

Summary of Changes

HRG4+ 2018/19 & 2017/18 Local Payment Groupers

**From:
HRG4 2016/17 Local Payment Grouper**

Published June 2018



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Summary of Changes

Purpose

The purpose of this summary is to provide an overview of the main changes to the underlying design between the HRG4 2016/17 Local Payment Grouper and the HRG4+ 2018/19 & 2017/18 Local Payment Groupers.

This document is intended as a high-level summary to be used to form the basis of further analysis and investigation, rather than a comprehensive list of all differences between grouper releases. Further HRG4+ supporting documentation is available from the National Casemix Office website <https://digital.nhs.uk/services/national-casemix-office>

HRG4+ 2018/19 & 2017/18 Local Payment Grouper from HRG4 2016/17 Local Payment Grouper

HRG Design Changes

Update of Base Design

The design base for the HRG4+ 2018/19 & 2017/18 Local Payment Groupers is the HRG4+ 2014/15 Reference Costs design.

Increase in the number of HRGs

The net number of HRGs has increased by 1,109, from 1,673 in the HRG4 2016/17 Local Payment Grouper, to 2,782 in the HRG4+ 2017/18 & 2018/19 Local Payment Groupers. This is due to the change from HRG4 to HRG4+, accommodating NHS England and NHS Improvement policy requirements - to reflect updated clinical practice; to support service redesign; to improve identification of the resource implications of specialised care, which is often higher cost. Net movements in the numbers of HRGs at Subchapter level can be found in Appendix A.

Deletion and creation of new Subchapters

Subchapter CZ Mouth, Head, Neck and Ears Procedures and Disorders

To better reflect resource use and align this Subchapter with others in HRG4+, Subchapter CZ Mouth, Head, Neck and Ears Procedures and Disorders has been deleted and replaced with the following:

- Subchapter CA Ear, Nose, Mouth, Throat and Neck Procedures
- Subchapter CB Ear, Nose, Mouth, Throat and Neck Disorders
- Subchapter CD Dental and Orthodontic Procedures

Subchapter EA Cardiac Procedures

Following a complete redesign of cardiac procedure HRGs to more appropriately differentiate between surgical and percutaneous procedures, and to better reflect expected resource use, Subchapter EA Cardiac Procedures has been deleted and replaced with the following:

- Subchapter ED Open Cardiac Procedures for Acquired Conditions
- Subchapter EY Interventional Cardiology for Acquired Conditions

In addition, for clarity, Subchapter EC has been renamed as Open and Interventional Procedures for Congenital Heart Disease.

Subchapters HA Orthopaedic Trauma Procedures; HB Orthopaedic Non-Trauma Procedures; HR Orthopaedic Reconstruction Procedures

Following a complete redesign of orthopaedic procedure and disorder HRGs to better reflect expected resource use and align these Subchapters with others in HRG4+ in terms of design

concept, these three Subchapters have been deleted and replaced with the following Subchapters:

- HE Orthopaedic Disorders
- HN Orthopaedic Non-Trauma Procedures
- HT Orthopaedic Trauma Procedures

Subchapter PA Paediatric Medicine

The HRGs for paediatric medicine have been expanded into 18 new Subchapters, based largely on the body systems recognised by the Subchapters that reflect the equivalent adult activity. This enables better differentiation of the care and treatment of children admitted to hospital, as well as improving the way that their complications and comorbidities (CCs) are acknowledged by the HRG design. Subchapter PA has therefore been deleted and replaced with the following Subchapters:

- PC Paediatric Ear Nose and Throat Disorders
- PD Paediatric Respiratory Disorders
- PE Paediatric Cardiology Disorders
- PF Paediatric Gastroenterology Disorders
- PG Paediatric Hepatobiliary Disorders
- PH Paediatric Rheumatology Disorders
- PJ Paediatric Dermatology Disorders
- PK Paediatric Diabetology, Endocrinology and Metabolic Disorders
- PL Paediatric Renal Disorders
- PM Paediatric Haematological-Oncology Disorders
- PN Paediatric Non-Malignant Haematological Disorders
- PP Paediatric Ophthalmic Disorders
- PQ Paediatric Immune System Disorders
- PR Paediatric Neurosciences Disorders
- PT Paediatric Mental Health Disorders
- PV Paediatric Trauma Medicine
- PW Paediatric Infectious Diseases
- PX Paediatric Medicine

Subchapter QZ Vascular Procedures and Disorders; Subchapter RC Interventional Radiology

Following a complete redesign of HRGs for vascular open procedures and both vascular and non-vascular imaging interventions, to more appropriately reflect the link between these clinical areas and to better differentiate expected resource use, Subchapter QZ Vascular Procedures and Disorders and Subchapter RC Interventional Radiology have been deleted and replaced with the following Subchapters:

- YA Neurological Imaging Interventions
- YD Thoracic Imaging Interventions
- YF Gastrointestinal Imaging Interventions
- YG Hepatobiliary and Pancreatic Imaging Interventions
- YH Musculoskeletal Imaging Interventions
- YJ Breast Imaging Interventions
- YL Urological Imaging Interventions
- YQ Vascular Open Procedures and Disorders

- YR Vascular Imaging Interventions

Chapter Q Vascular System has been deleted and replaced with a new Chapter Y Vascular Procedures and Disorders and Imaging Interventions.

Subchapter RA Diagnostic Imaging Procedures

To create more appropriate, procedure-specific HRGs to better differentiate the expected resource use of high cost, complex scans, as well as nuclear medicine procedures, Subchapter RA Diagnostic Imaging Procedures has been deleted and replaced with the following:

- Subchapter RD Diagnostic Imaging Procedures
- Subchapter RN Nuclear Medicine Procedures

Subchapter WA Immunology, Infectious Diseases, Poisoning, Shock, Special Examinations, Screening and Other Healthcare Contacts

Following a complete redesign of the various HRGs within this Subchapter to more appropriately reflect the difference in treatment of infectious diseases when compared to other conditions, this Subchapter has been deleted and replaced with the following Subchapters:

- WH Poisoning, Toxic Effects, Special Examinations, Screening and Other Healthcare Contacts
- WJ Infectious Diseases and Immune System Disorders

Introduction of Interactive Complication & Comorbidities (CC)

Interactive CC splits have been implemented in the majority of HRG4+ Subchapters, to more appropriately reflect the additional resource use expected when treating patients with multiple complications or comorbidities. The summed 'score' of all secondary diagnoses from the values assigned to the Subchapter-specific CC list determine the HRG derived. Major CCs have a nominal value of two whilst all other CCs have a nominal value of one.

Appendix A highlights those Subchapters where interactive CCs have been introduced to the design.

Introduction of Intervention Splits

Interventions splits have been implemented on diagnosis-driven HRGs within many Subchapters, to acknowledge that 'minor interventions' have been undertaken. The benefit of this approach is two-fold; these HRGs will not only include the expected additional cost/resources associated with performing these minor procedures, but may also provide an indication that the patient's condition was more severe, often resulting in more resource-intensive treatment.

In summary, intervention splits have been applied to Subchapters:

- BZ Eyes and Periorbita Procedures and Disorders
- CB Ear, Nose, Mouth, Throat and Neck Disorders
- DZ Respiratory System Procedures and Disorders
- FZ Digestive System Procedures and Disorders
- GC Hepatobiliary and Pancreatic System Disorders
- HC Spinal Procedures and Disorders
- HE Orthopaedic Disorders
- JA Breast Procedures and Disorders
- JD Skin Disorders

- KC Metabolic Disorders
- LA Renal Procedures and Disorders
- LB Urological and Male Reproductive System Procedures and Disorders
- MB Female Reproductive System Disorders
- PB Neonatal Disorders
- WH Poisoning, Toxic Effects, Special Examinations, Screening and Other Healthcare Contacts
- WJ Infectious Diseases and Immune System Disorders

Increased Recognition of Multiple Procedures

The ability of the HRG design to recognise the resource impact of undertaking multiple procedures, including bilateral operations, has been enhanced.

In summary, increased recognition of multiple procedures has been applied to Subchapters:

- AA Nervous System Procedures and Disorders
- BZ Eyes and Periorbita Procedures and Disorders
- CA Ear, Nose, Mouth, Throat and Neck Procedures
- DZ Thoracic Procedures and Disorders
- ED Open Cardiac Procedures for Acquired Conditions
- EY Interventional Cardiology for Acquired Conditions
- HC Spinal Procedures and Disorders
- HN Orthopaedic Non-Trauma Procedures
- HT Orthopaedic Trauma Procedures
- JA Breast Procedures and Disorders
- YA Neurological Imaging Interventions
- YF Gastrointestinal Imaging Interventions
- YG Hepatobiliary and Pancreatic Imaging Interventions
- YJ Breast Imaging Interventions
- YL Urological Imaging Interventions
- YQ Vascular Open Procedures and Disorders
- YR Vascular Imaging Interventions

Coding Quality

Creation of Combination Codes for ‘Renewal of’ Procedures

A review of procedure coding revealed that many ‘renewal of’ procedure codes were not being optimally recognised in the HRG design. As many of the prostheses or devices being renewed are high cost, the design was reviewed globally, and combination codes were created for all ‘renewal of’ procedures, which are mapped to the same HRG as the equivalent ‘insertion of’ procedure code.

Other changes made, as part of quality improvements, include ensuring that the HRG design supports restated coding rules and guidance, and the updated version 6.2 of the Commissioning Data Set (CDS) in Subchapters JA, Breast Procedures and Disorders; PB, Neonatal Disorders; XA Neonatal Critical Care and XB Paediatric Critical Care.

Updated Complication and Comorbidities (CC) Lists

A review of all Subchapter-specific CC lists has been undertaken to ensure continued compliance with design rules. For example, to ensure that if a list contains the less specific, or unspecified, diagnosis code (typically but not always the .9 code within the three digit ICD rubric) then all the more specific codes for that diagnosis are also included on the list. This has led to one of two actions; either the deletion of the less specific code from the respective list, or the inclusion of the more specific codes in that list. Additionally, checks have been made to ensure that 'too unspecific' diagnosis codes, and those that are invalid for grouping, continue to be excluded from any such lists.

Updated Multiple Procedure Lists

As a result of the redesign of several Subchapters to map procedure codes to more appropriate resource HRGs, lists used in multiple procedure logic have been reviewed to ensure that their content remains consistent with the new design e.g. that list FZ_Major contained procedures that are considered Major in terms of expected resource usage.

Updated Interventions List

The Interventions list is used by many HRGs to differentiate those long stay patients who are more complex, having one or more minor procedures during their stay. The intent of this list is to capture all minor procedures which have a maximum length of stay check at HRG level, so that they may be acknowledged in diagnosis-driven HRGs for longer stay patients. The Interventions list therefore has been updated to reflect all procedure codes that now have maximum length of stay logic, and to remove those for which this length of stay logic no longer applies.

Specialised Activity

Specialised activity has been remapped within existing HRGs, and new HRGs have been created specifically to identify specialised and/or high cost procedures in the following Subchapters:

- AA Nervous System Procedures and Disorders
- AB Pain Management
- BZ Eyes and Periorbita Procedures and Disorders
- CA Ear, Nose, Mouth, Throat and Neck Procedures
- DZ Respiratory System Procedures and Disorders
- EC Open and Interventional Procedures for Congenital Heart Disease
- ED Open Cardiac Procedures for Acquired Conditions
- EY Interventional Cardiology for Acquired Conditions
- FZ Digestive System Procedures and Disorders
- HC Spinal Procedures and Disorders
- JA Breast Procedures and Disorders
- LB Urological and Male Reproductive System Procedures and Disorders
- NZ Obstetric Medicine
- RD Diagnostic Imaging Procedures
- RN Nuclear Medicine Procedures
- SA Haematological Procedures and Disorders
- YA Neurological Imaging Interventions
- YD Thoracic Imaging Interventions
- YG Hepatobiliary and Pancreatic Imaging Interventions

- YH Musculoskeletal Imaging Interventions
- YL Urological Imaging Interventions
- YR Vascular Imaging Interventions

Full details of specific changes can be found in the Chapter Summary document that accompanies the HRG4+ 2018/19 Local Payment Grouper release.

General Enhancements

HRG labels and descriptions have been amended to help clarify content and for consistency.

Appendix A:

HRG Distribution by Subchapter in the HRG4+ 2018/19 Local Payment Grouper and the HRG4 2016/17 Local Payment Grouper

For further details of all Subchapter changes please see the supporting documentation, including the Code to Group Excel file and the Chapter Summary document available on the National Casemix Office website at <https://digital.nhs.uk/services/national-casemix-office>

It must be emphasised that although the design and content of an HRG might appear unchanged between grouper releases, this does not mean that the activity content of unchanged HRGs will remain constant over time.

Subchapter	P18/19	P16/17	Comment
AA Nervous System Procedures and Disorders	98	65	A complete redesign of the procedure-driven HRGs has been implemented, to better differentiate expected resource usage of specialised activity including multiple procedure logic, revisional and other surgery that involves enhanced monitoring, and paediatric-specific HRGs. In addition, interactive CC splits have been introduced.
AB Pain Management	13	10	A complete redesign of this Subchapter has been implemented, to more appropriately capture pain management activity and to identify the difference in expected resource usage of the various treatments. Although the majority of activity will shift between pain management HRGs a small volume will shift to/from other Subchapters.
BZ Eyes and Periorbita Procedures and Disorders	94	33	A complete redesign of the procedure-driven HRGs has been implemented, to better differentiate expected resource usage including multiple procedure logic (plus bilateral logic where appropriate), revisional surgery and the additional resource usage of operations undertaken under general anaesthetic and on children. This includes the creation of younger children-specific HRGs. In addition, interactive CC splits have been introduced.
CZ Mouth Head Neck and Ears Procedures and Disorders	0	94	The entire Subchapter has been deleted and replaced with three new Subchapters, as detailed below.

Subchapter	P18/19	P16/17	Comment
CA Ear, Nose, Mouth, Throat and Neck Procedures	120	0	<p>A new Subchapter has been created with 120 HRGs to replace the procedure-driven, non-dental HRGs previously within Subchapter CZ Mouth Head Neck and Ears Procedures and Disorders.</p> <p>This Subchapter employs multiple procedure logic; paediatric/infant age splits; interactive CC splits; HRGs specific to common procedures; and new HRGs specific to sinus and neck surgery to more appropriately reflect the different complexity of ENT and Maxillofacial procedures.</p> <p>There are nine HRGs specific to neck procedures, 22 HRGs for nose and sinus procedures, 34 HRGs for ear procedures and audiology, 42 HRGs for mouth and throat procedures and 13 HRGs for maxillofacial procedures.</p>
CB Ear, Nose, Mouth, Throat and Neck Disorders	12	0	<p>A new Subchapter has been created with 12 HRGs to replace the diagnosis-driven HRGs previously within Subchapter CZ Mouth Head Neck and Ears Procedures and Disorders.</p> <p>This Subchapter splits activity between malignant and non-malignant activity, with interactive CC and intervention splits, to improve expected resource differentiation between patients with multiple complications and comorbidities, and those without.</p>
CD Dental and Orthodontic Procedures	23	0	<p>A new Subchapter has been created with 23 HRGs, which is an effective remapping of the previous dental HRGs from Subchapter CZ Mouth Head Neck and Ears Procedures and Disorders.</p>
DZ Thoracic Procedures and Disorders	176	100	<p>The open surgery HRGs have been redesigned to more appropriately reflect expected resource usage including multiple procedure logic (plus bilateral logic where appropriate) and interactive CC splits.</p> <p>The bronchoscopy HRGs have been redesigned to more appropriately differentiate between diagnostic and therapeutic procedures.</p> <p>HRGs have been deleted and replaced as a result of activity remapping to HRGs in new Subchapter YD Thoracic Imaging Interventions.</p> <p>Interactive CC and intervention splits have been added to the diagnosis-driven HRGs. The majority of activity remains within the same HRG root, with only one replacement at HRG root level being required to accommodate the number of new (split) HRGs.</p>
EA Cardiac Procedures	0	38	<p>The entire Subchapter has been deleted and replaced with new Subchapters ED Open Cardiac Procedures for Acquired Conditions and EY Interventional Cardiology for Acquired Conditions as detailed below.</p>

Subchapter	P18/19	P16/17	Comment
EB Cardiac Disorders	48	14	<p>HRG EB01Z Non-Interventional Acquired Cardiac Conditions, has been deleted due to the introduction of 12 new HRGs for specific cardiac conditions split out from this HRG: EB12* Unspecified Chest Pain, EB13* Angina, and EB14* Other Acquired Cardiac Conditions.</p> <p>The two HRGs for Hypertension have been merged due to relatively low volumes within CC splits thus creating a single HRG EB04Z Hypertension.</p> <p>A new HRG root EB15* Primary Pulmonary Hypertension has been created to separately identify this resource-intensive activity.</p> <p>In addition, interactive CC splits have been introduced.</p>
EC Open and Interventional Procedures for Congenital Heart Disease	21	0	<p>A complete redesign of this Subchapter has been implemented to more appropriately differentiate between therapeutic open surgery or percutaneous procedures, and diagnostic procedures or tests.</p> <p>Multiple procedure logic has been employed and in addition, logic has been added to take account of the additional expected resource usage of revisional surgery and minor percutaneous/ procedures undertaken under general anaesthetic.</p> <p>Interactive CC splits have also been added to the HRGs within this Subchapter.</p> <p>The majority of activity will shift between HRGs within Subchapter EC but there may be a small amount of activity moving to this Subchapter that previously mapped to Subchapter EA Cardiac Procedures and from this Subchapter to new Subchapter ED Open Cardiac Procedures for Acquired Conditions. Likewise a small volume of activity may shift from/to Subchapter YQ Vascular Open Procedures and Disorders.</p>
ED Open Cardiac Procedures for Acquired Conditions	46	0	<p>A new Subchapter has been created with 46 HRGs replacing the open cardiac procedure-driven HRGs previously located within Subchapter EA Cardiac Procedures.</p> <p>This Subchapter employs multiple procedure logic, interactive CC splits and HRGs specific to specialised procedures to more appropriately reflect the different clinical complexity of undertaking open cardiac procedures.</p> <p>The majority of activity will shift from Subchapter EA Cardiac Procedures to Subchapter ED. However as there has been some remapping between cardiac and vascular open procedure HRGs, a small volume of activity will shift to/from Subchapters YQ Vascular Open Procedures and Disorders and EC Open and Interventional Procedures for Congenital Heart Disease.</p>

Subchapter	P18/19	P16/17	Comment
EY Interventional Cardiology for Acquired Conditions	65	0	<p>A new Subchapter has been created with 65 HRGs replacing the percutaneous cardiac procedure-driven HRGs previously located within Subchapter EA Cardiac Procedures.</p> <p>This Subchapter employs multiple procedure logic, interactive CC splits and HRGs specific to specialised procedures, to more appropriately reflect the different clinical complexity of percutaneous cardiac procedures.</p> <p>The majority of activity will shift from Subchapter EA Cardiac Procedures to EY. However as there has been some remapping between cardiac and vascular imaging intervention HRGs, a small volume of activity will shift to/from Subchapters YR Vascular Imaging Interventions and EC Open and Interventional Procedures for Congenital Heart Disease.</p>
FZ Digestive System Procedures and Disorders	202	158	<p>Interactive CC and interventions splits have been introduced, which includes the merging of several diagnosis-driven HRGs to create more appropriate HRG roots to then allow for greater differentiation at the split level.</p> <p>New HRGs have been created to accommodate high cost specialist therapeutic endoscopic procedures.</p> <p>HRGs have been deleted as a result of the redesign required following the remapping of percutaneous procedures to HRGs in new Subchapter YF Gastrointestinal Imaging Interventions.</p> <p>New HRGs have been created specific to specialised activity in line with NICE guidance; FZ96Z Insertion of Neurostimulator for Treatment of Faecal Incontinence, FZ97Z Insertion of Neurostimulator Electrodes for Treatment of Faecal Incontinence and FZ98Z Maintenance of Gastric Band for Obesity.</p>
GA Hepatobiliary and Pancreatic System Surgery	26	22	Interactive CCs splits on existing HRG roots have been introduced.
GB Hepatobiliary and Pancreatic System Endoscopic and Percutaneous Procedures	14	22	<p>Interactive CC splits on existing HRG roots have been introduced.</p> <p>HRGs have been deleted as a result of the redesign required following the remapping of percutaneous procedures to HRGs in new Subchapter YG Hepatobiliary Imaging Interventions.</p> <p>New HRGs have been created specific to endoscopic ultrasound and diagnostic ERCP procedures.</p>
GC Hepatobiliary and Pancreatic System Disorders	24	12	<p>The use of interactive CC and interventions splits has been expanded, which includes the merging of several HRGs to create more appropriate HRG roots to then allow for greater differentiation at the split level.</p> <p>Two HRGs specific to non-obstructive jaundice, have been created, for activity that previously mapped to HRGs within Subchapter WA Immunology, Infectious Diseases, Poisoning, Shock, Special Examinations, Screening and Other Healthcare Contacts</p>

Subchapter	P18/19	P16/17	Comment
HA Orthopaedic Trauma Procedures	0	64	The entire Subchapter has been deleted and replaced with new Subchapters HE Orthopaedic Disorders, HN Orthopaedic Non-Trauma Procedures and HT Orthopaedic Trauma Procedures as detailed below.
HB Orthopaedic Non-Trauma Procedures	0	70	The entire Subchapter has been deleted and replaced with new Subchapters HE Orthopaedic Disorders, HN Orthopaedic Non-Trauma Procedures and HT Orthopaedic Trauma Procedures as detailed below.
HC Spinal Surgery and Disorders	74	32	A complete redesign of the procedure-driven HRGs has been implemented to better differentiate expected resource usage including multiple procedure logic (plus bilateral where appropriate), revisional surgery and the additional resource use of operations undertaken using advance monitoring or for infections. Also cancer- and paediatric-specific HRGs have been created. In addition to the application of interactive CC splits for both procedure and diagnosis-driven HRGs, interventions splits have been added to the diagnosis-driven HRGs where clinically appropriate.
HD Musculoskeletal Disorders	35	21	Interactive CCs splits have been introduced.
HR Orthopaedic Reconstruction Procedures	0	9	The entire Subchapter has been deleted and replaced with new Subchapters HN Orthopaedic Non-Trauma Procedures and HT Orthopaedic Trauma Procedures, as detailed below.
HE Orthopaedic Disorders	84	0	A new Subchapter has been created with 84 HRGs replacing the orthopaedic diagnosis-driven HRGs previously within Subchapters HA Orthopaedic Trauma Procedures and HB Orthopaedic Non-Trauma Procedures. This Subchapter employs both interactive CC and intervention splits. The majority of activity will shift from Subchapters HA Orthopaedic Trauma Procedures and HB Orthopaedic Non-Trauma Procedures to Subchapter HE Orthopaedic Disorders. However as there has been some remapping of some injury codes to more appropriate body system-specific HRGs, a small volume of activity will shift to/from Subchapters CB Ear, Nose, Mouth, Throat and Neck Disorders and DZ Thoracic Procedures and Disorders.

Subchapter	P18/19	P16/17	Comment
HN Orthopaedic Non-Trauma Procedures	110	0	<p>A new Subchapter has been created with 110 HRGs replacing the orthopaedic non-trauma procedure-driven HRGs previously within Subchapters HA Orthopaedic Trauma Procedures, HB Orthopaedic Non-Trauma Procedures and HR Orthopaedic Reconstruction Procedures.</p> <p>This Subchapter employs multiple procedure logic, including for bilateral operations, interactive CC splits and escalation of procedures undertaken for the treatment of infection or cancer, to more appropriately reflect the different clinical complexity of orthopaedic procedures for non-trauma care.</p> <p>The majority of activity will shift from Subchapters HB Orthopaedic Non-Trauma Procedures and HR Orthopaedic Reconstruction Procedures to Subchapter HN Orthopaedic Non-Trauma Procedures. However as there have been some changes to the definition of trauma, and given that malignancy no longer maps activity into the trauma/malignancy HRGs directly, some activity will also shift from Subchapter HA Orthopaedic Trauma Procedures. Additionally there has been a remapping of certain procedure codes to more appropriate body system-specific HRGs, and as such, a small volume of activity will shift to Subchapter DZ Thoracic Procedures and Disorders.</p>
HT Orthopaedic Trauma Procedures	87	0	<p>A new Subchapter has been created with 87 HRGs replacing the orthopaedic trauma procedure-driven HRGs previously within Subchapters HA Orthopaedic Trauma Procedures and HR Orthopaedic Reconstruction Procedures.</p> <p>This Subchapter employs multiple procedure logic, including for bilateral operations, interactive CC splits and escalation of procedures undertaken for the treatment of infection or cancer, to more appropriately reflect the different clinical complexity of orthopaedic procedures for trauma care.</p> <p>The majority of activity will shift from Subchapters HA Orthopaedic Trauma Procedures and HR Orthopaedic Reconstruction Procedures to Subchapter HT Orthopaedic Trauma Procedures. However there has been some remapping of procedure codes to more appropriate body system-specific HRGs, and as such, a small volume of activity will shift to Subchapter DZ Thoracic Procedures and Disorders.</p>
JA Breast Procedures and Disorders	35	23	<p>Interactive CC and intervention splits have been introduced on the existing diagnosis-driven HRG roots.</p> <p>The procedure-driven HRGs have been completely redesigned to better differentiate resource usage; in particular to differentiate between unilateral and bilateral surgery and the associated expected resource difference, reconstruction procedures – delayed vs immediate, and the creation of HRGs specific to specialised activity.</p> <p>In addition percutaneous procedures have been remapped to HRGs in new Subchapter YJ Breast Imaging Interventions</p>

Subchapter	P18/19	P16/17	Comment
JB Burns Procedures and Disorders	12	11	A complete redesign of this Subchapter has been implemented, including the deletion of all HRGs and replacement with 12 new HRGs in order to better reflect the treatment and care of burns patients. The new HRGs reflect the different resource usage associated with the extent of the surface area of the burn and the surgical or clinical treatment provided.
JC Skin Surgery	12	36	A complete redesign of this Subchapter has been implemented, to simplify the design structure, improve HRG performance and improve differentiation of resource use for patients 12 years and under.
JD Skin Disorders	10	17	Interactive CC and interventions splits have been introduced which has resulted in the merging of several HRGs to create more appropriate HRG roots to then allow for greater differentiation at the split level.
KA Endocrine System Disorders	18	11	Interactive CC splits on existing HRG roots have been introduced.
KB Diabetic Medicine	12	11	Interactive CC splits on existing HRG roots have been introduced, and age splits now deemed clinically unnecessary have been removed.
KC Metabolic Disorders	9	7	Interactive CC and intervention splits on existing HRG roots have been introduced.
LA Renal Procedures and Disorders	48	32	Two new HRGs (LA97A Same Day Dialysis Admission or Attendance, 19 years and over and LA97B Same Day Dialysis Admission or Attendance, 18 years and under) have been created to replace LA08E Chronic Kidney Disease with length of stay 1 day or less, associated with Renal Dialysis, which effectively represent empty core HRGs. Interactive CC and intervention splits on existing HRG roots have been introduced.
LB Urological and Male Reproductive System Procedures and Disorders	149	103	Interactive CC and interventions splits on existing diagnosis-driven HRG roots have been introduced. HRGs have been deleted as a result of the redesign required following the remapping of percutaneous procedures to HRGs in new Subchapter YL Urological Imaging Interventions. HRGs have also been created specific to specialised activity in line with NICE guidance. e.g. LB80Z Insertion of Neurostimulator Electrodes for Treatment of Urinary Incontinence and LB77Z Transperineal Template Biopsy of Prostate.
LD Renal Dialysis for Chronic Kidney Disease	26	26	No change to HRG number or labels.
LE Renal Dialysis for Acute Kidney Injury	4	4	No change to HRG number or labels.

Subchapter	P18/19	P16/17	Comment
MA Female Reproductive System Procedures	48	31	New HRGs have been created to specifically identify high volume procedures, and to also capture the additional expected resource usage when multiple minor procedures are performed during the same admission/attendance. Interactive CC splits on existing HRG roots have been introduced.
MB Female Reproductive System Disorders	17	12	Introduction of interactive CC and interventions splits, which includes the merging of several diagnosis-driven HRGs to create more appropriate HRG roots to then allow for greater differentiation at the split level.
MC Assisted Reproduction Medicine	10	10	No change to HRG number or labels.
NZ Obstetric Medicine	56	32	The normal and assisted delivery HRGs have been redesigned to distinguish between the additional expected resource usage associated with epidurals, inductions and deliveries requiring post-partum surgical intervention and the different combinations thereof patients may receive. The caesarean section delivery HRGs have been redesigned to distinguish between planned and emergency caesarean deliveries. Interactive CC splits have also been introduced.
PA Paediatric Medicine	0	114	The entire Subchapter has been deleted and replaced with 18 new Subchapters as detailed below.
PB Neonatal Disorders	20	3	A complete redesign of the neonatal disorder HRGs has been implemented to better differentiate expected resource use dependent on the source of patient admission. This also includes the introduction of interactive CC and intervention splits to better reflect the clinical complexity of care.
PC Paediatric Ear Nose and Throat Disorders	4	0	A new Subchapter has been created with four HRGs to replace the HRGs relating to ear, nose and throat disorders previously within Subchapter PA Paediatric Medicine. This Subchapter employs interactive CCs to improve resource differentiation between patients with multiple complications and comorbidities, and those without.
PD Paediatric Respiratory Disorders	24	0	A new Subchapter has been created with 24 HRGs to replace the HRGs relating to respiratory disorders previously within Subchapter PA Paediatric Medicine. This Subchapter employs interactive CCs to improve resource differentiation between patients with multiple complications and comorbidities, and those without.

Subchapter	P18/19	P16/17	Comment
PE Paediatric Cardiology Disorders	12	0	A new Subchapter has been created with 12 HRGs to replace the HRGs relating to cardiology disorders previously within Subchapter PA Paediatric Medicine. This Subchapter employs interactive CCs to improve resource differentiation between patients with multiple complications and comorbidities, and those without.
PF Paediatric Gastroenterology Disorders	17	0	A new Subchapter has been created with 17 HRGs to replace the HRGs relating to gastroenterology disorders previously within Subchapter PA Paediatric Medicine. This Subchapter employs interactive CCs to improve resource differentiation between patients with multiple complications and comorbidities, and those without.
PG Paediatric Hepatobiliary Disorders	3	0	A new Subchapter has been created with three HRGs to replace the HRGs relating to hepatobiliary disorders previously within Subchapter PA Paediatric Medicine. This Subchapter employs interactive CCs to improve resource differentiation between patients with multiple complications and comorbidities, and those without.
PH Paediatric Rheumatology Disorders	4	0	A new Subchapter has been created with four HRGs to replace the HRGs relating to rheumatology disorders previously within Subchapter PA Paediatric Medicine. This Subchapter employs interactive CCs to improve resource differentiation between patients with multiple complications and comorbidities, and those without.
PJ Paediatric Dermatology Disorders	7	0	A new Subchapter has been created with seven HRGs to replace the HRGs relating to dermatology disorders previously within Subchapter PA Paediatric Medicine. This Subchapter employs interactive CCs to improve resource differentiation between patients with multiple complications and comorbidities, and those without.
PK Paediatric Diabetology, Endocrinology and Metabolic Disorders	11	0	A new Subchapter has been created with 11 HRGs to replace the HRGs relating to diabetology, endocrinology and metabolic disorders previously within Subchapter PA Paediatric Medicine. This Subchapter employs interactive CCs to improve resource differentiation between patients with multiple complications and comorbidities, and those without.
PL Paediatric Renal Disorders	10	0	A new Subchapter has been created with 10 HRGs to replace the HRGs relating to renal disorders previously within Subchapter PA Paediatric Medicine. This Subchapter employs interactive CCs to improve resource differentiation between patients with multiple complications and comorbidities, and those without.

Subchapter	P18/19	P16/17	Comment
PM Paediatric Haematological-Oncology Disorders	14	0	A new Subchapter has been created with 14 HRGs to replace the HRGs relating to cancer previously within Subchapter PA Paediatric Medicine. This Subchapter employs interactive CCs to improve resource differentiation between patients with multiple complications and comorbidities, and those without.
PN Paediatric Non-Malignant Haematological Disorders	9	0	A new Subchapter has been created with nine HRGs to replace the HRGs relating to non-malignant haematology disorders previously within Subchapter PA Paediatric Medicine. This Subchapter employs interactive CCs to improve resource differentiation between patients with multiple complications and comorbidities, and those without.
PP Paediatric Ophthalmic Disorders	2	0	A new Subchapter has been created with two HRGs to replace the HRGs relating to eye disorders previously within Subchapter PA Paediatric Medicine. This Subchapter employs interactive CCs to improve resource differentiation between patients with multiple complications and comorbidities, and those without.
PQ Paediatric Immune System Disorders	2	0	A new Subchapter has been created containing two HRGs to specifically identify paediatric immune system disorders that previously mapped to HRGs within Subchapter PA Paediatric Medicine.
PR Paediatric Nervous System Disorders	22	0	A new Subchapter has been created with 22 HRGs to replace the HRGs relating to nervous system disorders previously within Subchapter PA Paediatric Medicine. This Subchapter employs interactive CCs to improve resource differentiation between patients with multiple complications and comorbidities, and those without.
PT Paediatric Mental Health Disorders	4	0	A new Subchapter has been created with four HRGs to replace the HRGs relating to paediatric mental health conditions previously within Subchapter PA Paediatric Medicine. This Subchapter employs interactive CCs to improve resource differentiation between patients with multiple complications and comorbidities, and those without.
PV Paediatric Trauma Medicine	7	0	A new Subchapter has been created with seven HRGs to replace the HRGs relating to injuries previously within Subchapter PA Paediatric Medicine. This Subchapter employs interactive CCs to improve resource differentiation between patients with multiple complications and comorbidities, and those without.

Subchapter	P18/19	P16/17	Comment
PW Paediatric Infectious Diseases	15	0	A new Subchapter has been created with 15 HRGs to replace the HRGs relating to infectious diseases previously within Subchapter PA Paediatric Medicine. This Subchapter employs interactive CCs to improve resource differentiation between patients with multiple complications and comorbidities, and those without.
PX Paediatric Medicine	46	0	A new Subchapter has been created with 46 HRGs to replace the HRGs relating to all other disorders previously within Subchapter PA Paediatric Medicine (other than those identified above). This Subchapter employs interactive CCs to improve resource differentiation between patients with multiple complications and comorbidities, and those without.
QZ Vascular Procedures and Disorders	0	31	The entire Subchapter has been deleted and replaced with Subchapter YQ Vascular Open Procedures and Disorders and Subchapter YR Vascular Imaging Interventions, as detailed below. The latter Subchapter also combining activity that mapped to Subchapter RC Interventional Radiology.
RA Diagnostic Imaging Procedures	0	49	The entire Subchapter has been deleted and replaced with new Subchapters RD Diagnostic Imaging Procedures and RN Nuclear Medicine Procedures as detailed below.
RC Interventional Radiology	0	27	The entire Subchapter has been deleted and replaced with new Subchapters within Chapter Y Vascular Procedures and Disorders and Imaging Interventions, as detailed below.
RD Diagnostic Imaging Procedures	46	0	A new Subchapter has been created with 46 HRGs replacing the diagnostic imaging HRGs previously within Subchapter RA Diagnostic Imaging Procedures. The majority of the HRGs have been 'lifted and shifted' to this new Subchapter, however seven new HRGs have been created specifically to differentiate ultrasound with and without contrast, and also to support the identification of complex specialised scans.
RN Nuclear Medicine Procedures	68	0	A new Subchapter has been created with 68 HRGs replacing the seven nuclear medicine HRGs previously located within Subchapter RA Diagnostic Imaging Procedures. The new HRGs differentiate on type of test, and additionally on patient age, including identifying activity specific to children and infants.
SA Haematological Procedures and Disorders	99	56	Interactive CC splits on existing HRG roots have been introduced. A new HRG root SA35 Agranulocytosis, specific to this disorder has been created, and sickle cell with crisis activity has been separately identified with the creation of new HRG roots SA36 Sickle Cell Anaemia with Crisis and SA37 Sickle Cell Anaemia without Crisis. The peripheral blood stem cell transplant HRGs have been redesigned to better differentiate the expected resource use associated with donor type, and bring the HRG design into line with the equivalent bone marrow transplant HRGs.

Subchapter	P18/19	P16/17	Comment
SB Chemotherapy	18	18	No change to HRG number or labels.
SC Radiotherapy	30	30	No change to HRG number or labels.
SD Specialist Palliative Care	10	10	No change to HRG number or labels.
UZ Undefined Groups	1	1	No change to HRG number or labels.
VA Multiple Trauma	24	24	No change to HRG number or labels.
VB Emergency Medicine	12	12	No change to HRG number or labels.
VC Rehabilitation	23	23	No change to HRG number or labels.
WA Immunology, infectious diseases, poisoning, shock, special examinations, screening and other healthcare contacts	0	55	The entire Subchapter has been deleted and replaced with new Subchapters WH Poisoning, Toxic Effects, Special Examinations, Screening and Other Healthcare Contacts and WJ Infectious Diseases and Immune System Disorders as detailed below.
WD Treatment of Mental Health Patients by Non-Mental Health Service Providers	3	3	No change to HRG number or labels.
WF Non-admitted Consultations	8	8	No change to HRG number or labels. Logic has been amended (see Page 4)
WH Poisoning, Toxic Effects, Special Examinations, Screening and Other Healthcare Contacts	64	0	A new Subchapter has been created with 64 HRGs replacing the non-infection HRGs previously located within Subchapter WA Immunology, Infectious Diseases, Poisoning, Shock, Special Examinations, Screening and Other Healthcare Contacts. This Subchapter employs both interactive CC and intervention splits to more appropriately reflect the clinical resource use of these ambulatory and other miscellaneous health conditions.
WJ Infectious Diseases and Immune System Disorders	40	0	A new Subchapter has been created with 40 HRGs replacing the infections HRGs previously located within Subchapter WA Immunology, Infectious Diseases, Poisoning, Shock, Special Examinations, Screening and Other Healthcare Contacts. This Subchapter employs both interactive CC and intervention splits, and also differentiates based on isolation requirement, to more appropriately reflect the clinical resource usage of the treatment of patients with infectious diseases.
XA Neonatal Critical Care	6	6	No change to HRG number or labels.

Subchapter	P18/19	P16/17	Comment
XB Paediatric Critical Care	9	8	A new HRG XB09Z Enhanced Care has been created in order to represent the resources involved in providing critical care to children where the critical care activity codes recorded do not indicate high resource use. HRGs have also been relabelled to more appropriately reflect current clinical terminology.
XC Adult Critical Care	7	7	No change to HRG number or labels.
XD High Cost Drugs	58	58	No change to HRG number or labels.
YA Neurological Imaging Interventions	10	0	A new Subchapter has been created with 10 HRGs that include activity that previously mapped to Subchapter RC Interventional Radiology and HRGs within Subchapter AA Nervous System Procedures and Disorders. The HRGs within this Subchapter are procedure specific and employ multiple procedure logic, and interactive CC splits.
YD Thoracic Imaging Interventions	5	0	A new Subchapter has been created with five HRGs that include activity that previously mapped to Subchapter RC Interventional Radiology and HRGs within Subchapter DZ Respiratory System Procedures and Disorders. The HRGs within this Subchapter are procedure-specific.
YF Gastrointestinal Imaging Interventions	8	0	A new Subchapter has been created with eight HRGs that include activity that previously mapped to Subchapter RC Interventional Radiology and HRGs within Subchapter FZ Digestive System Procedures and Disorders. The HRGs within this Subchapter are procedure-specific and employ multiple procedure logic, and interactive CC splits.
YG Hepatobiliary and Pancreatic Imaging Interventions	16	0	A new Subchapter has been created with 16 HRGs that include activity that previously mapped to Subchapter RC Interventional Radiology and HRGs within Subchapter GB Hepatobiliary and Pancreatic System Endoscopic and Percutaneous Procedures. The HRGs within this Subchapter are procedure-specific and employ multiple procedure logic, and interactive CC splits.

Subchapter	P18/19	P16/17	Comment
YH Musculoskeletal Imaging Interventions	8	0	A new Subchapter has been created with eight HRGs that include activity that previously mapped to Subchapter RC Interventional Radiology and HRGs within Subchapters HA Orthopaedic Trauma Procedures, HB Orthopaedic Non-Trauma Procedures and HC Spinal Procedures and Disorders. The HRGs within this Subchapter are procedure-specific.
YJ Breast Imaging Interventions	12	0	A new Subchapter has been created with 12 HRGs that include activity that previously mapped to HRGs within Subchapter JA Breast Procedures and Disorders. The HRGs within this Subchapter are procedure-specific and employ multiple procedure logic, including for bilateral operations.
YL Urological Imaging Interventions	8	0	A new Subchapter has been created with eight HRGs that include activity that previously mapped to Subchapter RC Interventional Radiology and to HRGs within Subchapter LB Urological and Male Reproductive System Procedures and Disorders. The HRGs within this Subchapter are procedure-specific and employ multiple procedure logic, including for bilateral operations.
YQ Vascular Open Procedures and Disorders	60	0	A new Subchapter has been created with 60 HRGs replacing the open, vascular, procedure-driven HRGs and diagnosis-driven HRGs previously within Subchapter QZ Vascular Procedures and Disorders. This Subchapter employs multiple procedure logic, interactive CC splits and HRGs specific to common procedures to more appropriately reflect the different complexity of open vascular procedures. A small volume of activity will map from HRGs within Subchapters EA Cardiac Procedures and RC Interventional Radiology.
YR Vascular Imaging Interventions	58	0	A new Subchapter has been created with 58 HRGs replacing the vascular imaging intervention HRGs previously within Subchapter QZ Vascular Procedures and Disorders and Subchapter RC Interventional Radiology. This Subchapter employs multiple procedure logic; paediatric/infant age splits; interactive CC splits and HRGs specific to common procedures to more appropriately reflect the different complexity of vascular imaging interventions. A small volume of activity will map from HRGs within Subchapters EA Cardiac Procedures and QZ Vascular Procedures and Disorders.

The Documentation Suite

Below is a list of the various documents which are available to download from the National Casemix Office website <https://digital.nhs.uk/services/national-casemix-office>.

This documentation suite provides a comprehensive resource to enable users to understand design concepts and logic, as well as practical use of the Grouper.

- The **Casemix Companion** is a starting point and general reference guide for anyone interested in learning about the casemix classification system used by the NHS in England. The document provides an introduction to HRGs, groupers, HRG4+ design concepts and grouping logic, and it contains links to additional resources.
- The **Grouper User Manual** provides instructions on how to prepare and group data using the Grouper software application. Sample data with expected results is provided. This document is updated with every grouper release.
- The **Chapter Summaries** document provides an overview of the scope, composition and relevant grouping logic of individual HRG subchapters, and it highlights significant changes to the latest HRG design.
- The **Code to Group Workbook** is a spreadsheet that embodies the casemix design. It provides details of the constituent elements that contribute to HRG grouping, and it contains reference data such as the ICD-10 and OPCS-4 codes utilised in the design, the procedure and diagnosis hierarchies pertinent to a specific design, and the Complication and Comorbidities lists for HRG subchapters. The spreadsheet also includes information on Programme Budgeting Category (PBC) mapping, as well as a comprehensive list of HRG codes and labels.
- The **Code to Group User Manual** explains how to make best use of the information found in the Code to Group Workbook. Specifically, the manual clarifies the grouping logic found in the workbook's Code to Group tab.
- The **Best Practice Guide** is a spreadsheet that contains details about how the grouper allocates specific identification flags relating to best practice. Best Practice Flags usually result in an adjustment to the tariff. The spreadsheet also provides details of these specific tariff adjustments.