```

Separate columns occur in the ~~WIESNZ12~~WIESNZ13 weights table for episodes that are:

- same day
- one day
- multiday low outliers
- multiday inliers, and
- high outliers.

The base WIES score for sameday episodes (inlier and low outlier), one day episodes (inlier and low outliers), and multiday inliers can be read directly from the ~~WIESNZ12~~WIESNZ13 weights table using the appropriate column and row (NZdrg60x). The base WIES score for multiday low outliers can be calculated by multiplying the patient's length of stay less one day, by the per diem weight given in the ~~WIESNZ12~~WIESNZ13 weights table and adding the one day inlier weight (from table). The base WIES score for high outliers is obtained by multiplying the number of high outlier days by the high outlier per diem weight (from table) and adding the multiday inlier weight (from table). Technical details are provided in Box 2c.

Box 2c: Calculate Base WIES

```
Select Inlier
   case "L" do                                    "Low Outliers"
            select LOS_cat
                 case "S" do                      "Same Day"
                          base_WIES = sd
                          go to box 3
                 case "O" do                      "One Day"
                          base_WIES = od
                          go to box 3
```

```
                    case "M" do                          "Multi day Low Outlier"
                            base_WIES = (LOS-1) ×lo_pd + od
                            go to box 3
case "I" do                                              "Inlier"
          select LOS_cat
                    case "S" do                          "Same Day"
                            base_WIES = sd
                            go to box 3
                    case "O" do                          "One Day"
                            base_WIES = od
                            go to box 3
                    case "M" do                          "Multi day Inlier"
                            base_WIES = md_in
                            go to box 3
case "H" do                                              "High Outlier"
          high_days = max (0, LOS - hb - adjmvday)
          base_WIES = Md_in + high_days × ho_pd
          go to box 3
```

High outlier days are days stayed in excess of the high outlier boundary plus any mechanical co-payment ventilation days ("adjmvdays" see Boxes 1 and 2b).

4.4.64.5.6 Final WIES Weight

The WIES weight is calculated by adding the base WIES and the co-payment WIES. Details are provided in Box 3.

Box 3: Calculating WIES Weight

WIESNZ12WIESNZ13 = base_WIES + mv_copay + aaa_pay + asd_pay + scol_pay + eps_pay

This formula applies in all cases, except as follows:

Events with an excluded purchase unit S40004 will be assigned an NZdrg60x of C03W and cost weight equal to 0.04787.
Events with an excluded purchase unit of MS02016 will be assigned an NZdrg60x of J11W and cost weight equal to 0.1085.

5 Purchase Unit Allocation

The following section describes the derived variables required, the exclusion tests applied and the mappings used to allocate DHB casemix Purchase Units to NMDS events. Each exclusion test indicates the relevant purchase unit wherever possible.

5.1 Derived Variables Required in Allocation

The following derived variables are required for casemix exclusion testing.

5.1.1 Patient's Age

The patient's age is calculated in integer years as at the date of discharge, unless otherwise specified.

5.1.2 Length of Stay

(Refer to section 4.1.1) The calculated LOS equals the difference in integer days between the discharge and admission dates, minus any Event Leave Days. Further, this is set to 365 if the LOS is greater than 365 or is set to 1 if the LOS=0.

5.2 Exclusions from Casemix Purchasing

This section lists the tests that identify whether or not a particular event will be allocated to an inpatient casemix purchase unit. It should be noted that some events which are included in the casemix purchase unit allocation methodology will be excluded, by the final rule, from the publicly funded casemix extract used for inter DHB inpatient CWD wash-up. These events are excluded on the basis of Health Purchaser code and Health Agency code where these are not valid for the inter DHB funding wash-up. Note that from 1 July 2012 Funding Agency ~~i~~was a new field in the NMDS. Where ever the term agency is used in this document it refers to the~~is~~ new funding agency field. The exclusion rules below indicate the Nationwide Service Framework (NSF) equivalent purchase unit for NMDS events, which will be generated by the Information Group and stored in a separate field. The tests are hierarchical and must be applied in the supplied sequence.

Note that the Information Group SAS methodology uses individual exclusion flag fields to generate an overall exclusion flag {Yes/No} for each event. These individual fields indicate where an event could be excluded for more than one reason.

Hospitals can report up to 99 diagnoses, procedure and external cause (E-codes) codes for each event. However the grouper software (AR-DRG v6.0x) uses only the first 30 diagnoses and 30 procedure codes (external cause codes are not included in grouper logic). Many of the tests below state how many procedure or diagnoses codes are reviewed to determine if the event is included or excluded from casemix. Where this is not stated the first 30 diagnosis or 30 procedure codes are reviewed. External cause codes are not included in these totals.

DHBs that are concerned about the sufficiency of 30 diagnosis and 30 procedure codes should ensure their coding is prioritised so that the critical codes are included within the first 30 diagnosis and procedure codes for each event.

5.2.1 Base Purchase – Publicly Funded Events (EXCLU)

Only publicly funded events as indicated by the purchaser code are included for 20132/143. Publicly funded purchaser codes are 34 *MoH funded* event, 35 *DHB funded* event or 20 *Overseas resident eligible* for DHB funded health care.

Therefore an event will be excluded if it has a Purchaser code which is NOT in (20, 34 or 35).

~~Note that it has been proposed to remove this exclusion rule in future years, allocating a purchase unit on NMDS to all events at publicly funded agencies regardless of purchaser and using the purchaser code where appropriate as an exclusion when extracting data.~~

5.2.2 Publicly Funded Agencies

The agencies listed here have been identified as the providers through which the MoH and DHBs will monitor publicly funded agreements. Only NMDS records with

an agency from the following list will be allocated a publicly funded purchase unit. All other events will be excluded. Inclusion in casemix funding requires a combination of agency code as in the following table and facility code as in 5.2.36

Health (Funding) Agency Code*	Agency Name
1011	Northland DHB
1021	Waitemata DHB
1022	Auckland DHB
1023	Counties Manukau DHB
1236	Ministry of Health
2031	Waikato DHB
2042	Lakes DHB
2047	Bay of Plenty DHB
2051	Tairawhiti DHB
2071	Taranaki DHB
3061	Hawke's Bay DHB
3081	Mid Central DHB
3082	Whanganui DHB
3091	Capital & Coast DHB
3092	Hutt Valley DHB
3093	Wairarapa DHB
3101	Nelson-Marlborough DHB
4111	West Coast DHB
4121	Canterbury DHB
4123	South Canterbury DHB
4131	Otago DHB
4137	Otago Dental School
4141	Southland DHB
4160	Southern DHB
8559	Venturo
8630	Queen Elizabeth Hospital
8656	Mobile Surgical Bus

*the term 'agency' refers to 'funding agency'

Retired (Funding) Agency Codes

These codes have been retired but are noted here for historical reasons.

Health (Funding) Agency Code	Agency Name
0223	Heart Surgery South Island
2041	East Bay Health
2043	Western Bay Health
4122	Canterbury DHB (Healthlink South)

5.2.3 Error DRGs and Unrelated OR DRGs

Events that group to the three Error AR-DRGs (960Z, 961Z, and 963Z) are excluded from casemix. These events contain clinically atypical or invalid information and will be assigned to one of the three Error DRGs in AR-DRG6.0x, these are:

1. 960Z *Ungroupable*
2. 961Z *Unacceptable Principal Diagnosis*
3. 963Z *Neonatal Diagnosis Not Consistent With Age/Weight*

There are three Unrelated OR DRGs that occur because the principal diagnosis does not relate to the principal procedure (801A, 801B and 801C). These DRGs are not excluded from casemix, theseand are:

1. 801A *OR Procedures Unrelated to Principal Diagnosis With Catastrophic CC*
2. 801B *OR Procedures Unrelated to Principal Diagnosis With Severe or Moderate CC*
3. 801C *OR Procedures Unrelated to Principal Diagnosis Without CC*

5.2.4 Non-Treated Patients (Boarders – BOARDER or Cancelled Operations – CANC_OP)

Events where no treatment is provided are excluded from casemix funding. These include Boarders who may be admitted or admitted patients whose procedure is subsequently cancelled. The current costing process is such that costs for these events are spread across other casemix-funded events and so are funded indirectly.

Boarders are tested for by checking that the principal diagnosis code is: (Z763 *Healthy person accompanying sick person*or Z764 *Other boarder in health-care facility*).

Cancelled Operations are tested for by checking that:

The first procedure code is blank

AND

That the event is non-acute (i.e. Admission Type not "AC")

AND

Length of Stay is less than 2 days

AND

That one or more of the first six diagnosis codes contain the ICD-10-AM 6th th Edition code for *Persons encountering health services for specific procedures, not carried out*, i.e. one (or more) of the diagnosis 1-6 is in the range Z530 – Z539:

- Z530 *Procedure not carried out because of contraindication*
- Z531 *Procedure not carried out because of patient's decision for reasons of belief or group pressure*
- Z532 *Procedure not carried out because of patient's decision for other and unspecified reasons*
- Z538 *Procedure not carried out for other reasons*
- Z539 *Procedure not carried out, unspecified reason.*

5.2.5 Mental Health Events (EXCLU)

Events that have a Mental Health Speciality Code are excluded and in future versions will be allocated a purchase unit in the MHIS series. These services have a Health Speciality Code commencing with "Y", and are purchased under other funding arrangements.

5.2.6 Disability and Health of Older People Events

Events that have a Disability Health Speciality Code are excluded from casemix funding. These services have a Health Speciality Code commencing with "D", and are purchased under other funding arrangements. Health Specialties in the range:

(a) D00-D034 are allocated to HOP214 Age Related AT&R
(b) D04 is allocated to HOP1013 Carer Support Respite Day
(c) D20-D24 are allocated to HOP235 Psychogeriatric AT&R
(dc) D40-D44 are allocated to DSS214 Young Physically Disabled AT&R.

Other Disability Health Specialty codes relate to residential care, including short term respite care, and are purchased under a variety of non-casemix arrangements. The following mappings have been allocated for the non-casemix purchase unit field in 20132/143 but the mapping is indicative only and DHBs may map events to other codes using more detail. ~~a further review is required as this mapping is not always correct.~~ Care should be taken when using this mapping.

(ed) D10 – D112 – HOP1006 Aged ~~Continuing~~Residential Care – ~~Rest Home~~Hospital
~~(e) D30 – D32 HOP1035 Aged Continuing Care – Specialist~~
(f) D12 – HOP1044 Aged Residential Respite – Hospital level
(g) D13 – HOP1033 Aged Residential Care – Rest Home
(h) D14 – HOP1043 Aged Residential Respite – Rest Home level
(i) D30-D31 – HOP1035 Aged Residential Care – Specialist
(j) D32 – HOP1046 Aged Residential Respite – Psychogeriatric level
(k) D33 – HOP1032 Aged Residential Care – Secure Dementia
(l) D34 – HOP1045 Aged Residential Respite – Dementia level

All other events with a Health Specialty Code commencing with D are excluded.

5.2.7 Maternity Secondary and Tertiary Facility Table

The following table is sourced from the table of Maternity facilities contained in the document Maternity Services: A Reference Document, HFA, ~~1999~~ 2000 – Appendix 9[3]. Only the designated secondary and tertiary maternity facilities have been listed, as the intent of that~~e~~ maternity project group was that a casemix purchase framework should only apply for service provided in these facilities.

Document Facility Name	NMDS Facility Name	NMDS Facility Code	Secondary	Tertiary
Whangarei	Whangarei Hospital	4111	✓	
Northshore	Northshore	3215	✓	
Waitakere	Waitakere	3216	✓	
National Women's	National Women's	3213	✓	✓
Middlemore	Middlemore	3214	✓	✓
Auckland City	Auckland City	3260	✓	✓
Waikato Hospital	Waikato	5311	✓	✓
Rotorua	Rotorua	5312	✓	
Tauranga	Tauranga	4911	✓	
Whakatane	Whakatane	3311	✓	
Gisborne	Gisborne	3411	✓	
New Plymouth	Taranaki Base	4711	✓	
Wanganui	Wanganui	5711	✓	
Hastings	Hastings Memorial	3612	✓	
Masterton	Masterton	5511	✓	

[3] ~~http://www.moh.govt.nz/moh.nsf/82f4780aa066f8d7cc2570bb006b5d4d/64f4a80cd43629704c2569d9001a01c9/$FILE/Maternity%20Services%20November%202000%20-%20final%20version.pdf~~
http://www.moh.govt.nz/notebook/nbbooks.nsf/0/33BDA6510EF068D7CC2570890077C393/$file/maternityservices.pdf

Document Facility Name	NMDS Facility Name	NMDS Facility Code	Secondary	Tertiary
Palmerston North	Palmerston North	4311	✓	
Wellington	Wellington	5811	✓	✓
Hutt	Hutt	5812	✓	
Blenheim (Wairau)	Wairau	3811	✓	
Nelson	Nelson	3911	✓	
Christchurch Women's	Christchurch Women's	4014	✓	✓
Christchurch Hospital	Christchurch Hospital	4011	✓	✓
Greymouth	Grey Base Hospital	5911	✓	
Timaru	Timaru	4411	✓	
Dunedin	Dunedin	4211	✓	✓
Invercargill	Southland	4511	✓	

5.2.8 Secondary Tertiary Maternity, Primary Maternity, and Well Newborn Events ~~and Neonatal Events~~

Maternity events where the first character of the Health Speciality Code (HSC) is 'P' and the facility is NOT listed in table 5.2.7 are referred to as 'Primary Maternity' events; these are excluded from casemix funding, see 5.2.16 where the XPU for the primary maternity labour, delivery and post-natal stay events are identified.

Secondary or tertiary ~~Pregnancy and Childbirth secondary or tertiary~~ maternity events are those where the first character of the Health Specialty Code is 'P', and the facility is listed in the secondary/tertiary maternity facility table in section 5.2.7.

In these facilities, well newborn babies, as opposed to 'neonates', will be covered by maternity inpatient casemix. In general, we expect well newborns to fall into AR-DRG P67D *Neonate, AdmWt >2499g W/O Significant OR Procedure W/O Problem* and be counted under the maternity inpatients casemix purchase unit W10.01. The rules in section 5.2.9 to 5.2.14 all relate to secondary and tertiary maternity facilities only.

5.2.9 Postnatal Early Intervention Events (W03012)

Events that have the Postnatal Early Intervention Health Speciality Code (P50), and the event occurs in a facility listed in table 5.2.7, are excluded.

5.2.10 Neonatal Inpatient Casemix (W06.03)

This test takes the form of an inclusion rule, as this is easier to specify than the converse exclusion rule. To be potentially included in neonatal casemix volumes an event must occur in a facility listed in table 5.2.7, have a Paediatric Neonatal and Maternity Services Health Speciality Code, and must meet one of three tests (originally agreed by the 98/99 joint HFA/HHS Maternity & Neonates project) which attempt to distinguish between well newborns and those who require additional health services:

The Health Speciality Code is in the Paediatric Neonatal and Maternity Services range (P41, P42, P43, P60, P61, P70, P71[4])

[4]Prior to 1 July 2008 this exclusion rule also included health specialty codes P00, P10, P11, P20, P30, P35. These codes were retired on 1 July 2008.

AND
{The Health Speciality Code is in the range (P41, P42, P43)
OR
(The AR-DRG is in the range (P02Z, P03Z, P04Z, P05Z, P06A, P06B, P61Z, P62Z, P63Z, P64Z, P65A, P65B, P65C, P65D, P66A, P66B, P66C, P67A, P67B)
OR
(The AR-DRG is in the range (P01Z, P60A, P60B, P66D, P67C, P67D)
AND
(The third diagnosis is NOT blank OR the first procedure is NOT blank))}.

5.2.11 Amniocentesis (W03005)

For events where the Health Speciality Code starts with a P and is not P50, and the event occurs in a facility listed in table 5.2.7, and is not neonatal (5.2.10), same-day amniocentesis events are excluded from casemix purchasing.

These events are tested for by checking that:
The admission and discharge dates are the same
AND
The first procedure code is in the range: (1660000 *Diagnostic aminiocentesis*, 1661800 *Therapeutic aminiocentesis*, 1662100 *Amnio-infusion* [1330]).

5.2.12 Chorionic Villus Sampling (W03006)

For events where the Health Speciality Code starts with a P and is not P50, and the event occurs in a facility listed in table 5.2.7, and is not neonatal (5.2.10), same-day chorionic villus sampling events are excluded from casemix purchasing.

These events are tested for by checking that:
The admission and discharge dates are the same
AND
The first procedure code is 1660300 [1330] *Chorionic villus sampling*.

5.2.13 Rhesus Isoimmunisation and Other Isoimmunisation (W03007)

For events where the Health Speciality Code starts with P and is not P50, and the event occurs in a facility listed in table 5.2.7, and is not neonatal (5.2.10), same-day rhesus isoimmunisation events are excluded from casemix purchasing.

These events are tested for by checking that:
The admission and discharge dates are the same
AND
The principal diagnosis code is in the range: (O360 *Maternal care for rhesus isoimmunisation*, O361 *Maternal care for other isoimmunisation*).

5.2.14 Lactation Disorders Associated with Childbirth (W03010)

For events where the Health Speciality Code starts with P and is not P50 and the event occurs in a facility listed in table 5.2.7, and is not neonatal (5.2.10), same-day lactation events are excluded from casemix purchasing.

These events are tested for by checking that:
The admission and discharge dates are the same
AND

The principal diagnosis code is in the range: (O9230, O9231, O9240, O9241, O9250, O9251, O9260, O9261, O9270, O9271).

5.2.15 Maternity Casemix (W10.01)

All other events where the Health Speciality Code starts with P and is not P50 and the event occurs in a facility listed in table 5.2.7, and are not neonatal (5.2.10), are allocated to W10.01 Maternity Casemix.

5.2.16 Primary Maternity Events (W02020~~W02007,W02008, W02009, W02010, W02011~~)

All primary maternity events are excluded from casemix 5.2.8. Primary maternity events where the first character of the Health Specialty Code is P, and the facility is not listed in the secondary/tertiary facility table in 5.2.7, and the DRG has either a first character of P or has the first three characters in the following DRG groups; O01, O02, O04, O60, O61, O64 or O66 are assigned an XPU and Relative Value Unit (RVU).

These primary maternity events are all allocated to the non-casemix purchase unit W02020 *Inpatient maternity care in a primary maternity facility*.

Primary maternity events excluded and assigned XPU W02020 will then go through a decision process to calculate a Relative Value Unit (RVU) needed for the calculation of their funding..

The following flow diagram 5.2.17 outlines the decision process for the calculation of RVUs and is based on the following selection and decision criteria.

Initial Filter

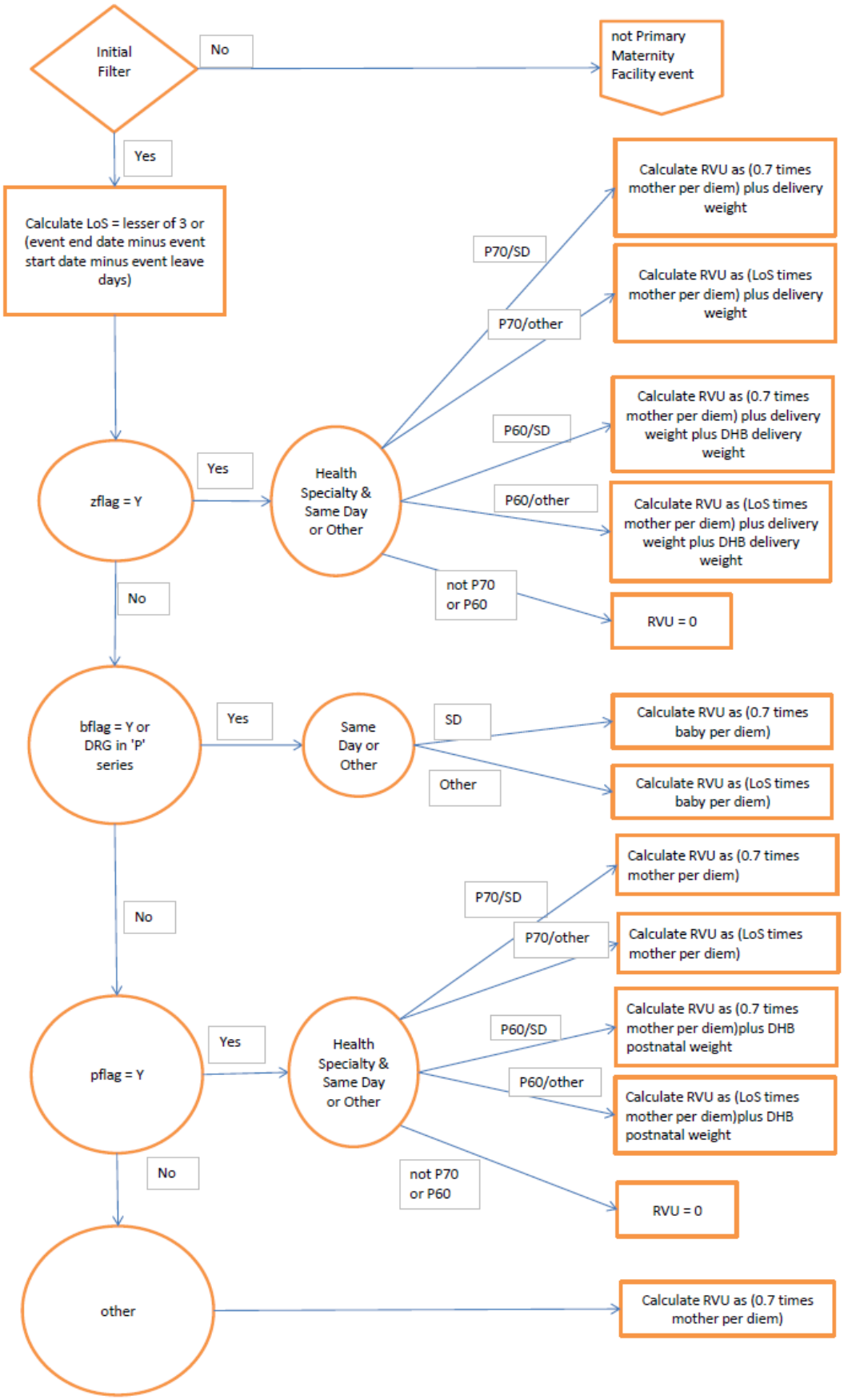
Category	Rule
Facility Check	include record if not in matfac list (5.2.7)
Health Specialty Check	include record if first character = 'P'
Boarder Check	include record if primary diagnosis not Z763 or Z764
DRG check	include record if first character of DRG = 'P' or first three characters in (O01, O02, O04, O60, O61, O64, O66)

Flags

Flag	Description	Rule	Output
Zflag	Identifies delivery on mother's record	Z37 in first three characters of any diagnosis code	Y
bflag	Identifies birth or neonatal care on the baby's record	Z38 in first three characters of any diagnosis code and zflag not = Y	Y
oflag	Identifies complications of delivery	O47 or O60-O75 in first three characters of any diagnosis code	Y
pflag	Identifies postnatal care on mother's record	Z39 in first three characters of any diagnosis code	Y

Refer to Appendix 4 for the Primary Maternity RVUs

5.2.17 Relative Value Unit (RVU) Flow Diagram for Primary Maternity



~~W02007 – Labour and Delivery in a primary facility~~

W02008 – Postnatal care in a primary facility (mother)
W02009 – Postnatal care in a primary facility (baby)
W02010 – Labour, Delivery, and Postnatal in a primary facility (mother)
W02011 –Labour without delivery in a primary maternity facility

Pregnancy and Childbirth primary events are those where the first character of the Health Specialty Code is P, and the facility is not listed in the secondary/tertiary facility table in 5.2.7. These are all excluded from casemix purchasing and will be allocated a non-casemix purchase unit in the W02 range.

Where the Health Specialty Code is one of P61, P71, P41, P42, and P43 (Maternity Services - well newborn or Paediatric Neonatal care) and the facility is not listed in the secondary/tertiary facility table in 5.2.7, then the event will be allocated to the non-casemix purchase unit W02009.

Events where the Health SpecialtyCode is P60 or P70 (Maternity Services - mother [no community LMC] / [with community LMC]) and the facility is not listed in the secondary/tertiary facility table in 5.2.7
AND
Any diagnosis contains Z37*
AND
Length of Stay >= 2
The event will be allocated to the non-casemix purchase unit W02010.

Events where the Health Specialty Code is P60 or P70 (Maternity Services - mother [no community LMC] / [with community LMC]) and the facility is not listed in the secondary/tertiary facility table in 5.2.7
AND
Any diagnosis contains Z37*
AND
Length of Stay < 2
The event will be allocated to the non-casemix purchase unit W02007.

Events where the Health Specialty Code is P60 or P70 (Maternity Services - mother [no community LMC] / [with community LMC]) and the facility is not listed in the secondary/tertiary facility table in 5.2.7
AND
No diagnosis contains Z37*
AND
No diagnosis code contains O47* or (O60* to O75*)
AND AR-DRG is NOT O66Z
The event will be allocated to the non-casemix purchase unit W02008.

Events where the Health Specialty Code is P60 or P70 (Maternity Services - mother [no community LMC] / [with community LMC]) and the facility is not listed in the secondary/tertiary facility table in 5.2.7
AND

*Additional character(s) is/are required to complete the diagnosis code
*Additional character(s) is/are required to complete the diagnosis code

~~No diagnosis contains Z37*~~
~~AND~~
~~(Any diagnosis code contains O47* or (O60* to O75*)~~
~~OR AR-DRG is O66Z~~
~~The event will be allocated to the non-casemix purchase unit W02011~~.

~~All other events where the Health Speciality Code starts with P, and the facility is not listed in the secondary/tertiary facility table in 5.2.7, are excluded.~~

~~5.2.17~~5.2.18 ~~Some~~ Transplants (T0103, T0106, T0111, T0113)

Some organ transplants are not purchased via casemix, namely liver, heart and lung transplants. In what follows, age means age at admission.

The AR-DRGs A01Z *Liver Transplant*, A03Z *Lung or Heart/Lung Transplant*, and A05Z *Heart Transplant* are excluded from casemix funding and non-casemix purchase units allocated as follows:

- A01Z at Starship (facility code 3260 and patient's age <16) has Excluded Purchase Unit (XPU) T0113 *Liver Transplant children*
- A01Z not at Starship (facility code not 3260 OR patient's age >15) has XPU T0111 *Liver Transplant adult*
- A05Z has XPU T0103 *Heart Transplant*
- A03Z has XPU T0106 *Lung Transplant*.

Note that simultaneous pancreas and kidney transplants are included in casemix funding, and are identified as those cases assigned to AR-DRG A09A *Renal Transplant With Pancreas Transplant or With Catastrophic CC* where the event includes a procedure code of 9032400 [981] *Transplantation of pancreas*.

~~5.2.18~~5.2.19 ~~Some~~ Spinal Injuries (S50001, S50002)

Some Spinal Services are excluded as they are not purchased via casemix. Excluded Spinal Services are those with the Health Speciality Code S50 *Spinal Surgery*. Events where the admission type is WN (Waiting List) map to S50002 *Spinal Services non-acute*, and all other admission types map to S50001 *Spinal Services acute cases*.

~~5.2.19~~5.2.20 Surgical Termination of Pregnancy – 2nd Trimester (S30009) – 14 to 25 weeks

Non-acute Surgical Termination of Pregnancy (ToP) events are excluded.

These are tested for by checking that:

The AR-DRG is equal to O05Z *Abortion W OR Procedure*
AND
The event is not acute (i.e. Admission Type not "AC")
AND
The first procedure code is in the range:
3564000, 3564001, 3564003, 3564303 [1265]
AND

The principal diagnosis is in the range (O040-O049 {O04*}) AND **any one** of the other diagnosis codes is in the set {O092, O093}.

5.2.205.2.21 Surgical Termination of Pregnancy – 1st Trimester (S30006) – 1 to 13 weeks

Non-acute Surgical Termination of Pregnancy (ToP) events are excluded.

These are tested for by checking that:

The AR-DRG is equal to O05Z *Abortion W OR Procedure*

AND

The event is not acute (i.e. Admission Type not "AC")

AND

The first procedure code is in the range:
3564000, 3564001, 3564003, 3564303 [1265]

AND

The principal diagnosis is in the range (O040-O049 {O04*}) AND **none** of the other diagnosis codes is in the set {O092, O093}.

5.2.215.2.22 Peritoneal Dialysis (M60005)

AR-DRG L68Z *Peritoneal Dialysis* (principal diagnosis of Z49.2 *Other dialysis)* is excluded from casemix purchasing. Peritoneal dialysis events are matched to the PU M60005 *Renal Medicine – CAPD Training* because generally patients are admitted for training/education purposes only.

5.2.225.2.23 Renal Haemodialysis (M60008)

AR-DRG L61Z *Haemodialysis* (principal diagnosis of Z49.1 *Extracorporeal dialysis)* is excluded from casemix purchasing.

5.2.235.2.24 Sameday Pharmacotherapy for Cancer (MS02009, M30020, M54004)

Sameday cases for Pharmacotherapy for cancer are excluded from casemix purchasing

These are tested for by checking that:

The admission ~~date is the same as the~~ and discharge dates are the same

AND

The principal diagnosis is Z511 *Pharmacotherapy session for neoplasm.*

The non-casemix purchase unit is allocated from Health Specialty Codes as follows:

- M30 Haematology =M30020 *Chemotherapy Haematology (non-paediatric)*
- M34 or M54 Paediatric =M54004 *Chemotherapy Specialist Paediatric Oncology*
- All other specialties =MS02009 *Chemotherapy any Health Specialty.*

5.2.245.2.25 Sameday Radiotherapy (~~M50005~~M50024, M50025)

~~Sameday cases for radiotherapy are tested by checking that:~~

~~The admission date is the same as the discharge date~~

~~AND~~

*Additional character(s) is/are required to complete the diagnosis code

~~The principal diagnosis is Z510 *Radiotherapy session*~~
~~AND~~
~~There are no procedure codes from the following: 1530400, 1531200, 1532000 [1790], 9076401 [1791], 1532706, 1532707 [1792].~~

Sameday cases for radiotherapy are excluded from casemix purchasing.

These are tested by checking that:
The admission and discharge dates are the same
AND
The principal diagnosis is Z510 *Radiotherapy session*
AND
There are no procedure codes from the following: 1530400, 1531200, 1532000 [1790], 9076401 [1791], 1532706, 1532707 [1792].

The XPU is determined as follows:

- If the event has a procedure code in the list (1522400, 1523900, 1525400, 1526900, 1560000, 1560001, 1560002, 1560003, 1560004) the XPU is M50025 *Oncology-Radiotherapy, External Beam Megavoltage (linac)*
- Else the event is assigned XPU M50024 *Oncology-Radiotherapy, External Beam Orthovoltage.*

~~5.2.25~~5.2.26 Note on Anaesthesia Coding

Anaesthesia coding in ICD-10-AM 6th~~th~~ Edition includes a large number of procedure codes that are in the block [1910] *Cerebral anaesthesia*. The following codes are either included in or referred to in each of the exclusions 5.2.27~~6~~ to 5.2.29~~8~~, 5.2.31~~0~~, 5.2.32~~1~~, 5.2.34~~3~~, and 5.2.35~~4~~. We will refer to these as *block [1910] codes*. Block [1910] includes general anaesthesia and sedation.

General anaesthesia codes:
9251410, 9251419, 9251420, 9251429, 9251430, 9251439, 9251440, 9251449, 9251450, 9251459, 9251469, 9251490, 9251499.
Sedation codes:
9251510, 9251519, 9251520, 9251529, 9251530, 9251539, 9251540, 9251549, 9251550, 9251559, 9251569, 9251590, 9251599, all [1910].

Where reference is made to anaesthesia codes not from block [1910] this refers to anaesthesia codes from block [1909] *Conduction anaesthesia* where the first five digits come from the set:

- 92508 *Neuraxial block*
- 92509 *Regional block, nerve of head or neck*
- 92510 *Regional block, nerve of trunk*
- 92511 *Regional block, nerve of upper limb*
- 92512 *Regional block, nerve of lower limb*
- 92519 *Intravenous regional anaesthesia*

Note:
Anaesthesia code 92513 *Infiltration of local anaesthesia* from block [1909] has been omitted from the list above as there is no requirement to code local anaesthesia (LA).

Analgesia/anaesthesia codes from block [1333] *Analgesia and anaesthesia during labour and delivery procedure* only relate to the context of labour and delivery and, therefore are also excluded.

~~5.2.26~~5.2.27 Lithotripsy (S70006)

Some same day Lithotripsy events are excluded from casemix purchasing.

These events are tested for by checking:

That the admission and discharge dates are the same

AND

That the event is non-acute (i.e. Admission Type not "AC")

AND

That the first procedure code is in the range:
(9095600, 9095700 [962], 3654600 [1126], 9219900 [1880])

AND

That the second procedure code is in the range:
(9095600, 9095700 [962], 3654600 [1126], 9219900 [1880], block [1910] codes, blank)

AND

That the third procedure code is in the range:
(9095600, 9095700 [962], 3654600 [1126], 9219900 [1880], block [1910] codes, blank).

~~5.2.27~~5.2.28 Colposcopies (NCSP-10, NCSP-20)[5]

Some sameday Colposcopy events are excluded from casemix purchasing and allocated to NCSP-10 *Colposcopy assessments* or NCSP-20 *Colposcopy directed treatment*.

These events are tested for by checking:

That the admission and discharge dates are the same

AND

The patient's age is greater than 15 years old

AND

That the event is non-acute (i.e. Admission Type not "AC")

AND

That the first procedure code is in the range:
(3562000 [1264], 3553902, 3560800, 3560801, 3564600, 3564700 [1275], 3560802, 3561100, 3561800, 3561801 [1276], 3561803 [1278], 3553904, 3561400 [1279], 3553903 [1282], 3561500 [1291])

AND

That the second procedure code is in the range:
(3562000 [1264], 3553902, 3560800, 3560801, 3564600, 3564700 [1275], 3560802, 3561100, 3561800, 3561801 [1276], 3561803 [1278], 3553904 [1279], 3561400 [1279], 3553903 [1282], 3561500 [1291], block [1910] codes, blank)

AND

That the third procedure code is in the range: (block [1910] codes, blank).

[5]NCSP-20 is used interchangeably with NCSP20. This formatting difference will be fixed in the NMDS and NNPAC as soon as practical.

Rules for allocating the non casemix purchase unit are as advised by the National Screening Unit (NSU). The non casemix purchase unit is allocated using the following rules in the stated order:

If any one of the procedure codes is in the range:
(3561800, 3561801 [1276], 3553902, 3560800, 3560801, 3564600, 3564700 [1275] and 3561100 [1276], assign to NCSP-20.

The remaining events are assigned to NCSP-10.

5.2.285.2.29 Cystoscopies (MS02004)

Some same day Cystoscopies events are excluded from casemix purchasing.

These events are tested for by checking:

That the admission and discharge dates are the same
AND
That the event is non-acute (i.e. Admission Type not "AC")
AND
The patient's age is greater than 15 years old
AND
That the first procedure code is either any code from 3686000, 3686001, 3680300 [1065], 3681800, 3681801, 3682400, 3682401 [1066], 3682101, 3682103, 3683301 [1067], 3680302, 3680602, 3685700 [1068], or is in the range: (3680601 [1074], 3680301 [1086], 3681200,3681201 [1089], 3684001, 3684502,3684503 [1096], 3684000, 3684500, 3684501 [1097], 3683600 [1098], 3684002, 3684504, 3684505 [1100], 3682700 [1108], 3731500 [1112], 3681501, 3731801 [1116])
AND
That the second procedure code is either any code from 3686000, 3686001, 3680300 [1065], 3681800, 3681801, 3682400, 3682401 [1066], 3682101, 3682103, 3683301 [1067], 3680302, 3680602, 3685700 [1068], or is in the range: (3680601 [1074], 3680301 [1086], 3681200, 3681201 [1089], 3684001, 3684502, 3684503, [1096], 3684000, 3684500, 3684501 [1097], 3683600 [1098], 3684002, 3684504, 3684505 [1100], 3682700 [1108], 3731500 [1112], 3681501, 3731801 [1116], block [1910] codes, blank)
AND
That the third procedure code is in the range: (block [1910] codes, blank).

5.2.295.2.30 Gastroenterology Procedure Codes used to Identify Excluded Events

The purpose of the next two clauses is to describe the exclusion rules for the three types of general gastroenterology 'scope' procedures known collectively as ERCP, Colonoscopy, and Gastroscopy. The structure below is ~~different from that used in previous years of this~~ the same as the WIESNZ12 Casemix Framework Document. ~~as it now~~ It restricts the number of procedure codes present to at most three, and is applied in a way that is independent of the order in which procedures are coded.

Collectively, we define the **ERCP block of procedure codes** to include ERCP (*Endoscopic Retrograde Cholangiopancreatography*), ERC (*Endoscopic Retrograde*

Cholangiography), and ERP (*Endoscopic Retrograde Pancreatography*). The procedure codes are:

3044200, 3048400, 3048401 [957], 3045201, 3049100 [958], 3045202 [959], 3045101, 3045102, 3045103 [960], 3048500, 3048501 [963], 3045200, 3049400 [971], 3048402 [974], 3049102, 3049103, 3049104 [975]

and is referred to as the *ERCP block*.

Similarly the **Colonoscopy block of procedure codes** are:

3207500 [904], 3208400, 3209000, 3208402, 3209002 [905], 9029500, 9029501, 9029502 [906], 9030800 [908], 3207501, 3207800, 3208100 [910], 3208401, 3208700, 3209001, 3209300 [911], 3209400 [917], 9031200, 9031201 [931], 3209900, 3210500, 3210800, 9034100, 3210300 [933]

and is referred to as the *Colon block*.

The **Gastroscopy block of procedure codes** are:

3047303, 4181600 [850], 3047600, 3047601, 3047806, 3047809 [851], 3047810, 4182500 [852], 3047602, 3047811, 3047812, 3047900 [856], 3047304, 3047813, 4182200, 9029700 [861], 3047807 [870], 3047603 [874], 9029701 [880], 3047500, 3047501 [882], 3209500 [891], 1182000, 3047300, 3047305, 3047307, 3047308[1005], 3047801, 3047802, 3047803, 3047815, 3047816, 3047817 [1007], 3047301, 3047306, 3047804, 3047818 [1008])

and is referred to as the *Gastro block*.

These code blocks are used to identify the Excluded Purchase Unit (XPU) that will be assigned to a casemix-excluded event. To state the rule for excluding these procedures in a way that is independent of the coding order requires the aggregated gastroenterology code block which concatenates the ERCP, Colon and Gastro code blocks as defined above.

The **Aggregated Gastroenterology Code Block** is:

Oesophagus: 3047303, 4181600 [850], 3047600, 3047601, 3047806, 3047809 [851], 3047810, 4182500 [852], 3047602, 3047811, 3047812, 3047900 [856], 3047304, 3047813, 4182200, 9029700 [861]
Stomach: 3047807 [870], 3047603 [874], 9029701 [880], 3047500, 3047501 [882]
Small Intestine: 3209500 [891]
Large Intestine: 3207500 [904], 3208400, 3209000, 3208402, 3209002 [905], 9029500, 9029501, 9029502 [906], 9030800 [908], 3207501, 3207800, 3208100 [910], 3208401, 3208700, 3209001, 3209300 [911], 3209400 [917]
Rectum and Anus: 9031200, 9031201 [931], 3209900, 3210500, 3210800, 9034100 3210300 [933]
Gallbladder and Biliary Tract: 3044200, 3048400, 3048401 [957], 3045201, 3049100, [958], 3045202 [959], 3045101, 3045102, 3045103 [960], 3048500, 3048501 [963], 3045200, 3049400 [971]

Pancreas: 3048402 [974], 3049102, 3049103, 3049104 [975]
Other Sites of Digestive System: 1182000, 3047300, 3047305, 3047307, 3047308 [1005], 3047801, 3047802, 3047803, 3047815, 3047816, 3047817 [1007], 3047301, 3047306, 3047804, 3047818 [1008].

For ease of reference in the next sections we shall refer to this as the *Agg_Gastro block.*

5.2.305.2.31 Exclusion Rules for Some Gastroenterology procedures (MS02006, M25008, MS02014, MS02007, MS02005)

Some same day ERCP, Colonoscopy and Gastroscopy events are excluded from casemix purchasing.

These events are tested for by checking:

That the admission and discharge dates are the same
AND
That the event is non-acute (i.e. Admission Type not "AC")
AND
The patient's age is greater than 15 years old
AND
There are at most three non-blank procedure codes
AND
At least one of the first three procedure codes is from the *Agg_Gastro block*
AND
That the first procedure code is in the range: (*Agg_Gastro block*, block [1910] codes)
AND
That the second procedure code is in the range: (*Agg_Gastro block*, block [1910] codes, blank)
AND
That the third procedure code is in the range: (*Agg_Gastro block*, block [1910] codes, blank).

Events excluded from casemix funding by this rule are assigned an XPU in the following order:

- If procedure code 1182000 [1005] (*Panendoscopy via camera capsule)* is in one of the first three procedure codes,then the XPU is M25008 *Capsule Endoscopy*; else
- If a procedure code from the *ERCP block* is in one of the first three procedure codes, then the XPU is MS02006 *ERCP*; else
- If there is at least one code from each of the *Colon block* and the *Gastro block* among the first three procedure codes then the XPU is MS02014 *Colonoscopy/Gastroscopy* for Combined Colonoscopy-Gastroscopy; else
- If the only *Agg_Gastro block* procedure code(s) in the first three procedure codes is/are from the *Colon block* then the XPU is MS02007 *Colonoscopy*; else
- If the only *Agg_Gastro block* procedure code(s) in the first three procedure codes is/are from the *Gastro block* then the XPU is MS02005 *Gastroscopy*.

5.2.315.2.32 Bronchoscopies (MS02003)

Some same day Bronchoscopies events are excluded from casemix purchasing.

These events are tested for by checking:

That the admission and discharge dates are the same

AND

That the event is non-acute (i.e. Admission Type not "AC")

AND

The patient's age is greater than 15 years old

AND

That the first procedure code is in the range: (4176403, 4184900, 4185500 [520], 4176404 [532], 4188900, 4188901, 4189800 [543], 4189200, 4189500, 4189801 [544])

AND

That the second procedure code is in the range: (4176403, 4184900, 4185500 [520], 4176404 [532], 4188900, 4188901, 4189800 [543], 4189200, 4189500, 4189801 [544], block [1910] codes, blank)

AND

That the third procedure code is in the range: (block [1910] codes, blank).

5.2.325.2.33 Same Day Blood Transfusions (MS02001, M30014, M50009, M00006)

Some same day Blood Transfusion events are excluded from casemix purchasing.

These events are tested for by checking:

That the admission and discharge dates are the same

AND

That the event is non-acute (i.e. Admission Type not "AC")

AND

The first procedure code is in the range: (1370601, 1370602, 1370603, 9206000 [1893])

AND

The second procedure is in the range: (1370601, 1370602, 1370603, 9206000 [1893], blank)

AND

The third procedure is blank.

If HSCealth Specialty Code= M30 then PU = M30014 *Haematology*
If HSCealth Specialty Code= M50 then PU = M50009 *Oncology*
If HSCealth Specialty Code=M00 then PU = M00006 *General Medicine*
Else for any other HSCealth Specialty Code then PU = MS02001 *Blood Transfusions – Any Health Specialty*

5.2.335.2.34 Ophthalmology Injections (S40004 Minor Eye Procedures)

This rule is for injections of a therapeutic agent (currently most likely to be Avastin) into the posterior chamber of eye. These events will be assigned to a NZDRG with its own costweight reflecting the outpatient price for such events, see 5.2.375.2.38.

Same day Ophthalmology Injection events are excluded from casemix purchasing.

These events are tested for by checking:

That the admission and discharge dates are the same

AND

That the event is non-acute (i.e. Admission Type not "AC")

AND

The event falls into DRG C03Z *Retinal Procedures*

AND

There are at most three non-blank procedure codes

AND

The first procedure code is 4274003 [209] *Administration of therapeutic agent into posterior chamber*

AND

The second procedure code is 4274003 [209] OR is anaesthesia not from block [1910] OR is blank

AND

The third procedure is anaesthesia not from block[1910]OR is blank.

~~5.2.34~~5.2.35 Skin Lesion Procedures (Removal) (MS02016)

Same day skin lesion excision events are excluded from casemix purchasing. These events will be assigned to an NZDRG with its own costweight reflecting the outpatient price for such events, see 5.2.38.

The skin lesion procedure codes included in the rule are listed below and are referred to as the 'skin lesion procedure list'.

3007102 [232], 3007528 [303], 3007523 [402], 4503000 [748], 3019500, 3019501, 3019504, 3019505 [1612], 3007100 [1618], 3018600, 3018601, 3018900, 3018901 [1619], 3120500, 3123000, 3123001, 3123002, 3123003, 3123004, 3123500, 3123501, 3123502, 3123503, 3123504 [1620].

These events are tested for by checking:

That the admission and discharge dates are the same

AND

That the event is non-acute (i.e. Admission Type not "AC")

AND

There are at most four non-blank procedure codes

AND

The first procedure code is in the skin lesion procedure list

AND

The second procedure code is in the skin lesion procedure list OR is anaesthesia not from block [1910] OR is blank

AND

The third procedure code is in the skin lesion procedure list OR is anaesthesia not from block [1910] OR is blank

AND

The fourth procedure code is anaesthesia not from block [1910] OR is blank

~~5.2.35~~5.2.36 Designated Hospital for Casemix Revenue[6]

A range of facilities, listed here, has been identified as valid to provide services at the level required for casemix-funded events. All other facilities historically designated as 'rural' or 'private', are excluded. Note that with DHB sub-contracting the list of included facilities may require updating periodically. Only NMDS events with a facility from the following list in combination with an agency from the table in 5.2.2 will be allocated a casemix-funded purchase unit. If an event includes a facility code which is not listed below it will be excluded from casemix but may be included in non-casemix purchase unit allocation. For this reason the Designated Hospital exclusion is the last exclusion.

Facility Code	Facility Name
0314	Primecare Eye Centre
3111	Ashburton
3214	Middlemore
3215	Northshore
3216	Waitakere
3250	Manukau Super Clinic
3260	Auckland City Hospital
3311	Whakatane
3411	Gisborne
3611	Napier
3612	Hastings Memorial
3811	Wairau
3911	Nelson
4011	Christchurch
4013	Burwood
4014	Christchurch Womens
4111	Whangarei Area Hospital
4112	Kaitaia
4113	Dargaville
4114	Bay of Islands
4211	Dunedin
~~4212~~	~~Wakari~~
4311	Palmerston North
4313	Horowhenua
4411	Timaru
4511	Southland
4711	Taranaki Base
4712	Hawera
4811	Taumarunui
4911	Tauranga
5011	Thames
5311	Waikato
5312	Rotorua
5313	TeKuiti

[6]This is a list of the WIES eligible facility codes as at October 2012~~1 July 2011~~. Facility codes that are~~have been~~ added during the year (and are valid for the whole year) ~~are~~will be listed at the end of this document (see 5.5)

Facility Code	Facility Name
5323	Tokoroa
5329	Taupo General
5511	Wairarapa – previously Masterton
5711	Wanganui
5811	Wellington
5812	Hutt
~~5814~~	~~Porirua~~
5816	Kenepuru
~~5818~~	~~Paraparaumu~~
~~5819~~	~~Puketiro~~
~~5820~~	~~Te Whare O Rangituhi~~
5911	Grey Base Hospital
8024	Quay Park Surgical Centre Auckland
8206	Southern Cross North Harbour
8218	Southern Cross Brightside
8233	Mercy Auckland
8255	Gillies Hospital (was Southern Cross Auckland)
8268	Anglesea Braemar Hospital
8270	Southern Cross Hamilton
8280	Grace Hospital (was Norfolk Southern Cross)
8281	Southern Cross Rotorua
8284	Chelsea Hospital Gisborne
8292	Royston
8297	Southern Cross New Plymouth
~~8303~~	~~Belverdale Hospital~~
8313	Aorangi (was Mercy)
8314	Southern Cross Palmerston North
8331	Bowen
8351	Manuka Street Trust Hospital Nelson
8366	St Georges
8377	Southern Cross Trust Christchurch
8383	Bidwell Trust
8394	Mercy Hospital Dunedin
8405	Southern Cross Invercargill
8420	Southern Cross Tauranga
8432	Wakefield
8459	Auckland Surgical Centre
8462	Boulcott Clinic
8471	Southern Cross Wellington
8473	Braemar Hospital
8477	Lakes Care Surgical Hospital
8482	Royal Navy Hospital
8487	Churchill Trust
8495	Eye Institute
8499	Auckland Eye Hospital
8507	Manor Park Hospital
8549	Endoscopy Auckland

Facility Code	Facility Name
8579	Park St Eye Clinic
8580	Oxford Day Clinic
8595	Ascot Hospital
8630	Queen Elizabeth Hospital Rotorua
8644	Kensington Hospital
8656	Mobile Surgical Bus
8714	Thorndon Eye Clinic
8715	Wellington Eye Clinic
8716	The Rutherford Clinic
8718	Anglesea Procedure Centre
8719	Harley Chambers
8720	Southern Eye Specialists
8721	Dr Ian Dallison's Rooms
8722	Auckland City Surgical Services
8757	The Mater Hospital Sydney
8774	Skin Institute Parnell
8784	Scott Clinic
8785	Ormiston Hospital
8791	Queen Elizabeth Hospital Southern Cross
8792	Urology 161
8805	Cardinal Point Specialist Centre
8861	Otago Dental School
8867	St Georges Radiology
8912	Bridgewater Day Surgery
8915	Retina Specialists
8916	Milford Eye Clinic
8920	Surgery on Shakespeare
8921	Mercy Endoscopy
8924	Oncology Surgery
8929	Grace Southern Cross Hospital Tauranga
8971	Eye Specialist Ltd Whangarei
8977	St Marks Road Surgical Centre
8979	Rotorua Eye Clinic

Retired Facility Codes

These facility codes have been retired but are noted here for historical reasons. The five facilities (4212, 5814, 5818, 5819, 5820) were removed from the casemix eligible facilities list as they provide no casemix- funded activity.

Facility Code	Facility Name
3211	Auckland
3212	Greenlane
3213	National Women's
3239	Starship Hospital
4212	Wakari
5814	Porirua

5818	Paraparaumu
5819	Puketiro
5820	TeWhare O Rangituhi
8303	Belverdale Hospital
8422	Our Lady's Home of Compassion
8611	Northern Surgical Centre

5.2.365.2.37 DRG Mapping for Excluded Ophthalmology Injections (S40004)
Events excluded under section 5.2.34 will be assigned their own NZDRG and cost weight as follows:

If XPU = S40004 then NZdrg60x = C03W *Same Day Ophthalmology Injections of Therapeutic Agents* and the cost weight is 0.04787.

5.2.375.2.38 DRG Mapping for Excluded Skin Lesion Procedures (MS02016)
Events excluded under section 5.2.35 will be assigned their own NZDRG and cost weight as follows:

If XPU = MS02016 then NZdrg60x = J11W *Same Day Skin Lesion Procedures* and the cost weight is 0.1085.

5.3 Mapping of Health Speciality Codes to Casemix Purchase Units (PUs)

DHB casemix Purchase Units are derived from a mapping of Health Speciality Codes. This mapping only applies for included events, i.e. any events excluded from casemix purchasing should not be given a casemix PU code. Note that the Information Group SAS code gives excluded events a PU code of "EXCLU" rather than blank.
The following Health Speciality Codes are initially remapped to other Health Service Speciality Codes. Many of these Health Specialty Codes have been retired from use in the NMDS but are still included here for completeness. In particular, retired pregnancy and childbirth Health Speciality Codes which could be mapped to any of the new P range (P60, P61 or P70, P71) have been arbitrarily mapped to (P60 and P61).

```
'M01' , 'M02' , 'M03'          = 'M00'
'M06' , 'M07' , 'G01'          = 'M05'
'M11' , 'M12' , 'M13'          = 'M10'
'M16' , 'M17' , 'M18' , 'M19' = 'M15'
'M21' , 'M22' , 'M23'          = 'M20'
'M26' , 'M27' , 'M28'          = 'M25'
'M31' , 'M32' , 'M33'          = 'M30'
'M36' , 'M37' , 'M38'          = 'M35'
'M41' , 'M42' , 'M43'          = 'M40'
'M46' , 'M47' , 'M48'          = 'M45'
'M51' , 'M52' , 'M53'          = 'M50'
'M56' , 'M57' , 'M58'          = 'M55'
'M61' , 'M62' , 'M63'          = 'M60'
'M66' , 'M67' , 'M68'          = 'M65'
'M71' , 'M72' , 'M73'          = 'M70'
'M76' , 'M77' , 'M78'          = 'M75'
'M81' , 'M82' , 'M83'          = 'M80'
```

```
'M87' , 'M88'                = 'M85'
'M91' , 'M92' , 'M93'        = 'M90'
'P00' , 'P10' , 'P20'        = 'P60'
'P30'                        = 'P61'
'S01' , 'S02' , 'S03'        = 'S00'
'S06' , 'S07' ,
'S11' , 'S12' , 'S13'        = 'S10'
'S16' , 'S17' , 'S18'        = 'S15'
'S21' , 'S22' , 'S23'        = 'S20'
'S26' , 'S27' , 'S28'        = 'S25'
'S31' , 'S32' , 'S33'        = 'S30'
'S36' , 'S37' , 'S38'        = 'S35'
'S41' , 'S42' , 'S43'        = 'S40'
'S46' , 'S47' , 'S48'        = 'S45'
'S51' , 'S52' , 'S53'        = 'S50'
'S55' , 'S56' , 'S57'        = 'S59'
'S61' , 'S62' , 'S63'        = 'S60'
'S66' , 'S67' , 'S68'        = 'S65'
'S71' , 'S72' , 'S73'        = 'S70'
'S76' , 'S77' , 'S78'        = 'S75'
other                        = '???';
```

And from there mapped to the following purchase units:

```
'S20'                                              = 'D01.01'
'S50'                                              = 'EXCLU'
'M00','M08','M85','M86','M89'                      = 'M00.01'
'M05'                                              = 'M05.01'
'M10'                                              = 'M10.01'
'M14'                                              = 'M10.05'
'M15'                                              = 'M15.01'
'M20','M95','M96'                                  = 'M20.01'
'M25'                                              = 'M25.01'
'M30'                                              = 'M30.01'
'M34'                                              = 'M34.01'
'M40','M75'                                        = 'M40.01'
'M45'                                              = 'M45.01'
'M49'                                              = 'M49.01'
'M50','M90'                                        = 'M50.01'
'M54','M94'                                        = 'M54.01'
'M24','M29','M39','M44','M55','M59',
'M64','M69','M74','M79','M84','M97','M98'          = 'M55.01'
'M60'                                              = 'M60.01'
'M65'                                              = 'M65.01'
'M35','M70'                                        = 'M70.01'
'M80'                                              = 'M80.01'
'S00','S10'                                        = 'S00.01'
'S05','S08'                                        = 'S05.01'
'S15','S19'                                        = 'S15.01'
'S25'                                              = 'S25.01'
'S30'                                              = 'S30.01'
'S35'                                              = 'S35.01'
'S40'                                              = 'S40.01'
'S45'                                              = 'S45.01'
'S58','S59'                                        = 'S55.01'
'S24','S60','S65'                                  = 'S60.01'
'S70'                                              = 'S70.01'
'S75'                                              = 'S75.01'
'P41','P42','P43'                                  = 'W06.03'
'P00','P10','P20','P30','P60','P61','P70','P71'    = 'W10.01'
Other                                                = 'EXCLU';
```

Each PU code is then described:

```
'D01.01' = 'Inpatient Dental treatment (DRGs)'
'M00.01' = 'General Internal Medical Services – Inpatient Services (DRGs)'
'M05.01' = 'Emergency Medicine – Inpatient Services (DRGs)'
'M10.01' = 'Cardiology - Inpatient Services (DRGs)'
'M10.05' = 'Specialist Paediatric Cardiac - Inpatient Services (DRGs)'
'M15.01' = 'Dermatology - Inpatient Services (DRGs)'
'M20.01' = 'Endocrinology & Diabetic - Inpatient Services (DRGs)'
'M25.01' = 'Gastroenterology - Inpatient Services (DRGs)'
'M30.01' = 'Haematology - Inpatient Services (DRGs)'
'M34.01' = 'Specialist Paediatric Haematology – Inpatient Services (DRGs)'
'M40.01' = 'Infectious Diseases (incl Venereology) – Inpatient Services
(DRGs)'
'M45.01' = 'Neurology - Inpatient Services (DRGs)'
'M49.01' = 'Specialist Paediatric Neurology Inpatient Services (DRGs)'
'M50.01' = 'Oncology - Inpatient Services (DRGs)'
'M54.01' = 'Specialist Paediatric Oncology - Inpatient Services (DRGs)'
'M55.01' = 'Paediatric Medical - Inpatient Services (DRGs)'
'M60.01' = 'Renal Medicine - Inpatient Services (DRGs)'
'M65.01' = 'Respiratory - Inpatient Services (DRGs)'
'M70.01' = 'Rheumatology (incl Immunology) - Inpatient Services (DRGs)'
'M80.01' = 'Palliative Care - Inpatient Services (DRGs)'
'S00.01' = 'General Surgery - Inpatient Services (DRGs)'
'S05.01' = 'Anaesthesiology - Inpatient Services (DRGs)'
'S15.01' = 'Cardiothoracic - Inpatient Services (DRGs)'
'S25.01' = 'Ear, Nose and Throat - Inpatient Services (DRGs)'
'S30.01' = 'Gynaecology - Inpatient Services (DRGs)'
'S35.01' = 'Neurosurgery - Inpatient Services (DRGs)'
'S40.01' = 'Ophthalmology - Inpatient Services (DRGs)'
'S45.01' = 'Orthopaedics - Inpatient Services (DRGs)'
'S55.01' = 'Paediatric Surgical Services (DRGs)'
'S60.01' = 'Plastic & Burns - Inpatient Services (DRGs)'
'S70.01' = 'Urology - Inpatient Services (DRGs)'
'S75.01' = 'Vascular Surgery - Inpatient Services (DRGs)'
'W10.01' = 'Maternity Inpatient (DRGs)'
'W06.03' = 'Neonatal Inpatient (DRGs)'
other    = 'Not a DRG casemix Purchase Unit';
```

5.4 Identifying DHB Casemix-Funded Events for Inter-DHB Inpatient Flow Calculations

The first casemix funding exclusion rules were intended to identify casemix events funded by DHB funding only. This concept has been expanded to include similar events funded directly by the Ministry of Health. As a result, not all casemix-funded events purchased or provided by MoH and DHBs identified in this document should be included in extracts intended to calculate inter DHB casemix-funded flows. To identify these flows for wash-up of 20132/143 actual volumes:

The Casemix Purchase Unit assigned to an event can be any PU except EXCLU;

AND

The Funding Agency Code is a valid casemix agency as shown in section 5.2.2, but is neither 4137 Otago Dental School nor 8559 (Venturo) nor 8630 (Queen Elizabeth Hospital) nor 8656 (Mobile Surgical Bus)

AND

The Purchaser Code is either 35 DHB *funded event* or 20 *Overseas resident eligible* for DHB funded health care.

See note on historical purchaser exclusions in section 5.2.2.

5.5 New Facility Codes Added During 20132/20143

Should new facility codes be approved to be added to the WIES facilities eligible list during 20132/143 then they will be documented in this section.

DHBs are reminded that events loaded into the NMDS against these facilities that occur prior to their eligibility will be excluded from casemix and may need to be re-submitted for them to be included.

Appendix 1: Table of 132/143 FY DRG Cost Weights and Associated Variables for Calculating WIESNZ12WIESNZ13

This appendix contains some notes on the cost weight schedule for use with AR-DRG v6.0AR-DRG v6.0x as adjusted for use in New Zealand.

Variable names translation
Sd {Same day costweight}
Od {One day costweight}
Lo_pd {Low outlier costweight per diem}
Md_in {Multiday inlier costweight}
Ho_pd {High outlier per diem costweight}
Lb {Low boundary point for LOS}
Hb {High boundary point for LOS}
Alos {Average inlier LOS}

Notes on the WIESNZ12WIESNZ13 cost weight schedule
The development of these cost weights is based on casemix-funded events in the National Minimum Data Set (NMDS). In any given year there can be instances of DRGs that are not used or do not appear in the casemix set as they are excluded from casemix funding. Or there may have been no same day cases and that cost weight is missing from the results. In order to have a complete DRG costweight schedule in Appendix 1 below, for some DRGs two years of data was considered for determining the inlier boundary points when the number of cases per annum was small.

Users of this weight schedule should note that the following DRGs are non-casemix and are included only for completeness: 960Z, 961Z, 963Z, A01Z, A03Z, A05Z, L61Z and L68Z. The weights shown have not been developed in the same way as for casemix-funded events and should not be viewed as a valid estimate of resource costs.

WIESNZ12WIESNZ13 for use with AR-DRG v6.0x as adapted for New Zealand

Appendix 2: SAS Code to Calculate ~~WIESNZ12~~WIESNZ13 and Assign PUs

```
** SAS program to calculate ~~wiesnz12~~WIESNZ13 costweight values **;
** Input drg is ~~AR-DRG v6.0~~AR-DRGv6.0x and clinical codes are ICD10
V6 **;
** Program now requires opdates opdate01-opdate30 **;
** KLM 09/05/2013 **;
```

WIESNZ13 SAS 9 May 2013.docx

Appendix 3: Casemix Cost Weights Project Group Membership

Members of the project team during 20121 were:

Name	Affiliation
Michael Rains	DHB Shared Services
Kieran Reilly	Ministry of Health
Angela Pidd	Ministry of Health
Keri McArthur	Ministry of Health
Tracy Thompson	Ministry of Health
Mark Jackson	Ministry of Health
Pirom Tawngdee	Capital & Coast DHB
Justine Tringham	Auckland DHB
Chris Hoar	Canterbury DHB
Tina Stacey	Waikato DHB
Phil Gibbs	Nelson Marlborough DHB
~~Shelly Wadhwa~~	~~Waikato DHB~~
Dianne Wilson	Counties Manukau DHB
Andreea Dumitru	Capital & Coast DHB

Appendix 4: New Zealand Casemix History

The following table summarises the New Zealand casemix funding environment since 1998. This includes the clinical coding classification (ICD), DRG set, cost weight version as designated in New Zealand, and unit prices for casemix-purchased events.

ICD Editions and WIES Versions

Implementation Year	Coding System	DRG List	Cost Weights
1998/99	ICD-9-CMA-II Australian 2nd clinical modification to ICD-9	AN-DRG 3.1	WIES 5, with no adjustment from the Victorian set.
1999/00	ICD-10-AM 1st Edition	AN-DRG 3.1 Coding back-mapped to ICD 9 and grouped to this DRG set.	As for 1998/99
2000/01	ICD-10-AM 1st Edition	AN-DRG 3.1 Coding back-mapped to ICD 9 and grouped to this DRG set.	WIES 5a, adapted to include NZ costs for blood and pre-admission clinics.
2001/02	ICD-10-AM 2nd Edition	AR-DRG 4.1	WIES 8a, with NZ LOS profile and NZ costs as for 2000/01. Where NZ ALOS was significantly different from Victorian ALOS, an adjustment to nursing/ward costs was made.
2002/03	ICD-10-AM 2nd Edition	AR-DRG 4.2	WIES 8b
2003/04	ICD-10-AM 2nd Edition	AR-DRG 4.2	WIES 8c
2004/05	ICD-10-AM 3rd Edition	AR-DRG 4.2, coding back-mapped to ICD 10-AM 2nd Edition.	WIES 8c as for 2003/04
2005/06, 2006/07, and 2007/08	ICD-10-AM 3rd Edition	AR-DRG 5.0	WIES 11, with NZ LOS profile, NZ costs for blood and pre-admission clinics, also for some costs where jurisdictional differences were identified – mainly pharmaceutical costs

Implementation Year	Coding System	DRG List	Cost Weights
			and stent / implant / prostheses utilisation. Other costs from Victorian data were those associated to the NZ morbidity profile.
2008/09	ICD-10-AM 6th Edition	AR-DRG 5.0, as modified for use in New Zealand, coding back-mapped to ICD-10-AM 3rd Edition.	WIESNZ08, which uses Victoria's WIES model for the weight development, but only New Zealand data elements, in particular NZ-only cost data.
2009/10	ICD-10-AM 6th Edition	AR-DRG 5.0 as modified for use in New Zealand, coding back mapped to ICD-10-AM 3rd Edition.	WIESNZ09
2010/11	ICD-10-AM 6th Edition	AR-DRG 5.0 as modified for use in New Zealand, coding back mapped to ICD-10-AM 3rd Edition.	WIESNZ10, same as WIESNZ09 except that F42A and F42B weights have been adjusted downwards to accommodate the EPS co-payment.
2011/12	ICD-10-AM 6th Edition	AR-DRG 6.0	WIESNZ11
2012/13	ICD-10-AM 6th Edition	AR-DRG 6.0	WIESNZ12, same as WIESNZ11 except for changes to C03W, F10B, J11W, and O01B.
2013/14	ICD-10-AM 6th Edition	AR-DRG 6.0x, as modified for use in New Zealand.	WIESNZ13

Note that the above table states the official Australian DRG set used as the basis for the Victorian implementation. New Zealand's implementation preserved the Victorian adjustments to the DRG sets and these are identified in the casemix framework document for each year. Though there were some other splits in the first two years listed, the splits were limited to bone marrow transplants and dialysis until 2008/09, when new splits for carotid stenting, some ear procedures and obesity procedures were introduced. Note that dialysis is not funded by casemix, but the split provided a way to directly identify the peritoneal provision. With AR-DRG v6.0AR-DRG v6.0x all splits implemented for the previous DRG set have been incorporated. DRG mappings for the current year are identified in this casemix framework document, see 4.2 and 4.3.

Unit Prices used in Purchasing

In the following table, Neonatal refers to all events assigned a Purchase Unit of W06.03, and Medical & Surgical covers all other Purchase Units for events included in casemix funding, including secondary and tertiary Maternity. Primary maternity events are partly funded by a separate RVU mechanism from 1 July 2013.

From 2002/03, these have been the inter-district flow (IDF) prices, thus in some cases there may be some variation for local provision. Note also that with effect from 2006/07 a common unit price has been set for medical-surgical and for neonatal casemix events. From 1 July 2009 secondary maternity events became casemix funded at the same unit price as for medical and surgical events.

Financial Year	Medical & Surgical	Neonatal	Primary Maternity
1998/99	2,433.62	None	
1999/00	2,399.22	2,761.48	
2000/01	2,487.16	2,732.47	
2001/02	2,479.01	2,677.23	
2002/03	2,617.72	2,827.03	
2003/04	2,728.55	2.946.72	
2004/05	2,854.88	3,024.37	
2005/06	2,949.09	3,124.17	
2006/07	3,151.01	3,151.01	
2007/08	3,740.38	3,740.38	
2008/09	3,985.32	3,985.32	
2009/10	4,315.48	4,315.48	
2010/11	4,410.38	4,410.38	
2011/12	4,567.49	4,567.49	
2012/13	4,614.36	4,614.36	
2013/14	4,655.43	4,655.43	TBC

Primary Maternity RVUs

In the table below are the RVUs used in the calculation of RVU weights for events assigned XPU W02020 *Inpatient maternity care in a primary maternity facility.*

Component	Weight
Labour and Delivery Fee	1
DHB-funded Lead Midwifery Care Fee (delivery)	0.565
DHB-funded Lead Midwifery Care Fee (postnatal stay only)	0.259
Per Diem - Baby	0.633
Per Diem - Mother	0.542
Same Day - Baby	0.443
Same Day - Mother	0.380

Appendix 5: XPUs Identified in this Document

For the purposes of this document the XPUs used are defined in the following table.

XPU	Description
BOARDER	Boarders – 5.2.4
CANC_OP	Cancelled Operations – 5.2.4
DSS214	Disability Support Services – Young Physically Disabled AT&R – 5.2.6
EXCLU	Excluded - Mental Health Events – 5.2.5and events where an XPU has not been identified –5.2.1, 5.2.3, and some AT&R 5.2.6
HOP214	Health of Older People – Age Related AT&R – 5.2.6
HOP235	Health of Older People – Psychogeriatric AT&R – 5.2.6
HOP1006	Health of Older People – Aged Residential Care (Hospital) – 5.2.6
HOP1013	Health of Older People – Carer Support Respite Day – 5.2.6
HOP1032	Health of Older People – Aged Residential Care (Secure Dementia) – 5.2.6
HOP1033	Health of Older People – Aged Residential Care (Rest Home) – 5.2.6
HOP1035	Health of Older People – Aged Residential Care (Specialist) – 5.2.6
HOP1043	Health of Older People – Aged Residential Care (Dementia) – 5.2.6
HOP1044	Health of Older People – Aged Residential Care (Hospital) – 5.2.6
HOP1045	Health of Older People – Aged Residential Respite – Dementia level – 5.2.6
HOP1046	Health of Older People – Aged Residential Care (Psychogeriatric) – 5.2.6
M00006	Same Day Blood Transfusions (General Medicine) – 5.2.33
M25008	Capsule Endoscopy – 5.2.31
M30014	Same Day Blood Transfusions (Haematology) – 5.2.33
M30020	Same Day Pharmacotherapy for Cancer (Haematology) – 5.2.24
M50009	Same Day Blood Transfusions (Oncology) – 5.2.33
M50024	Same Day Radiotherapy (Orthovoltage) – 5.2.25
M50025	Same Day Radiotherapy (Megavoltage) – 5.2.25
M54004	Same Day Pharmacotherapy for Cancer (Specialist Paed Oncology) – 5.2.24
M60005	Renal Medicine (Peritoneal Dialysis) – 5.2.22
M60008	Renal Medicine (Haemodialysis) – 5.2.23
MS02001	Same Day Blood Transfusions (Any Specialty) – 5.2.33
MS02003	Bronchoscopies – 5.2.32
MS02004	Cystoscopies – 5.2.29
MS02005	Gastroscopy – 5.2.31
MS02006	ERCP – 5.2.31

XPU	Description
MS02007	Colonoscopy – 5.2.31
MS02009	Same Day Pharmacotherapy for Cancer (Any Specialty) – 5.2.24
MS02014	Colonoscopy/Gastroscopy – 5.2.31
MS02016	Skin Lesion Removal – 5.2.35
NCSP-10	Colposcopies – 5.2.28
NCSP-20	Colposcopies – 5.2.28
S30006	Surgical Terminations of Pregnancy 1st Trimester – 5.2.21
S30009	Surgical Terminations of Pregnancy 2nd Trimester – 5.2.20
S40004	Minor Eye Procedures – 5.2.34
S50001	Spinal Services (Acute) – 5.2.19
S50002	Spinal Services (Non-acute) – 5.2.19
S70006	Lithotripsy – 5.2.27
T0103	Transplants (Heart) – 5.2.18
T0106	Transplants (Lung) – 5.2.18
T0111	Transplants (Liver – Adults) – 5.2.18
T0113	Transplants (Liver – Children) – 5.2.18
W03005	Amniocentesis – 5.2.11
W03006	Chorionic Villus Sampling – 5.2.12
W03007	Rhesus Isoimmunisation and Other Isoimmunisation – 5.2.13
W03010	Lactation Disorders Associated with Childbirth – 5.2.14
W03012	Postnatal Early Intervention Events – 5.2.9
W02020	Primary Maternity Events – 5.2.16

Appendix 6: List of Acronyms and Definitions

For the purposes of this document the acronyms used are defined in the following table.

Acronym	Definition
AAA	Abdominal Aortic Aneurysm
AC	Acute
ADJMVDAYS	Adjusted Mechanical Ventilation Days
ALOS	Average Length of Stay
AN-DRG	Australian National Diagnosis-Related Groups
AR-DRG	Australian Refined Diagnosis-Related Groups
ASD	Atrial Septal Defect
CANC_OP	Cancelled Operation
CCTAG	Common Counting Technical Advisory Group
CER	Casemix Exclusion Rules
CFD	Casemix Framework Document
COPAY	Co-Payment
CPG	Casemix Project Group
CWD	Cost Weighted Discharge
CWPG	Cost Weights Project Group
DHB	District Health Board
DRG	Diagnosis Related Groups
DSS	Disability Support Service
ED	Emergency Department
EPS	Electrophysiological Studies
ERC	Endoscopic Retrograde Cholangiography
ERCP	Endoscopic Retrograde Cholangiopancreatography
ERP	Endoscopic Retrograde Pancreatography
EXCLU	Excluded
HB	High Boundary Point
HCU	Health Care User
HDR	High Dose Rate
HFA	Health Funding Authority
HHS	Hospital and Health Service
HO_PD	High Outlier Per Diem
HOP	Health of Older People
HSC	Health Speciality Code
ICD	International Statistical Classification of Diseases and Related Health Problems

Acronym	Definition
ICD-9-CMA	International Statistical Classification of Diseases and Related Health Problems, 9h Revision, Clinical Modification, Australian
ICD-10-AM	International Statistical Classification of Diseases and Related Health Problems, 10thRevision, Australian Modification
IDF	Inter-District Flow
IG	Information Group
LA	Local Anaesthesia
LB	Low Boundary Point
LMC	Lead Maternal Carer
LO_PD	Low Outlier Per Diem
LOS	Length of Stay
MD_IN	Multiday Inlier
MHIS	Mental Health Information System
MoH	Ministry of Health
MV	Mechanical Ventilation
MVELIG	Mechanical Ventilation Eligibility
NCAMP	National Collections Annual Maintenance Project
NCCP	National Costing Collection and Pricing Programme
NCR	National Collections and Reporting
NCSP	National Cervical Screening Programme
NHB	National Health Board
NMDS	National Minimum Dataset
NNPAC	National Non-Admitted Patient Collection
NPP	National Pricing Programme
NSF	Nationwide Service Framework
NSU	National Screening Unit
NZDRG	New Zealand Diagnosis Related Group
OD	One Day
PCT	Pharmaceutical Caner Treatment
PU	Purchase Unit
RDM	Role Delineation Model
RVU	Relative Value Unit
SD	Same Day
SFLP	Selective Fetoscopic Laser Photocoagulation
TAG	Technical Advisory Group
TAVI	Transcatheter Aortic Valve Implantation

Acronym	Definition
ToP	Termination of Pregnancy
W	With
WIES	Weighted Inlier Equivalent Separation
W/O	With Out
WN	Waiting List – admitted from DHB booking system
XPU	Excluded Purchase Unit