

Chapter Summaries

HRG4+ 2021/22 Consultation Group

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Introduction

This document provides an overview of the scope, composition and relevant grouping logic of individual HRG subchapters, and it highlights the most significant changes that have been implemented in this HRG design.

As well as the changes highlighted in each subchapter summary, there are cross-chapter changes implemented in the HRG4+ 2021/22 Consultation design that will have an impact on multiple subchapters. Likewise, some changes to individual subchapters could have a significant impact on HRG grouping within other subchapters. Changes affecting multiple subchapters are described here.

Accommodation of ICD-10 emergency use codes

The HRG design has been updated to accommodate the use of emergency use ICD-10 codes in line with World Health Organization (WHO) requirements.

The code description of each of the following emergency use codes has been updated in the HRG4+ 2021/22 Consultation Grouper in response to changes in coding guidance issued by the Clinical Classifications Service and in line with WHO requirements. The new code descriptions for these codes are as follows:

U07.3 Personal history of COVID-19

U07.4 Post COVID-19 condition

U07.5 Multisystem inflammatory syndrome associated with COVID-19

Following the changes in national coding guidance affecting these three codes in November 2020, these codes have been appropriately mapped to ensure that the diagnoses classified by these codes are appropriately accommodated within the HRG design.

The updated national coding guidance can be found here:

https://hscic.kahootz.com/connect.ti/t_c_home/view?objectId=19099248#19099248

U07.3 Personal history of COVID-19

This code has been remapped from HRG root WH15 Special Screening, Examinations or Other Genetic Disorders (adult patients) and HRG root PX57 Paediatric, Examination, Follow-up, Special Screening or Other Admissions (child patients) to UZ01Z Data Invalid for Grouping as, according to national clinical coding standards, this code is not permitted to be used as a primary diagnosis, as per most similar code ***Z86.1 Personal history of infectious and parasitic diseases***.

When recorded as a primary diagnosis it will generate error code **UZ01 Invalid Primary Diagnosis: 1. Primary Diagnosis doesn't exist or 2. Primary Diagnosis Blank or 3. Diagnosis can't be used at primary position**.

This code has not been added to any complications and comorbidity lists as per clinical advice.

This code has been remapped to base PBC category, **PBC0201X Infectious Diseases**.

U07.4 Post COVID-19 condition

This code has not been remapped and retains mapping to HRG root **WH15 Special Screening, Examinations or Other Genetic Disorders** in adults and HRG root **PX57 Paediatric, Examination, Follow-up, Special Screening or Other Admissions** for children, on clinical advice.

This code has not been added to any complications and comorbidity lists as per clinical advice.

This code remains mapped to base PBC **PBC0223X Other**.

U07.5 Multisystem inflammatory syndrome associated with COVID-19

This code has been remapped from HRG root **WH15 Special Screening, Examinations or Other Genetic Disorders** to HRG root **WJ06 Sepsis** in adults, and HRG roots **PW16 Paediatric Major Infections** in children and **PM45 Paediatric Febrile Neutropenia with Malignancy** in children (with an additional diagnosis of cancer and agranulocytosis). This matches the mapping of the ICD-10 code in use for this disorder before the introduction of this emergency use code; ***R65.0 Systemic Inflammatory Response Syndrome of infectious origin without organ failure***.

As per ***R65.0 Systemic Inflammatory Response Syndrome of infectious origin without organ failure*** this code has been added to the paediatric, burns and adult infectious diseases complications and co-morbidities lists and the **DX_Major**, major manifestations of COVID-19 list.

This code has been remapped to base PBC category, **PBC0201X Infectious Diseases**.

Subchapter AA – Nervous System Procedures and Disorders

Subchapter **AA Nervous System Procedures and Disorders** covers all-age procedures and adult diagnoses relating to the nervous system. It includes activity undertaken in inpatient, day case and non-admitted care settings.

It does not include percutaneous procedures on the nervous system: these map to **YA Neurological Imaging Interventions**.

The neurosurgery HRGs in this subchapter are split into a maximum of seven levels of complexity (minimal, minor, intermediate, major, very major, complex and very complex).

In addition, there are HRGs for specific high-cost specialised activity, such as the insertion of neurostimulators and intrathecal drug delivery pumps, and stereotactic radiosurgery.

Multiple-procedure logic is employed within the procedure-driven HRGs in this subchapter, as are age splits: there are specific HRGs for adult activity (19 years and over) and others for paediatric activity (18 years and under). Escalation to an HRG with a higher expected resource use (up to a maximum of two complexity levels) also occurs wherever there is advanced monitoring, e.g. EPR during surgery, or where a procedure is revisional.

The neurophysiology HRGs are split into neuropsychology, EEG, EMG and nerve conduction studies and sleep studies. These HRGs, along with the minimal procedure-driven HRGs, employ maximum length of stay logic to ensure that minor procedures, such as EEGs, are not used to determine the HRG for a long-stay medical patient, for example, an elderly person who has had a stroke.

The adult diagnosis-driven HRGs are differentiated by disorder type.

Interactive CC splits are employed within the majority of both diagnosis-driven and procedure-driven HRG roots in this subchapter – up to a maximum of six levels – to more appropriately differentiate expected resource usage between routine and complex patients.

All diagnosis-driven activity relating to the treatment of children (aged 18 years and under) groups to an HRG in **Chapter P Diseases of Childhood and Neonates**, in line with the requirements of the Casemix Design Framework.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	101	101
Total HRG Roots	29	29
Procedure-driven HRGs	51	51
Diagnosis-driven HRGs	50	50
Age Splits	Yes	Yes
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	Yes	Yes

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19).

Subchapter AB – Pain Management

Subchapter **AB Pain Management** relates to services for pain management and covers activity for patients of all ages. It includes activity undertaken in inpatient, day case and non-admitted care settings.

The HRGs within this subchapter are separated into specific types of procedures rather than by complexity level. Therefore, there are HRGs specific to high-volume pain management procedures, for example joint injections or acupuncture.

There are also HRGs for specific high-cost specialised activity, such as the insertion of neurostimulators, the insertion of intrathecal drug delivery pumps, and radiofrequency ablation or cryoablation, for pain management.

Eleven of the HRGs within this subchapter can only be derived with a primary diagnosis indicating pain management. This is to distinguish the activity grouping to these HRGs from activity where the same procedures are undertaken for the treatment of other conditions.

The majority of the HRGs within this subchapter have maximum length of stay logic to ensure that minor procedures, such as injection into joint, are not used to determine the HRG for a long-stay medical patient, for example, a person who has suffered a stroke.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	13	13
Total HRG Roots	13	13
Procedure-driven HRGs	13	13
Diagnosis-driven HRGs	0	0
Age Splits	No	No
Complications and Comorbidities Splits	No	No
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	Yes	Yes

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19).

Subchapter BZ – Eyes and Periorbita Procedures and Disorders

Subchapter **BZ Eyes and Periorbita Procedures and Disorders** covers procedures for patients of all ages and diagnoses for adults relating to the eyes and periorbita, delivered in admitted or non-admitted care settings.

The HRG roots are separated based on the type of eye surgery – e.g. cataract or lens, ocular motility etc. – and the related HRGs are split into up to six levels of complexity (minor, intermediate, major, very major, complex and very complex).

Multiple-procedure logic is employed within the procedure-driven HRG roots within this subchapter, as are age splits: there are specific HRGs for adult activity (19 years and over) and others for paediatric activity (18 years and under) within many of the BZ HRG roots. There are also age-specific HRG roots that separate adult and paediatric activity at the root level. In addition, some HRG roots in Subchapter BZ employ paediatric age splits, which enable HRGs specific to the treatment of young children (0 to 3 years of age). Escalation to an HRG root with a higher expected resource use also occurs in this subchapter, where appropriate, when procedures are undertaken under general anaesthetic, are performed bilaterally or are revisional.

A number of the HRG roots within this subchapter relate to specific high-volume procedures, such as phacoemulsification cataract extraction and lens implantation, and retinal tomography.

The majority of minor complexity HRG roots in this subchapter employ maximum length of stay logic to ensure that minor procedures, such as irrigation of tear duct, are not used to determine the HRG for a long-stay medical patient, e.g. a person who has suffered a stroke.

Interactive CC splits are employed within some of the procedure-driven HRG roots in this subchapter – up to a maximum of three levels – to differentiate complex patients from routine patients.

The one diagnosis-driven HRG root in this subchapter, **BZ24 Non-Surgical Ophthalmology**, which is exclusively for adult activity, has both intervention and interactive CC splits.

All diagnosis-driven activity relating to the treatment of children (aged 18 years and under) groups to an HRG in Chapter **P Diseases of Childhood and Neonates**, in line with the requirements of the Casemix Design Framework.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	94	94
Total HRG Roots	48	48
Procedure-driven HRGs	90	90
Diagnosis-driven HRGs	4	4
Age Splits	Yes	Yes
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	Yes	Yes
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	Yes	Yes

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19).

Subchapter CA – Ear, Nose, Mouth, Throat and Neck Procedures

Subchapter **CA Ear, Nose, Mouth, Throat and Neck Procedures** covers ear, nose, mouth, throat and neck procedures for patients of all ages. It includes activity undertaken in inpatient, day case and non-admitted care settings.

It does not include dental or orthodontic procedures, which are covered by Subchapter **CD Dental and Orthodontic Procedures**.

The HRG roots within this subchapter are generally divided based on the site of surgery – e.g. neck, ear, nose etc. – but there are also HRG roots specific to maxillofacial and audiology procedures.

Related HRG roots are divided into a maximum of seven levels of complexity (minimal, minor, intermediate, major, very major, complex and very complex), although HRG roots at the high end of the complexity range are not employed for some sites or types of procedures.

There are also procedure-specific HRG roots for high-volume procedures, e.g. tonsillectomy, nasal polypectomy and reduction of fracture of nasal bone, and for specialised procedures, such as cochlear implants.

Multiple-procedure logic is employed throughout the HRG roots within this subchapter, as are age splits: There are specific HRGs for adult activity (19 years and over) and others for paediatric activity (18 years and under). There are also HRGs specific to the treatment of infants (0 to 1 year of age) as well as those for older children (2 to 18 years). For some of the audiology activity, there are HRGs specific to preschool-aged children (4 years and under) and school-aged children (5 to 18 years). Escalation to an HRG root with a higher expected resource use also occurs in this subchapter, where appropriate, when procedures are performed bilaterally or where the patient is being treated for vascular nasal tumours.

Most of the minor and minimal procedure HRG roots within this subchapter have maximum length of stay logic to ensure that minor procedures, such as drainage of ear wax, are not used to determine the HRG for a long-stay medical patient, e.g. a person who has suffered a stroke.

Interactive CC splits are employed within many of the more complex HRG roots within this subchapter – up to a maximum of three levels – to differentiate complex patients from routine patients.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	120	120
Total HRG Roots	70	70
Procedure-driven HRGs	120	120
Diagnosis-driven HRGs	0	0
Age Splits	Yes	Yes
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	Yes	Yes

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19).

Subchapter CB – Ear, Nose, Mouth, Throat and Neck Disorders

Subchapter **CB Ear, Nose, Mouth, Throat and Neck Disorders** includes all ear, nose, mouth, throat and neck disorders for adult patients only. It includes activity undertaken in inpatient and day case settings.

The HRGs within this subchapter are separated into two HRG roots, malignant and non-malignant ear, nose, mouth, throat and neck disorders.

Interactive CC splits are employed within both of the HRG roots within this subchapter – up to a maximum of three levels – to differentiate complex patients from routine patients. Intervention splits are also employed within both HRG roots.

All diagnosis-driven activity relating to the treatment of children (aged 18 years and under) groups to an HRG in Chapter **P**

Diseases of Childhood and Neonates, in line with the requirements of the Casemix Design Framework.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	12	12
Total HRG Roots	2	2
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	12	12
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	Yes	Yes
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19).

Subchapter CD – Dental and Orthodontic Procedures

Subchapter **CD Dental and Orthodontic Procedures** covers dental and orthodontic procedures for patients of all ages. It includes activity undertaken in inpatient, day case and non-admitted care settings.

All other procedures on the mouth are covered alongside ear, nose, throat and neck procedures in Subchapter **CA Ear, Nose, Mouth, Throat and Neck Procedures**.

The HRG roots within this subchapter are divided based on the type of procedure – e.g. tooth extractions, orthodontic appliance procedures. Related HRG roots are further divided based on up to three levels of complexity (minor, intermediate and major).

Most HRG roots within this subchapter employ age splits: there are specific HRGs for adult activity (19 years and over) and others for paediatric activity (18 years and under).

All the HRG roots within this subchapter have maximum length of stay logic to ensure that minor procedures, such as tooth extraction, are not used to determine the HRG for a long-stay medical patient, e.g. a person who has suffered a stroke.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	23	23
Total HRG Roots	12	12
Procedure-driven HRGs	23	23
Diagnosis-driven HRGs	0	0
Age Splits	Yes	Yes
Complications and Comorbidities Splits	No	No
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	Yes	Yes

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19).

Subchapter DX – COVID-19 Infection

Subchapter **DX COVID-19 Infection** is a new subchapter designed specifically to identify patients with a primary diagnosis of either ***U07.1 COVID-19, virus identified*** or ***U07.2 COVID-19, virus not identified*** who have no significant procedures recorded. It covers patients of all ages and includes activity undertaken in admitted patient care (APC) settings only. As the HRGs are diagnosis-driven, they cannot be generated in a non-admitted care setting.

Subchapter **DX COVID-19 Infection** has been created in response to updates to national coding guidance regarding the recording of COVID-19 infections, which has confirmed that the two COVID-19 ICD-10 codes are effectively identifying a cohort of patients with the same disease and treatment pathway.

U07.1 COVID-19, virus identified must only be assigned for laboratory confirmed cases of COVID-19 (i.e. positive test result).

U07.2 COVID-19, virus not identified is used when COVID-19 is diagnosed clinically or epidemiologically but laboratory testing is inconclusive or not available

Composition and Concepts		
	C21/22v2 July 2020	P20/21
Total HRGs	6	N/A
Total HRG Roots	3	N/A
Procedure-driven HRGs	0	N/A
Diagnosis-driven HRGs	6	N/A
Age Splits	Yes	N/A
Complications and Comorbidities Splits	No	N/A
Intervention Splits	No	N/A
Multiple Procedures	No	N/A
Procedure Combination Codes	No	N/A
Diagnosis-qualified	No	N/A
Subsidiary Procedure-qualified	No	N/A
Length of Stay-qualified	No	N/A

There are six HRGs within this subchapter, as follows:

- **DX01A COVID-19 Infection, with Major Manifestations, 19 years and over**
- **DX01B COVID-19 Infection, with Major Manifestations, 18 years and under**
- **DX11A COVID-19 Infection, with Pneumonia, 19 years and over**
- **DX11B COVID-19 Infection, with Pneumonia, 18 years and under**
- **DX21A COVID-19 Infection, 19 years and over**
- **DX21B COVID-19 Infection, 18 years and under**

Subchapter DX COVID-19 Infection HRG Grouping Logic

The Subchapter **DX COVID-19 Infection** HRGs require a primary diagnosis of either **U07.1 COVID-19, virus identified** or **U07.2 COVID-19, virus not identified** and no significant procedures recorded. They cover patients of all ages and can only be generated from the APC Data Set.

The HRG Grouping logic makes use of two lists, effectively “escalating” from the DX21* “infection-only” base HRGs when specified secondary diagnoses are recorded.

For example:

- If the patient has one or more major manifestations recorded as secondary diagnoses in the patient record (as identified by one of the 125 ICD-10 codes on the “Major Manifestation” list **DX_Major**), the HRG root that will be generated will be **DX01 COVID-19 Infection, with Major Manifestations**

The Major Manifestations list includes conditions clinically identified as major manifestations of other diseases caused by the COVID-19 infection, such as sepsis, blood clots, organ failure and paediatric multisystem inflammatory syndrome. The complete list of codes on the Major Manifestations list can be found in the Code to Group Workbook that accompanies the July 2020 release of the updated HRG4+ 2020/21 Local Payment Grouper v2.

- If the patient does not have a Major Manifestation recorded but does have a manifestation of “COVID-pneumonia”, recorded in accordance with national coding standards as a secondary diagnosis of **J12.8 Other viral pneumonia**, the HRG root that will be generated will be **DX11 COVID-19 Infection, with Pneumonia**. The ICD-10 code **J12.8 Other viral pneumonia** is the only ICD-10 code on the “COVID-Pneumonia” list (list **DX_Pneumonia**)

If the patient has COVID-Pneumonia and one or more of the manifestations on list **DX_Major**, then a **DX01*** HRG will be generated.

- If the patient has a primary diagnosis of either **U07.1 COVID-19, virus identified** or **U07.2 COVID-19, virus not identified** and has no manifestations of the disease recorded that are included on either the Major Manifestations or COVID-Pneumonia lists, the HRG root that will be generated will be **DX21 COVID-19 Infection**

The HRGs within this subchapter employ standard adult / child age splits (19 years and over / 18 years and under) and do not employ any CC or Intervention splits.

The Subchapter **DX COVID-19 Infection** HRGs do not take into account whether or not patients have subsequently been admitted to intensive care facilities, as the data, and the appropriate unbundled HRG design, is reliant upon different data sets, for example the Critical Care Minimum Data Sets.

As both episode and spell APC grouping are based on the patient’s adjusted rather than total length of stay, the days relating to Critical Care, discrete Rehabilitation or Specialist Palliative Care should be included in the grouping input file, as per standard HRG grouping.

Event-based unbundled HRGs, recorded using OPCS-4 procedure codes and relating to services such as dialysis for acute renal failure, will also be generated in addition to the APC core Subchapter **DX COVID-19 Infection** HRGs for patients admitted with a COVID-19 infection primary diagnosis, as per the Casemix design principles. Please see the respective unbundled HRG subchapters for further information on how these HRGs are generated.

Understanding HRG Grouping Methods

The HRGs in Subchapter **DX COVID-19 Infection** are diagnosis-driven and so not all patients with a primary diagnosis of **U07.1 COVID-19, virus identified** or **U07.2 COVID-19, virus not identified** will group to this subchapter

For example:

- In line with standard grouping methodology, these HRGs will not be generated if any elements of the data in the mandated fields required for grouping are invalid. If this is the case, the HRG **UZ01Z Data Invalid for Grouping** will be generated
- **Core 1** procedure-driven grouping takes precedence over **Core 1** diagnosis-driven grouping in the HRG design. Where a patient has a significant procedure (determined by the procedure hierarchy within the design), a procedure-driven HRG will be generated. However, the design also includes maximum length of stay logic for some procedures. For these procedures, grouping will effectively “flip” to diagnosis-driven HRG grouping where the maximum adjusted length of stay for the procedure has been exceeded. These are the basic principles of **Core 1** Logic

Where the dominant procedure has a procedure hierarchy (PH) value of five or more and has no maximum length of stay logic check (at either the episode or spell level), the HRG generated will be procedure-driven.

For patients with a primary diagnosis of either **U07.1 COVID-19, virus identified** or **U07.2 COVID-19, virus not identified** who have a significant procedure recorded (that is not subject to a maximum length of stay check), the HRG generated will be from a subchapter other than Subchapter **DX COVID-19 Infection**.

For patients with a primary diagnosis of either **U07.1 COVID-19, virus identified** or **U07.2 COVID-19, virus not identified** who have a significant procedure recorded (that is subject to a maximum length of stay check), HRGs from Subchapter **DX COVID-19 Infection** will be generated where the maximum length of stay for the dominant procedure (at either the episode or spell level) is exceeded.

- Where the dominant procedure in the APC patient record has a PH value of two, an unbundled HRG will be derived (in addition to the core HRG). Procedures with a PH value of one are deemed insignificant for grouping purposes, so the HRG derived will be generated from the spell primary diagnosis
 - Where the dominant procedure in the patient record has a PH value of zero, the procedure is not valid for Casemix Grouping and will generate the HRG **UZ01Z Data Invalid for Grouping**, irrespective of the primary diagnosis of the patient
- Where patients are admitted as a result of Multiple Trauma injuries, **Core 4** grouping logic is employed, and as such a Subchapter **DX COVID-19 Infection** HRG cannot be generated, as neither **U07.1 COVID-19, virus identified** or **U07.2 COVID-19, virus not identified** are present on the Multiple Trauma primary diagnoses “entry list”
- Where patients have a second- or third-degree burn with diagnoses recorded in any position, **Core 7** logic (and subsequently **Core 3** escalation logic) is employed. As such a Subchapter **DX COVID-19 Infection** HRG will not be generated, as “burns” logic takes precedence over **Core 1** grouping logic. The resultant HRG will be from Subchapter **JB Burns Procedures and Disorders**

- **Core 5** logic is referred to as “global exception logic” and takes precedence over **Core 1** logic within the grouping process. For example, this allows for planned procedures not carried out (recorded via ICD-10 secondary diagnoses codes) to override **Core 1** grouping using diagnoses that would ordinarily result in a different HRG
 - Coding standard **DCS.XXI.11: Cancelled procedures and abandoned procedures (Z53)** states that “*Codes in category Z53.- Persons encountering health services for specific procedures, not carried out must never be assigned in a primary position. Z53.- must only be used for patients admitted electively for a procedure which is subsequently cancelled/not carried out/not started for any reason and no other procedure has been carried out, i.e. the coded record contains no OPCS-4 procedure codes within that particular consultant episode.*”

Therefore, if the ICD-10 codes (**Z53***) are recorded in the patient record, the HRG root **WH50 Procedure Not Carried Out** will be derived, for patients of all ages.

- **Core 5** grouping logic is also employed to override HRG derivation in specific circumstances to allow the generation of HRGs that identify patients who, irrespective of their primary diagnosis, are admitted or attend for one of the following reasons:
 - I. Solely for radiotherapy treatment and have a length of stay of zero days
 - II. Solely for chemotherapy treatment and have a length of stay of zero days
 - III. Solely for nuclear medicine investigations under Treatment Function Code **371 Nuclear Medicine**
 - IV. Solely for diagnostic imaging investigations under Treatment Function Code **812 Diagnostic Imaging**

Further details of the Casemix grouping logic and design principles can be found in the Casemix Companion that accompanies this release.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

Accommodation of ICD-10 emergency use codes

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been added to the major manifestations list, **DX_Major**, as per **R65.0 Systemic Inflammatory Response Syndrome of infectious origin without organ failure**.

Subchapter DX: Worked Examples

Cases A to F illustrate the basic grouping of the new HRGs.

Case	Age	Overall Length of Stay (Days)	Adjusted Length of Stay (Days)	Primary Diagnosis	Secondary Diagnosis	Dominant Procedure	HRG4+
A	20	10	10	U07.1 COVID-19, virus identified or U07.2 COVID-19, virus not identified	A41.9 Sepsis, unspecified		DX01A COVID-19 Infection, with Major Manifestations, 19 years and over
B	5	10	10	U07.1 COVID-19, virus identified or U07.2 COVID-19, virus not identified	U07.5 Multisystem inflammatory syndrome associated with COVID-19		DX01B COVID-19 Infection, with Major Manifestations, 18 years and under
C	20	10	10	U07.1 COVID-19, virus identified or U07.2 COVID-19, virus not identified	J12.8 Other viral pneumonia		DX11A COVID-19 Infection, with Pneumonia, 19 years and over
D	5	10	10	U07.1 COVID-19, virus identified or U07.2 COVID-19, virus not identified	J12.8 Other viral pneumonia		DX11B COVID-19 Infection, with Pneumonia, 18 years and under
E	20	10	10	U07.1 COVID-19, virus identified or U07.2 COVID-19, virus not identified			DX21A COVID-19 Infection, 19 years and over
F	5	10	10	U07.1 COVID-19, virus identified or U07.2 COVID-19, virus not identified			DX21B COVID-19 Infection, 18 years and under

Cases G to I illustrate the basic grouping of the new HRGs, with an adjusted length of stay relating to specialist care, without a dominant procedure recorded.

Case	Age	Overall Length of Stay (Days)	Adjusted Length of Stay (Days)	Primary Diagnosis	Secondary Diagnosis	Dominant Procedure	HRG4+
G	20	10	0	U07.1 COVID-19, virus identified <i>or</i> U07.2 COVID-19, virus not identified	A41.9 Sepsis, unspecified; J12.8 Other viral pneumonia		DX01A COVID-19 Infection, with Major Manifestations, 19 years and over
H	5	10	0	U07.1 COVID-19, virus identified <i>or</i> U07.2 COVID-19, virus not identified	U07.5 Multisystem inflammatory syndrome associated with COVID-19; J12.8 Other viral pneumonia		DX01B COVID-19 Infection, with Major Manifestations, 18 years and under
I	20	10	0	U07.1 COVID-19, virus identified <i>or</i> U07.2 COVID-19, virus not identified	J12.8 Other viral pneumonia		DX11A COVID-19 Infection, with Pneumonia, 19 years and over

Cases J to M illustrate the grouping of the new HRGs where a dominant procedure (that does not have a maximum adjusted length of stay logic check) is recorded.

In addition, patients of all ages typically may generate the same HRG root as a result of procedure-driven grouping. As these HRGs are not affected by length of stay, the HRG roots detailed below are applicable for all lengths of stay, irrespective of whether they are Overall, or Adjusted.

Case	Age	Overall Length of Stay (Days)	Adjusted Length of Stay (Days)	Primary Diagnosis	Secondary Diagnosis	Dominant Procedure	HRG4+ Root
J	20	10	10	U07.1 COVID-19, virus identified or U07.2 COVID-19, virus not identified	J12.8 Other viral pneumonia	T52.6 Revision of digital fasciectomy	HN42 Very Major Hand Procedures for Non-Trauma
K	5	10	10	U07.1 COVID-19, virus identified or U07.2 COVID-19, virus not identified	A41.9 Sepsis, unspecified	T52.6 Revision of digital fasciectomy	HN42 Very Major Hand Procedures for Non-Trauma
L	20	10	0	U07.1 COVID-19, virus identified or U07.2 COVID-19, virus not identified		T52.6 Revision of digital fasciectomy	HN42 Very Major Hand Procedures for Non-Trauma
M	5	10	0	U07.1 COVID-19, virus identified or U07.2 COVID-19, virus not identified	J12.8 Other viral pneumonia	T52.6 Revision of digital fasciectomy	HN42 Very Major Hand Procedures for Non-Trauma

Cases N to Q illustrate the grouping of the new HRGs where a dominant procedure (which has maximum adjusted length of stay logic) is recorded, either where the maximum length of stay logic criteria is met or not.

In addition, patients of all ages may generate the same HRG root as a result of procedure-driven grouping.

Case	Age	Overall Length of Stay (Days)	Adjusted Length of Stay (Days)	Primary Diagnosis	Secondary Diagnosis	Dominant Procedure	HRG4+
N	20	10	10	U07.1 COVID-19, virus identified or U07.2 COVID-19, virus not identified	J12.8 Other viral pneumonia	E85.6 Continuous positive airway pressure	DX11A COVID-19 Infection, with Pneumonia, 19 years and over
O	20	10	0	U07.1 COVID-19, virus identified or U07.2 COVID-19, virus not identified		E85.6 Continuous positive airway pressure	DZ37A Non-Invasive Ventilation Support Assessment, 19 years and over
P	5	10	10	U07.1 COVID-19, virus identified or U07.2 COVID-19, virus not identified		E85.6 Continuous positive airway pressure	DX21B COVID-19 Infection, 18 years and under
Q	5	10	0	U07.1 COVID-19, virus identified or U07.2 COVID-19, virus not identified	A41.9 Sepsis, unspecified	E85.6 Continuous positive airway pressure	DZ37B Non-Invasive Ventilation Support Assessment, 18 years and under

In the above example, a dominant procedure of OPCS-4 code **E85.6 Continuous positive airway pressure** has a maximum length of stay logic check of zero days. For adjusted lengths of stay of one day or more, where the dominant procedure is **E85.6 Continuous positive airway pressure**, the HRG derived will be diagnosis-driven.

Maximum length of stay logic can be a different duration for different OPCS-4 codes: for example, where OPCS-4 code **L91.1 Open insertion of central venous catheter** is the dominant procedure, the HRG derived will be procedure-driven for adjusted lengths of stay that are less than three days. For further details relating to the grouping logic, please see the Code to Group tab in the Code to Group workbook that accompanies this Grouper release.

Subchapter DZ – Respiratory System Procedures and Disorders

Subchapter **DZ Respiratory System Procedures and Disorders** covers both adult respiratory diagnoses and thoracic and respiratory procedures for patients of all ages. It includes activity undertaken in inpatient, day case and non-admitted care settings.

It does not include percutaneous procedures undertaken on the respiratory system: these map to Subchapter **YD Thoracic Imaging Interventions**.

The surgical HRGs within this subchapter are split into five levels of complexity (minor, intermediate, major, complex and very complex). There is also an HRG specific to lung transplantation.

Multiple-procedure logic is employed throughout the surgical HRGs within this subchapter, as are age splits: there are specific HRGs for adult activity (19 years and over) and others for paediatric activity (18 years and under). There are also HRGs specific to the treatment of infants (0 to 1 year of age) and those for older children (2 to 18 years). Escalation to an HRG with a higher expected resource use also occurs when procedures are performed bilaterally.

There are HRGs specific to bronchoscopic procedures that are split into three levels of complexity for therapeutic procedures, and there are specific HRGs for diagnostic procedures. The latter are split into adult (19 years and over) and paediatric (18 years and under) HRGs.

There are also HRGs specific to respiratory physiology procedures, several of which are split into adult- and paediatric-specific HRGs.

All minor complexity HRGs in this subchapter, including the respiratory physiology procedure HRGs and the majority of bronchoscopic HRGs, have maximum length of stay logic to ensure that minor procedures, such as oxygen assessment, are not used to determine the HRG for a long-stay medical patient, e.g. a person who has lung cancer.

The adult diagnosis-driven HRGs for respiratory system disorders are disease-specific.

Interactive CC splits are employed within the majority of HRG roots within this subchapter – up to a maximum of five levels – to more appropriately differentiate expected resource usage between routine and complex patients.

In addition, intervention splits, including those that differentiate between whether a single intervention or multiple interventions have been undertaken, are employed within the majority of the diagnosis-driven HRG roots.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	176	176
Total HRG Roots	52	52
Procedure-driven HRGs	46	46
Diagnosis-driven HRGs	130	130
Age Splits	Yes	Yes
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	Yes	Yes
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	Yes	Yes

All diagnosis-driven activity relating to the treatment of children (aged 18 years and under) groups to an HRG in Chapter **P Diseases of Childhood and Neonates**, in line with the requirements of the Casemix Design Framework.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19).

Subchapter EB – Cardiac Disorders

Subchapter **EB Cardiac Disorders** covers all diagnoses for adults within the cardiac specialty. It includes activity undertaken in inpatient and day case settings.

The HRGs within this subchapter are split based on disorder type.

Interactive CC splits are employed within the majority of HRG roots within this subchapter – up to a maximum of three levels – to more appropriately differentiate expected resource usage between routine and complex patients.

All diagnosis-driven activity relating to the treatment of children (aged 18 years and under) groups to an HRG in Chapter **P Diseases of Childhood and Neonates**, in line with the requirements of the Casemix Design Framework.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	48	48
Total HRG Roots	13	13
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	48	48
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19).

Subchapter EC – Open and Interventional Procedures for Congenital Heart Disease

Subchapter **EC Open and Interventional Procedures for Congenital Heart Disease** covers procedures within cardiac surgery that are either carried out on patients 18 years or under or are carried out as a result of adult patients having congenital heart disease. Subchapter EC includes activity undertaken in inpatient, day case and non-admitted care settings.

All other cardiac procedures are covered within Subchapters **ED Open Cardiac Procedures for Acquired Conditions** or **EY Interventional Cardiology for Acquired Conditions**.

The therapeutic congenital cardiac procedure HRGs are split into six levels of complexity (minor, intermediate, major, very major, complex, and very complex).

Multiple-procedure logic is employed within the majority of HRGs within this subchapter. In addition, escalation to a higher expected resource HRG also occurs where there is active cooling during surgery, when percutaneous procedures are undertaken under general anaesthetic or if a procedure is revisional.

There are also HRGs specific to diagnostic congenital cardiac procedures and tests.

All paediatric procedure-driven cardiac activity, with the exception of transplant surgery, maps to the HRGs within Subchapter **EC Open and Interventional Procedures for Congenital Heart Disease**.

The congenital cardiac physiology HRGs have maximum length of stay logic to ensure that minor procedures such as ECGs are not used to determine the HRG for a long-stay medical patient, e.g. a person who has suffered a heart attack.

Interactive CC splits are employed within the majority of HRG roots within this subchapter – up to a maximum of three levels – to more appropriately differentiate expected resource usage between routine and complex patients.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	21	21
Total HRG Roots	9	9
Procedure-driven HRGs	21	21
Diagnosis-driven HRGs	0	0
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	Yes	Yes

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19).

Subchapter ED – Open Cardiac Procedures for Acquired Conditions

Subchapter **ED Open Cardiac Procedures for Acquired Conditions** covers open cardiac procedures for acquired heart disease for adult patients. It includes activity undertaken in inpatient, day case and non-admitted care settings.

Percutaneous cardiac procedures map to Subchapter **EY Interventional Cardiology for Acquired Heart Disease**.

With the exception of seven HRGs specific to transplantation (covered by the HRGs **ED01Z Heart and Lung Transplant to ED09Z Standard Insertion of Long-Term Bridge to Transplant Ventricular Assist Device** inclusive), procedures that are either carried out on children (patients 18 years or under) or are carried out as a result of adult patients having congenital heart disease are covered within Subchapter **EC Open and Interventional Procedures for Congenital Heart Disease**.

Subchapter **ED Open Cardiac Procedures for Acquired Conditions** consists of HRGs specific to transplant surgery, thoracic aortic surgery, coronary artery bypass and valve replacement/repair procedures and other open procedures on the heart or pericardium.

Varying levels of complexity of surgery are reflected in these HRGs, often through the creation of standard and complex equivalent HRGs.

Multiple-procedure logic is employed within the majority of HRGs within this subchapter. In addition, for complex open surgery, escalation to a higher expected resource HRG also occurs where there is active cooling during surgery, if a procedure is revisional or if the primary diagnosis is a heart infection or constricted pericarditis.

Several of the HRGs within this subchapter are specific to high-cost, specialised activity, such as complex aortic aneurysm surgery.

Interactive CC splits are employed within the majority of HRG roots within this subchapter – up to a maximum of three levels – to more appropriately differentiate expected resource usage between routine and complex patients.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	48	48
Total HRG Roots	24	24
Procedure-driven HRGs	48	48
Diagnosis-driven HRGs	0	0
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19).

Subchapter EY – Interventional Cardiology for Acquired Conditions

Subchapter **EY Interventional Cardiology for Acquired Conditions** covers interventional cardiology procedures for acquired conditions for adult patients. It includes activity undertaken in inpatient, day case and non-admitted care settings.

Open procedures for acquired heart disease map to Subchapter **ED Open Cardiac Procedures for Acquired Heart Disease**.

Procedures that are either carried out on patients 18 years or under or are carried out as a result of patients having congenital heart disease are covered within Subchapter **EC Open and Interventional Procedures for Congenital Heart Disease**.

This subchapter consists of HRGs specific to pacemaker and defibrillator procedures, transcatheter aortic valve implantation (TAVI), complex percutaneous repairs, cardiac ablation, electrophysiology studies, coronary angioplasty, cardiac catheterisation and cardiac physiological tests.

Varying levels of complexity of surgery are reflected in these HRGs, often through the creation of standard and complex equivalent HRGs.

Multiple-procedure logic is employed within the majority of HRGs within this subchapter. In addition, escalation to a higher expected resource HRG also occurs if specified imaging or other assistance procedures are used to support the undertaking of the procedure, e.g. intravascular ultrasound (IVUS) or fractional flow reserve (FFR).

Several of the HRGs within this subchapter identify high-cost, specialised activity, such as the insertion of implantable cardiac defibrillators and TAVI.

The cardiac physiology HRGs have maximum length of stay logic to ensure that minor procedures such as ECGs are not used to determine the HRG for a long-stay medical patient, e.g. a person who has suffered a heart attack.

Interactive CC splits are employed within the majority of HRG roots within this subchapter – up to a maximum of six levels – to more appropriately differentiate expected resource usage between routine and complex patients.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	65	65
Total HRG Roots	26	26
Procedure-driven HRGs	65	65
Diagnosis-driven HRGs	0	0
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	Yes	Yes

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter FD – Digestive System Disorders

Subchapter **FD Digestive System Disorders** covers gastroenterology medicine for adults, delivered in admitted patient care settings.

There are several disease-specific HRG roots within Subchapter FD, but the majority of digestive system disorders are mapped to either the Malignant Gastrointestinal Tract Disorders HRG root or the Non-Malignant Gastrointestinal Tract Disorders HRG root.

Interactive CC splits are employed within six of the seven HRG roots within this subchapter – up to a maximum of four levels – to differentiate between the expected resource usage of routine patients and complex patients.

In addition, intervention splits, including at times those that differentiate between whether a single intervention or multiple interventions have been undertaken, are employed within all of the HRG roots in this subchapter.

All diagnosis-driven activity relating to the treatment of children (aged 18 years and under) groups to an HRG in Chapter **P Diseases of Childhood and Neonates**, in line with the requirements of the Casemix Design Framework.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	54	54
Total HRG Roots	7	7
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	54	54
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	Yes	Yes
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter FE – Digestive System Endoscopic Procedures

Subchapter **FE Digestive System Endoscopic Procedures** covers endoscopic digestive system procedures for patients of all ages, delivered in admitted or non-admitted care settings.

It does not include laparoscopic and open surgical digestive system procedures, which are covered by Subchapter **FF Digestive System Open and Laparoscopic Procedures**, or interventions for the treatment of hepatobiliary or pancreatic system disorders, which are covered by Chapter **G Hepatobiliary and Pancreatic System** and Subchapter **YG Hepatobiliary and Pancreatic Imaging Interventions**.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	37	37
Total HRG Roots	22	22
Procedure-driven HRGs	37	37
Diagnosis-driven HRGs	0	0
Age Splits	Yes	Yes
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	Yes	Yes

The endoscopic procedure HRG roots within Subchapter FE are differentiated based on the type of scope used and whether the intervention is diagnostic, diagnostic with biopsy, or therapeutic. The therapeutic HRG roots are further differentiated based on complexity.

Many of the HRG roots in this subchapter employ age splits, and several employ paediatric age splits: there are specific HRGs for adult activity (19 years and over), others for paediatric activity (18 years and under), and still others specific to infants (1 year and under). There are also age-specific HRG roots that separate adult and paediatric activity at the root level.

Interactive CC splits are employed within several HRG roots within this subchapter – up to a maximum of four levels – to differentiate complex patients from routine patients.

Multiple-procedure logic is employed within many of the HRG roots within this subchapter, with some activity escalating to an HRG root in Subchapter **FF Digestive System Open and Laparoscopic Procedures**. Escalation to an HRG root with a higher expected resource use also occurs in this subchapter, where appropriate, when a lower gastrointestinal tract endoscopic procedure is combined with an upper gastrointestinal tract endoscopic procedure, and vice versa, or when a biopsy is performed in addition to a diagnostic endoscopic procedure.

The less-resource intensive HRG roots within this subchapter have maximum length of stay logic to ensure that minor procedures, such as diagnostic colonoscopy, are not used to determine the HRG for a long-stay medical patient, e.g. a person who has a gastrointestinal tract bleed.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter FF – Digestive System Open and Laparoscopic Procedures

Subchapter **FF Digestive System Open and Laparoscopic Procedures** covers both laparoscopic and open surgical digestive system procedures for patients of all ages, delivered in admitted or non-admitted care settings.

Generally, it does not include endoscopic digestive system procedures, as these are typically covered by Subchapter **FE Digestive System Endoscopic Procedures**, and it does not include interventions for the treatment of hepatobiliary or pancreatic system disorders, which are covered by Chapter **G Hepatobiliary and Pancreatic System** and Subchapter **YG Hepatobiliary and Pancreatic Imaging Interventions**.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	112	112
Total HRG Roots	35	35
Procedure-driven HRGs	112	112
Diagnosis-driven HRGs	0	0
Age Splits	Yes	Yes
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	Yes	Yes

The surgical HRG roots within this subchapter are divided based on the site of surgery – e.g. oesophagus and stomach, small intestine or large intestine – with related HRGs separated by level of complexity (minor, intermediate, major, very major, complex and very complex). Not all complexity levels are relevant to each site, with a maximum of five levels of complexity applicable to any single site.

Some endoscopic procedures have been mapped to **FF Digestive System Open and Laparoscopic Procedures** as their expected resource use is more akin to clinically similar digestive system procedures performed laparoscopically than to other endoscopic procedures. Additionally, some endoscopic procedures group to this subchapter in order to keep clinically similar activity within the same subchapter, e.g. procedures undertaken to treat obesity.

There are also procedure-specific HRG roots for high-volume procedures such as hernia repair or appendicectomy, and for specialised procedures such as bariatric surgery or insertion of neurostimulator for the treatment of faecal incontinence.

Many of the HRG roots in this subchapter employ age splits, and several employ paediatric age splits: there are specific HRGs for adult activity (19 years and over), others for paediatric activity (18 years and under), and still others specific to infants (1 year and under). There are also age-specific HRG roots that separate adult and paediatric activity at the root level.

Interactive CC splits are employed within the majority of HRG roots within this subchapter – up to a maximum of five levels – to differentiate complex patients from routine patients.

Multiple-procedure logic is employed within many of the HRG roots within this subchapter. Escalation to an HRG root with a higher expected resource use also occurs in this subchapter, where appropriate, when certain procedures, e.g. hernia repair, are performed bilaterally or are revisional.

Several procedures that group to this subchapter will group to different HRGs depending on which primary diagnosis is coded alongside the dominant procedure in the patient record, e.g. procedures that can be performed to treat either gastrointestinal cancers or obesity.

The less-resource intensive HRG roots within this subchapter have maximum length of stay logic to ensure that minor procedures, such as rubber band ligation of haemorrhoid, are not used to determine the HRG for a long-stay medical patient, e.g. a person who has a gastrointestinal tract bleed.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter GA – Hepatobiliary and Pancreatic System Open and Laparoscopic Procedures

Subchapter **GA Hepatobiliary and Pancreatic System Open Procedures** includes hepatobiliary and pancreatic system surgery for patients of all ages. It includes activity undertaken in inpatient, day case and non-admitted care settings.

It does not include endoscopic or percutaneous procedures on the hepatobiliary and pancreatic system as these map to Subchapters **GB Hepatobiliary and Pancreatic System Endoscopic and Percutaneous Procedures** and **YG Hepatobiliary and Pancreatic Imaging Interventions**, respectively.

The more general Hepatobiliary and Pancreatic HRG roots within this subchapter are divided into six levels of complexity: minor, intermediate, major, very major, complex and very complex.

There are also procedure-specific HRG roots for high-volume procedures such as cholecystectomy, or specialised procedures such as hepatobiliary transplants or pancreatic necrosectomy.

Multiple-procedure logic is employed throughout the HRG roots within this subchapter. Escalation to an HRG root with a higher expected resource use also occurs in this subchapter, where appropriate, for patients with acute pancreatitis.

The cholecystectomy HRG root is split based on whether the surgery was open or laparoscopic and has age splits: there are several HRGs specifically for adult activity (19 years and over) and one HRG specifically for paediatric activity (18 years and under). The liver transplant HRG root has a paediatric age split in addition to a standard age split: there is a specific HRG for adult activity (atypically defined as 18 years and over) and HRGs specific to the treatment of infants (0 to 1 year of age) and older children (2 to 17 years), respectively.

Interactive CC splits are employed within the majority of HRG roots within this subchapter – up to a maximum of three levels – to differentiate complex patients from routine patients.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	27	27
Total HRG Roots	11	11
Procedure-driven HRGs	27	27
Diagnosis-driven HRGs	0	0
Age Splits	Yes	Yes
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter GB – Hepatobiliary and Pancreatic System Endoscopic Procedures

Subchapter **GB Hepatobiliary and Pancreatic System Endoscopic Procedures** covers hepatobiliary and pancreatic system endoscopic procedures. It includes activity undertaken in inpatient, day case and non-admitted care settings for patients of all ages.

It does not include open surgical procedures, which map to Subchapter **GA Hepatobiliary and Pancreatic System Open and Laparoscopic Procedures**, or percutaneous procedures, which map to Subchapter **YG Hepatobiliary and Pancreatic Imaging Interventions**.

The HRG roots within this subchapter are split into endoscopic retrograde cholangiopancreatography (ERCP) procedures and endoscopic ultrasound procedures.

There are three therapeutic ERCP HRG roots (intermediate, major and complex) and two diagnostic ERCP HRG roots (with biopsy or cytology and without biopsy or cytology).

Multiple-procedure logic is employed throughout the HRG roots within this subchapter. Escalation to an HRG root with a higher expected resource use also occurs in this subchapter, where appropriate, for patients with acute pancreatitis.

Interactive CC splits are employed within many of the more complex HRG roots within this subchapter – up to a maximum of four levels – to differentiate complex patients from routine patients.

The less-resource intensive HRG roots within this subchapter have maximum length of stay logic to ensure that minor procedures, such as diagnostic ERCP, are not used to determine the HRG for a long-stay medical patient, e.g. a person who has liver failure.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Composition and Concepts		
	C21/22	P20/21
Total HRGs	14	14
Total HRG Roots	7	7
Procedure-driven HRGs	14	14
Diagnosis-driven HRGs	0	0
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	Yes	Yes

Subchapter GC – Hepatobiliary and Pancreatic System Disorders

Subchapter **GC Hepatobiliary and Pancreatic System Disorders** covers all adult liver, biliary and pancreatic system disorders. It includes activity undertaken in inpatient and day case settings.

The HRGs within this subchapter are spread across four HRG roots, two of which are disease-specific – for liver failure and non-obstructive jaundice – and two of which contain all other hepatobiliary and pancreatic system disorders – one for malignant disorders and one for non-malignant disorders.

Interactive CC splits are employed within all HRG roots within this subchapter – up to a maximum of four levels – to differentiate complex patients from routine patients.

In addition, intervention splits, including those that differentiate between whether a single intervention or multiple interventions have been undertaken, are employed within three of the four HRG roots in this subchapter.

All diagnosis-driven activity relating to the treatment of children (aged 18 years and under) groups to an HRG in Chapter **P Diseases of Childhood and Neonates**, in line with the requirements of the Casemix Design Framework.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	24	24
Total HRG Roots	4	4
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	24	24
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	Yes	Yes
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter HC – Spinal Procedures and Disorders

Subchapter **HC Spinal Procedures and Disorders** includes spinal surgery for patients of all ages and treatment for adult spinal disorders, undertaken as inpatient, day case or outpatient activity.

The majority of percutaneous spinal procedures map to Subchapter **YH Musculoskeletal Imaging Interventions**.

The procedure-driven HRGs within this subchapter are specific to spinal reconstruction, including instrumented correction of spinal deformity. There are also extradural spinal surgery HRGs with six levels of complexity (minor, intermediate, major, very major, complex and very complex), HRGs specific to intradural spinal surgery with two levels of complexity (major and complex), and HRGs specific to diagnostic spinal puncture.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	74	74
Total HRG Roots	23	23
Procedure-driven HRGs	39	39
Diagnosis-driven HRGs	35	35
Age Splits	Yes	Yes
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	Yes	Yes
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	Yes	Yes

Multiple-procedure logic is employed in the majority of these procedure-driven HRGs, as are age splits: There are specific HRGs for adult activity (19 years and over) and others for paediatric activity (18 years and under). For the diagnostic spinal puncture HRGs, paediatric activity is further disaggregated into splits for young children (0 to 5 years of age) and older children (6 to 18 years of age).

Escalation to an HRG with a higher expected resource use also occurs, where appropriate, when procedures are performed bilaterally, where the patient is being treated for a spinal tumour or infection, or wherever there is advanced monitoring – e.g. EPR during surgery.

HRGs **HC65Z Minor Extradural Spinal Procedures** and **HC72* Diagnostic Spinal Puncture** employ maximum length of stay logic to ensure that minor procedures, such as a diagnostic lumbar puncture, are not used to determine the HRG for a long-stay medical patient, e.g. a child who has meningitis.

Interactive CC splits are employed within the majority of both diagnosis-driven and procedure-driven HRG roots in this subchapter – up to a maximum of four levels – to more appropriately differentiate expected resource usage between routine and complex patients.

Intervention splits are employed by several diagnosis-driven HRG roots within this subchapter to acknowledge where “minor interventions” undertaken during a patient admission are expected to result in additional resource usage.

All diagnosis-driven activity relating to the treatment of children (aged 18 years and under) groups to an HRG in Chapter **P Diseases of Childhood and Neonates**, in line with the requirements of the Casemix Design Framework.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter HD – Musculoskeletal and Rheumatological Disorders

Subchapter **HD Musculoskeletal and Rheumatological Disorders** covers musculoskeletal and rheumatological disorders for adult patients. It includes activity undertaken in an inpatient and day case setting.

The HRGs within this subchapter are differentiated by disorder type.

Interactive CC splits are employed within all HRG roots within this subchapter – up to a maximum of six levels – to differentiate complex patients from routine patients.

All diagnosis-driven activity relating to the treatment of children (aged 18 years and under) groups to an HRG in Chapter **P Diseases of Childhood and Neonates**, in line with the requirements of the Casemix Design Framework.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	35	35
Total HRG Roots	7	7
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	35	35
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter HE – Orthopaedic Disorders

Subchapter **HE Orthopaedic Disorders** covers trauma and non-trauma orthopaedic diagnoses for adult patients only. It includes activity undertaken in inpatient and day case settings.

Adult spinal disorder HRGs can be found in Subchapter **HC Spinal Procedures and Disorders**.

Adult rheumatological and other musculoskeletal disorders can be found in Subchapter **HD Musculoskeletal and Rheumatological Disorders**.

Within this subchapter, there are HRGs for injuries based on the site of the injury, further differentiated based on the type of injury: fracture or other injury. There are also HRGs specific to complications of trauma and orthopaedic treatment.

Interactive CC splits are employed within all HRG roots within this subchapter – up to a maximum of five levels – to more appropriately differentiate expected resource usage between routine and complex patients.

In addition, intervention splits, including at times those that differentiate between whether a single intervention or multiple interventions have been undertaken, are employed within the majority of HRG roots in this subchapter.

All diagnosis-driven activity relating to the treatment of children (aged 18 years and under) groups to an HRG in Chapter **P Diseases of Childhood and Neonates**, in line with the requirements of the Casemix Design Framework.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	84	84
Total HRG Roots	15	15
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	84	84
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	Yes	Yes
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter HN – Orthopaedic Non-Trauma Procedures

Subchapter **HN Orthopaedic Non-Trauma Procedures** covers non-trauma orthopaedic procedures for patients of all ages. It includes activity undertaken in inpatient, day case and non-admitted care settings.

Trauma procedure activity can be found in Subchapter **HT Orthopaedic Trauma Procedures**.

Spinal activity can be found in Subchapter **HC Spinal Procedures and Disorders**.

Adult orthopaedic disorders can be found in Subchapter **HE Orthopaedic Disorders**.

Adult musculoskeletal and rheumatological disorders can be found in Subchapter **HD Musculoskeletal and Rheumatological Disorders**.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	111	111
Total HRG Roots	36	36
Procedure-driven HRGs	111	111
Diagnosis-driven HRGs	0	0
Age Splits	Yes	Yes
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	Yes	Yes

Subchapter HN does not include percutaneous spinal procedures, with the exception of OPCS-4 code **W35.5 Therapeutic percutaneous puncture of bone**: these map to Subchapter **YH Musculoskeletal Imaging Interventions**.

The orthopaedic procedures for non-trauma HRGs are differentiated based on the site of surgery – e.g. hip, knee, hand etc. – and are split into seven levels of complexity (minimal, minor, intermediate, major, very major, complex and very complex), with some sites combined at the higher complexity level.

To reflect the clinical care and high costs associated with the treatment of infected internal orthopaedic prosthetics, HRG roots **HN80 Very Complex, Hip or Knee Procedures for Non-Trauma** and **HN85 Very Complex, Foot, Hand, Shoulder or Elbow Procedures for Non-Trauma** have been created. These HRGs can only be derived for specific revisional and end-stage limb salvage procedures, indicated by a diagnosis code indicating infected internal orthopaedic prosthetics.

Multiple-procedure logic is employed throughout the HRGs within this subchapter, as are age splits: There are specific HRGs for adult activity (19 years and over) and others for paediatric activity (18 years and under). There are also HRGs specific to the treatment of young children (0 to 5 years of age) and those for older children (6 to 18 years). Escalation to an HRG with a higher expected resource use also occurs, where appropriate, when procedures are performed bilaterally (or on multiple digits of hands or feet), or where the patient is being treated for bone malignancy or an infected orthopaedic prosthesis.

All minor and minimal procedure HRGs within this subchapter have maximum length of stay logic to ensure that minor procedures, such as joint injections, are not used to determine the HRG for a long-stay medical patient, e.g. a person who has bone cancer.

Interactive CC splits are employed within the majority of HRG roots in this subchapter – up to a maximum of six levels – to more appropriately differentiate expected resource usage between routine and complex patients.

Multiple site codes

Where multiple site codes are recorded relating to the same dominant procedure, the sequencing of sites per the following site hierarchy is applied when grouping activity:

Spine > Hip > Knee > Shoulder > Elbow > Hand > Foot

Therefore, if **A59.2 Partial sacrifice of peripheral nerve** had subsequent site codes of **Z09.5 Posterior interosseous nerve** (ELBOW) and **Z09.2 Median nerve** (HAND), the combination code **A592+ELBOW Partial sacrifice of peripheral nerve of elbow** would be derived and would drive grouping.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter HT – Orthopaedic Trauma Procedures

Subchapter **HT Orthopaedic Trauma Procedures** covers trauma orthopaedic procedures for patients of all ages. It includes activity undertaken in inpatient, day case and non-admitted care settings.

Non-trauma procedure activity can be found in Subchapter **HN Orthopaedic Non-Trauma Procedures**.

Spinal activity can be found in Subchapter **HC Spinal Procedures and Disorders**.

Adult orthopaedic disorders can be found in Subchapter **HE Orthopaedic Disorders**.

Adult musculoskeletal and rheumatological disorders can be found in Subchapter **HD Musculoskeletal and Rheumatological Disorders**.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	87	87
Total HRG Roots	26	26
Procedure-driven HRGs	87	87
Diagnosis-driven HRGs	0	0
Age Splits	Yes	Yes
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	Yes	Yes

Subchapter HT does not include percutaneous spinal procedures, with the exception of OPCS-4 code **W35.5 Therapeutic percutaneous puncture of bone**: these map to Subchapter **YH Musculoskeletal Imaging Interventions**.

The orthopaedic procedures for trauma HRGs are differentiated based on the site of surgery – e.g. hip, knee, hand etc. – and are now split into five levels of complexity (minor, intermediate, major, very major and complex), with some sites combined at the higher complexity level.

Multiple-procedure logic is employed throughout the HRGs in this subchapter, as are age splits: There are specific HRGs for adult activity (19 years and over) and others for paediatric activity (18 years and under). There are also HRGs specific to the treatment of young children (0 to 5 years of age) and those for older children (6 to 18 years). Escalation to an HRG with a higher expected resource use also occurs in this subchapter, where appropriate, when procedures are performed bilaterally (or on multiple digits of hands or feet).

All minor procedure HRGs within this subchapter have maximum length of stay logic to ensure that minor procedures, such as the application of traction, are not used to determine the HRG for a long-stay medical patient, e.g. a person who has suffered a fractured hip.

Interactive CC splits are employed within the majority of HRG roots in this subchapter – up to a maximum of five levels – to more appropriately differentiate expected resource usage between routine and complex patients.

Multiple site codes

Where multiple site codes are recorded relating to the same dominant procedure, the sequencing of sites per the following site hierarchy is applied when grouping activity:

Spine > Hip > Knee > Shoulder > Elbow > Hand > Foot

Therefore, if **A59.2 Partial sacrifice of peripheral nerve** had subsequent site codes of **Z09.5 Posterior interosseous nerve** (ELBOW) and **Z09.2 Median nerve** (HAND), the combination code **A592+ELBOW Partial sacrifice of peripheral nerve of elbow** would be derived and would drive grouping.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter JA – Breast Procedures and Disorders

Subchapter **JA Breast Procedures and Disorders** covers breast procedures for patients of all ages and adult breast disorders. It includes activity undertaken in inpatient, day case and non-admitted care settings.

It does not include percutaneous breast imaging intervention procedures: these map to Subchapter **YJ Breast Imaging Interventions**.

The breast procedure HRGs within this subchapter are split based on three levels of complexity (minor, intermediate and major). In addition, there are HRGs specific to breast surgery with lymph node clearance and therapeutic mammoplasty.

There are also HRGs specific to reconstructive surgery that are split based on the type of reconstruction employed, and whether the surgery was performed immediately or at a later date.

All procedure-driven HRGs in this subchapter are also split into unilateral and bilateral HRGs – the latter can include either the identical procedure performed on both breasts, i.e. bilateral reduction mammoplasty, or procedures of the equivalent resource usage being performed on both breasts, i.e. lumpectomy of left breast with oncoplasty of right breast.

Multiple-procedure logic is employed throughout the majority of HRGs in this subchapter.

All minor procedure HRGs within this subchapter have maximum length of stay logic to ensure that minor procedures, such as injection into breast, are not used to determine the HRG for a long-stay medical patient, e.g. a person who has breast cancer.

The diagnosis-driven HRGs for adult breast disorders are split based on whether the disorder is malignant or non-malignant.

Interactive CC splits, up to a maximum of five levels, are employed within the majority of both diagnosis-driven and procedure-driven HRG roots in this subchapter to more appropriately differentiate expected resource usage between routine and complex patients.

Intervention splits are employed by several diagnosis-driven HRG roots in this subchapter to acknowledge where “minor interventions” undertaken during a patient admission are expected to result in additional resource usage.

All diagnosis-driven activity relating to the treatment of children (aged 18 years and under) groups to an HRG in Chapter **P Diseases of Childhood and Neonates**, in line with the requirements of the Casemix Design Framework.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	35	35
Total HRG Roots	20	20
Procedure-driven HRGs	24	24
Diagnosis-driven HRGs	11	11
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	Yes	Yes
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	Yes	Yes

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter JB – Burns Procedures and Disorders

Subchapter JB Burns Procedures and Disorders

covers all aspects of burns care for both adults and children. It includes activity undertaken in inpatient, day case and non-admitted care settings.

The majority of HRGs within this subchapter are differentiated by the severity score of the burn, derived after evaluating a combination of factors such as the total body surface area (TBSA) affected, the degree of burn, the location of burn, inhalation injury, the patient age, and complications and comorbidities. These HRGs are further differentiated by the number and type of intervention recorded in the form of an intervention score.

All diagnosis-driven activity relating to the treatment of children (aged 18 years and

under) for burns care groups to an HRG within Subchapter **JB Burns Procedures and Disorders**, rather than to an HRG in Chapter **P Diseases of Childhood and Neonates**. This is an exception to the requirements of the Casemix Design Framework, undertaken on clinical advisement.

The updated burns design incorporates new Core 7 (Burns) logic, developed to ensure that patients with a 2nd or 3rd degree burn diagnosis code, in any position, map to a burns HRG, irrespective of any procedure recorded.

Records with a primary diagnosis of a 1st degree burn, unspecified degree burn, or burn of respiratory or genitourinary tract (which are classed as equivalent to a 2nd/3rd degree burn for the purpose of the HRG design, but as internal burns do not require TBSA to be recorded) will only map to a burns HRG where no significant procedure is recorded.

However, records with a dominant procedure specific to the treatment of burns (OPCS-4 categories **S54.-** and **S55.-**) will also map to a burns HRG. There are also procedure-specific HRGs for the treatment of burns – debridement and cleansing and dressing, where the activity does not map to the severity category HRGs, i.e. in an outpatient procedure setting, where diagnosis is not recorded.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	38	38
Total HRG Roots	23	23
Procedure-driven HRGs	4	4
Diagnosis-driven HRGs	34	34
Age Splits	Yes	Yes
Complications and Comorbidities Splits*	No	No
Intervention Splits#	No	No
Multiple Procedures	Yes	Yes
Procedure Combination Codes	No	No
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	Yes	Yes
* Although this subchapter does not have CC splits, CCs are built into the severity score		
# Many HRGs in this subchapter have intervention score splits (these are not generated in the same way as intervention splits in other subchapters)		

With the exception of internal burns, the absence of a diagnosis code indicating TBSA of burn will generate the U group HRG, **UZ01Z Data Invalid for Grouping**, as this is required to appropriately determine resource usage.

There are specific HRGs for unspecified degree of burns, split, atypically, into adult (16 years and over) and child (15 years and under) HRGs, as is clinically appropriate. It is hoped that the activity reported against these HRGs will reduce over time as more appropriate coding of the severity of burn is captured.

There are also specific HRGs for patients receiving treatment for 2nd or 3rd degree burns that are either transferred out from a provider or die within 2 days or less, to reflect that the resources associated with these patients is very different to that of those patients undergoing long-term treatment, often for very severe burns.

All other treatment of burns will map to one of the various levels of severity category HRGs, which are also split by age (adult/child) and/or intervention score, e.g. skin grafts.

In order to simplify the design, dummy HRG roots are used to map records via Core 7 (Burns) logic for 2nd and 3rd degree burns, or via Core 1 (standard) logic for 1st degree and internal burns to a base severity category HRG root, as below:

- **JB89 Treatment of Burn, with Severity Score 1** – Enables direct mapping to **JB49** and **JB58**
- **JB90 Treatment of Burn, with Severity Score 2** – Enables direct mapping to **JB48** and **JB57** (For First Degree Burns)
- **JB91 Treatment of Burn, with Severity Score 2** – Enables direct mapping to **JB48**, **JB55** and **JB57** (For Second and Third Degree Burns)
- **JB92 Treatment of Burn, with Severity Score 3** – Enables direct mapping to **JB47**, **JB55** and **JB56**
- **JB93 Treatment of Burn, with Severity Score 4** – Enables direct mapping to **JB46**, **JB52** and **JB54**
- **JB94 Treatment of Burn, with Severity Score 5** – Enables direct mapping to **JB43**, **JB45**, **JB52** and **JB53**
- **JB95 Treatment of Burn, with Severity Score 6** – Enables direct mapping to **JB43**, **JB44** and **JB51**
- **JB96 Treatment of Burn, with Severity Score 7** – Enables direct mapping to **JB42** and **JB51**
- **JB97 Treatment of Burn, with Severity Score 8-9** – Enables direct mapping to **JB41** and **JB50**
- **JB98 Treatment of Burn, with Severity Score 10+** – Enables direct mapping to **JB40** and **JB50**

For 2nd or 3rd degree burns (external burns only), grouped via Core 7 (Burns) logic, Core 3 “escalation” logic is then used to determine the final severity category dummy HRG root, and then the final HRG is determined using age and intervention criteria.

The base severity category HRG is determined by a combination of the depth of the burn, i.e. degree, and the TBSA.

The TBSA diagnosis codes are in bands representing 10% TBSA, e.g. **T31.0 Burns involving less than 10% of body surface** and **T31.1 Burns involving 10-19% of body surface**. However, there is a significant resource difference between a patient with a burn of 1% TBSA compared to a patient with a burn of 9% TBSA.

Therefore, for patients with a TBSA of <20%, a proxy measure of calculating TBSA has been devised using the average % TBSA burned of each region of the body, as shown in the table below:

Body Site (as per ICD-10 codes)	Proxy % TBSA (where <10% TBSA overall)	Proxy % TBSA (where <20% TBSA overall)
Head and Neck	1.5	3
Trunk	3	9
Upper Limb	1	2
Hand and Wrist	1	2
Lower Limb	2	4
Foot and Ankle	2	4
Multiple Areas	3	9
Unspecified Area	1	2

If, for example, a patient has a TBSA <10% code recorded and they have a diagnosis code of a burn of hand, this has a proxy TBSA of 1%, whereas a burn of trunk has a proxy TBSA of 3%. If a patient has both, the total proxy TBSA is 4%. Likewise, if a patient has a TBSA of 10-19% code recorded and they have a diagnosis code of burn of head, trunk and foot, their proxy TBSA would be 16%.

Note that only unique burns diagnosis codes (including primary diagnosis) contribute to proxy TBSA scoring, e.g. a primary and secondary diagnosis of **T20.2 Burn of second degree of head and neck** will only count as 1 area when determining proxy TBSA.

For information, in order for this to be implemented in the design, each of these values has been multiplied by a value of 10, e.g. a Head and Neck value of 1.5 becomes 15. Therefore, the check at flag level for 1-4% TBSA proxy will check for a minimum value of 15, and the check at flag level for 15-19% TBSA will check for a minimum value of 150.

This enables differentiation of expected resource usage between patients with <1% (the 1% proxy TBSA are assumed to be <1% for the HRG derivation), 1-4% (which would actually start at 1.5%), 5-9%, 10-14% and 15-19% TBSA. Therefore, records which map to a burns HRG will map to the following base severity category HRG roots:

% TBSA/Degree of burn	Start Severity Category
1 st degree <20%	1
1 st degree >20%, or 2 nd /3 rd degree <1%	2
2 nd /3 rd degree 1-4%	3
2 nd /3 rd degree 5-9%	4
2 nd /3 rd degree 10-14%	5
2 nd /3 rd degree 15-19%	6
2 nd /3 rd degree 20-29%	7
2 nd /3 rd degree 30-39%	8
2 nd /3 rd degree 40%+	9

Escalation to a higher severity category HRG – up to a maximum of 1 severity category for 1st degree burns (enabled via Core 1 standard grouping logic) and 3 severity categories for 2nd or 3rd degree burns (enabled via Core 3 escalation logic) will then take place depending on other relevant information such as age, complications and comorbidities (CC), burns to face, hands or feet – i.e. burns which are more resource intensive due to location, i.e. inability to walk, feed themselves etc., and whether the patient has an inhalation injury or combination thereof.

Escalation can occur up the severity categories depending on the complicating factor as outlined in the table below:

Complicating factor	No escalation	Up 1 Severity Category	Up 2 Severity Categories	Up 3 Severity Categories
Age	<60	60-79	80 or above	-
CC Score	<3	3-5	6-8	9+
Burn involving face, hands or feet	0 or 1 of these areas	2 of these areas e.g. face and hand	3 of these areas e.g. face, hands and feet	-
Inhalation Injury requiring invasive ventilation	-	-	-	Yes

Note that only unique burns diagnosis codes (including primary diagnosis) contribute to severity escalation logic, e.g. a primary and secondary diagnosis of **T20.2 Burn of second degree of head and neck** will only count as 1 area when determining severity escalation.

Patients may qualify for a combination of these factors, but for 1st degree burns the maximum escalation will be up 1 severity category – from **JB89 Severity Category 1** to **JB90 Severity Category 2**, via Core 1 standard logic.

For 2nd and 3rd degree burns, the maximum escalation will be up 3 severity categories, e.g. from **JB92 Severity Category 3** to **JB95 Severity Category 6**, via Core 3 escalation logic.

For example, if a record derives a base **JB91 Severity Category 2** dummy HRG root (from Core 7 or Core 1 logic) and has an age of 65 years old, burns of face and feet, and also unique secondary diagnoses that sum to a CC score of 3, then as each of these complicating factors would escalate the patient up one severity category level, the combination of these factors escalates up 3 severity categories to a **JB94 Severity Category 5** dummy HRG root.

If a record derives a base **JB93 Severity Category 4** dummy HRG root and has an age of 85 years old, unique secondary diagnoses that sum to a CC score of 7 and an inhalation injury requiring invasive ventilation, then, although these complicating factors combined would count to an escalation value of 7, noting that the maximum escalation is 3 severity categories, escalation would occur to **JB96 Severity Category 7** dummy HRG root.

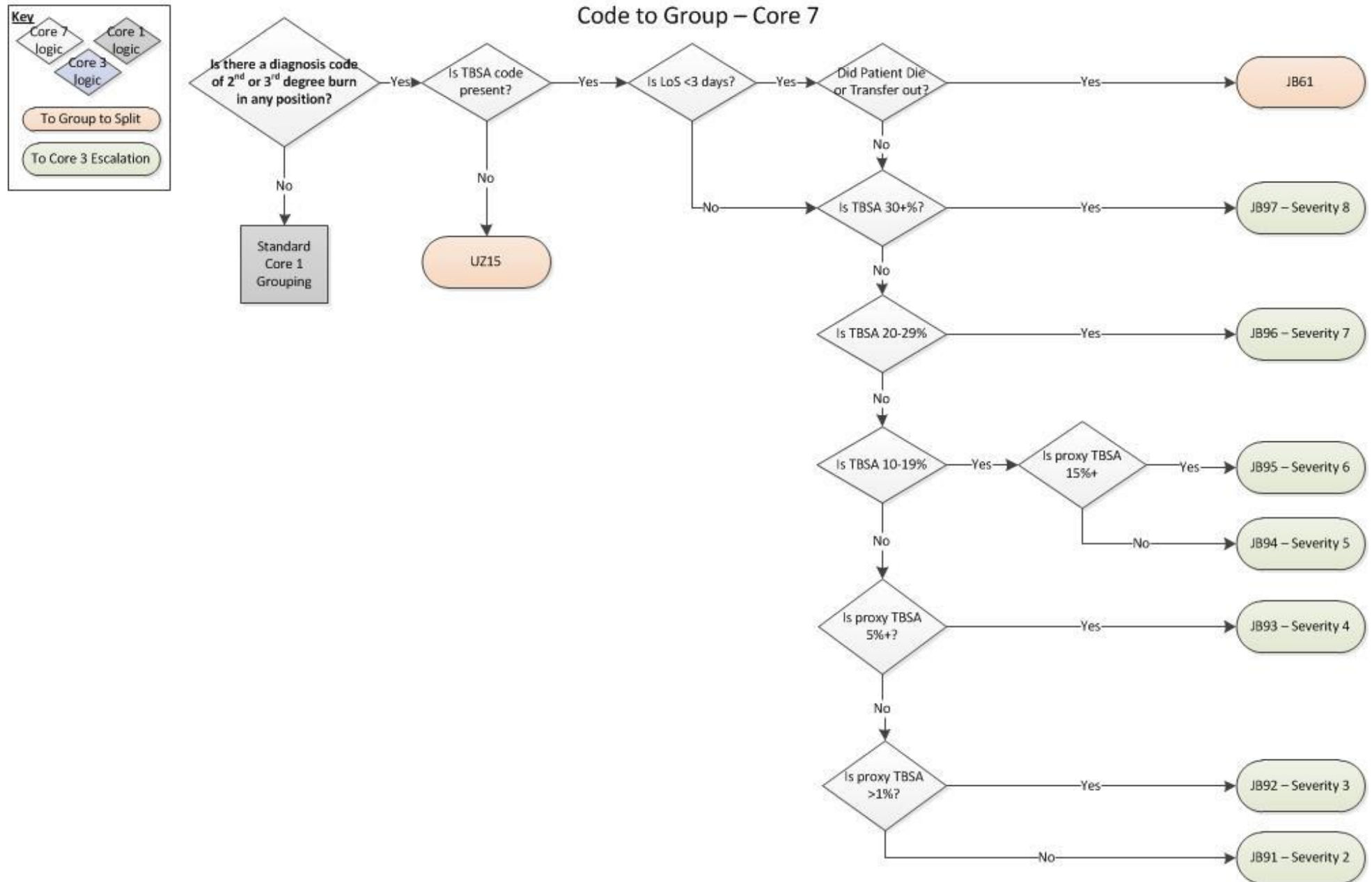
As the maximum severity category HRG is 8+ for children and 10+ for adults, patients cannot escalate beyond these HRGs.

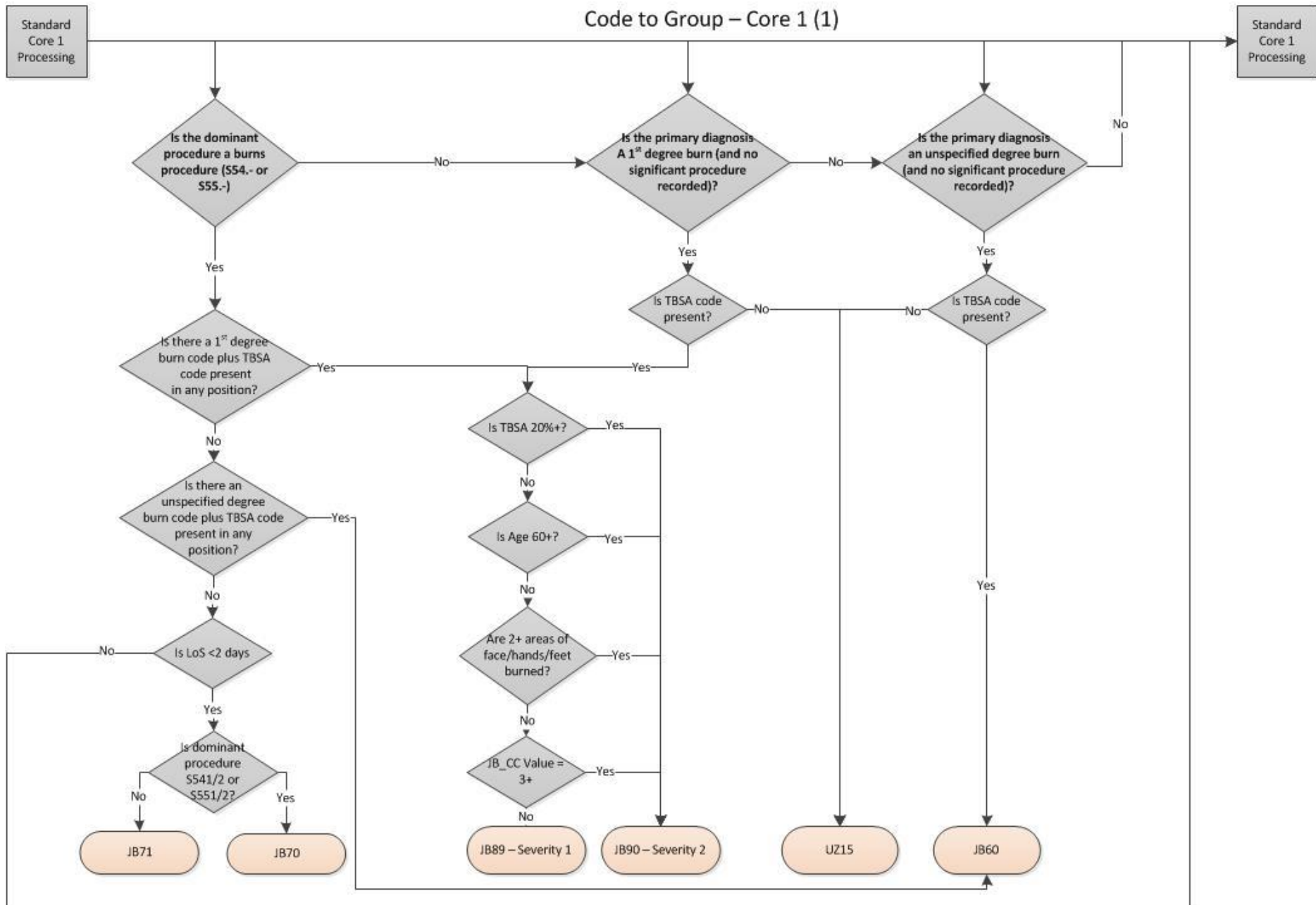
The actual HRG is then derived using patient age (adult >15 years/child <16 years) and intervention score.

Interventions have scores that are either 0 – no significant burns related intervention; 1 – a major burn intervention (e.g. skin graft); or 2 – a complex burn intervention (e.g. amputation of limb). Therefore an intervention score of 2 can be achieved from either one complex procedure or 2 major procedures.

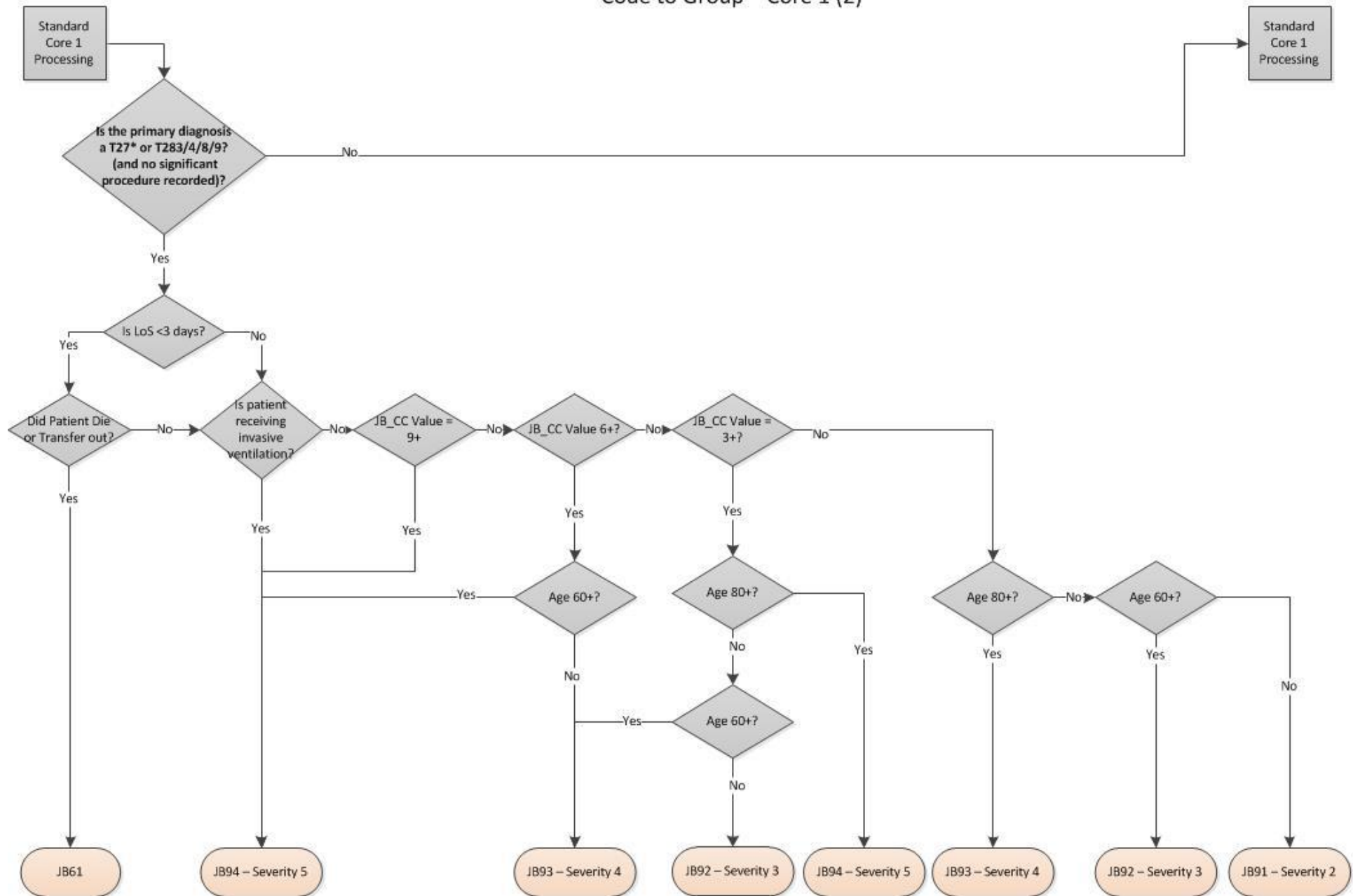
Below is a flow diagram that shows how the new burns HRGs can be generated as explained above, either using Core 7 (burns) logic or Core 1 (standard) logic to determine whether the activity should generate a burns HRG, and if so which specific HRG or base severity category dummy HRG based on degree of burn and TBSA. Where appropriate, Core 3 and standard escalation logic is then used to determine the appropriate severity category of the dummy HRG root.

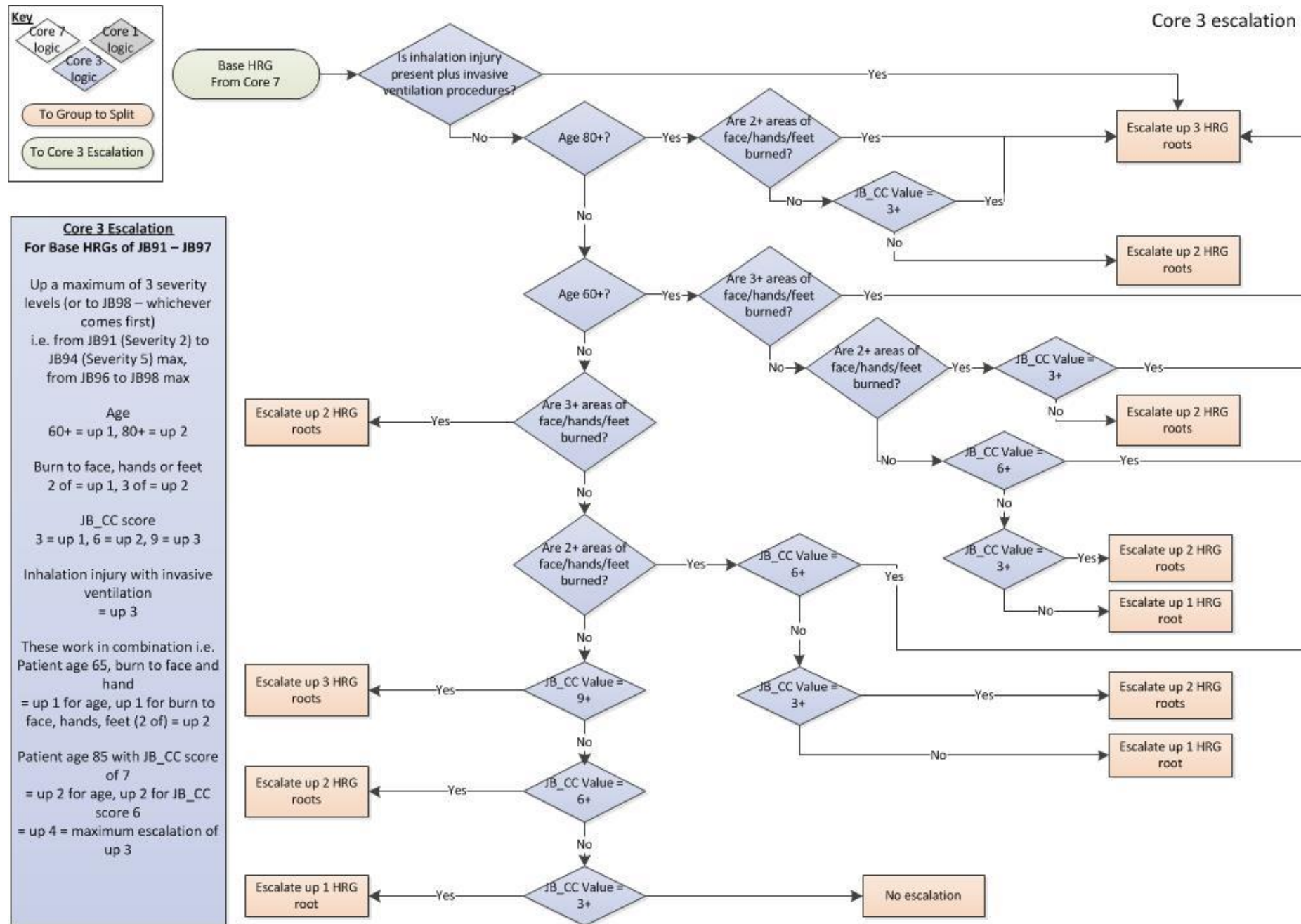
From the dummy HRG root, group to split logic (as identified in the Group to Split worksheet in the Code to Group Excel workbook) is used to determine the mapping of these dummy HRG roots to final HRGs based on the patient's age and intervention score.

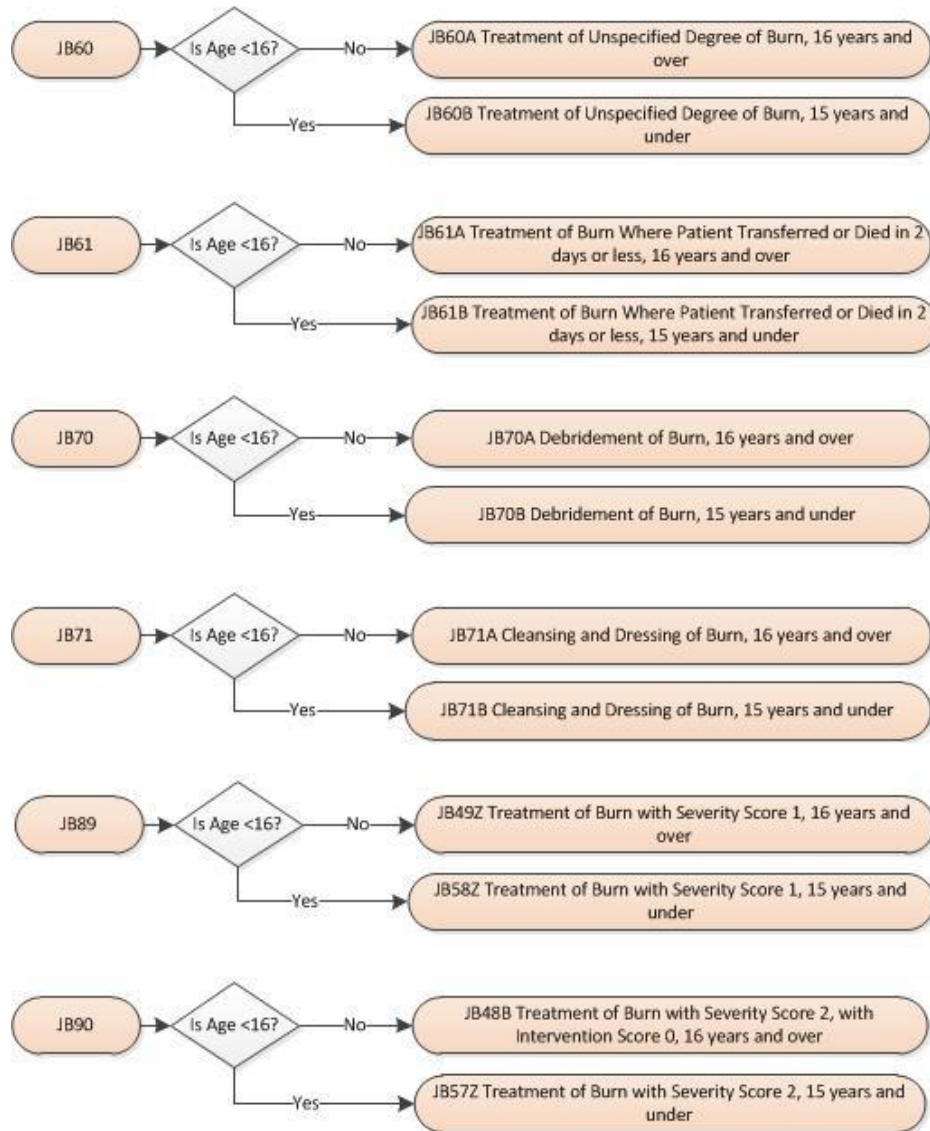




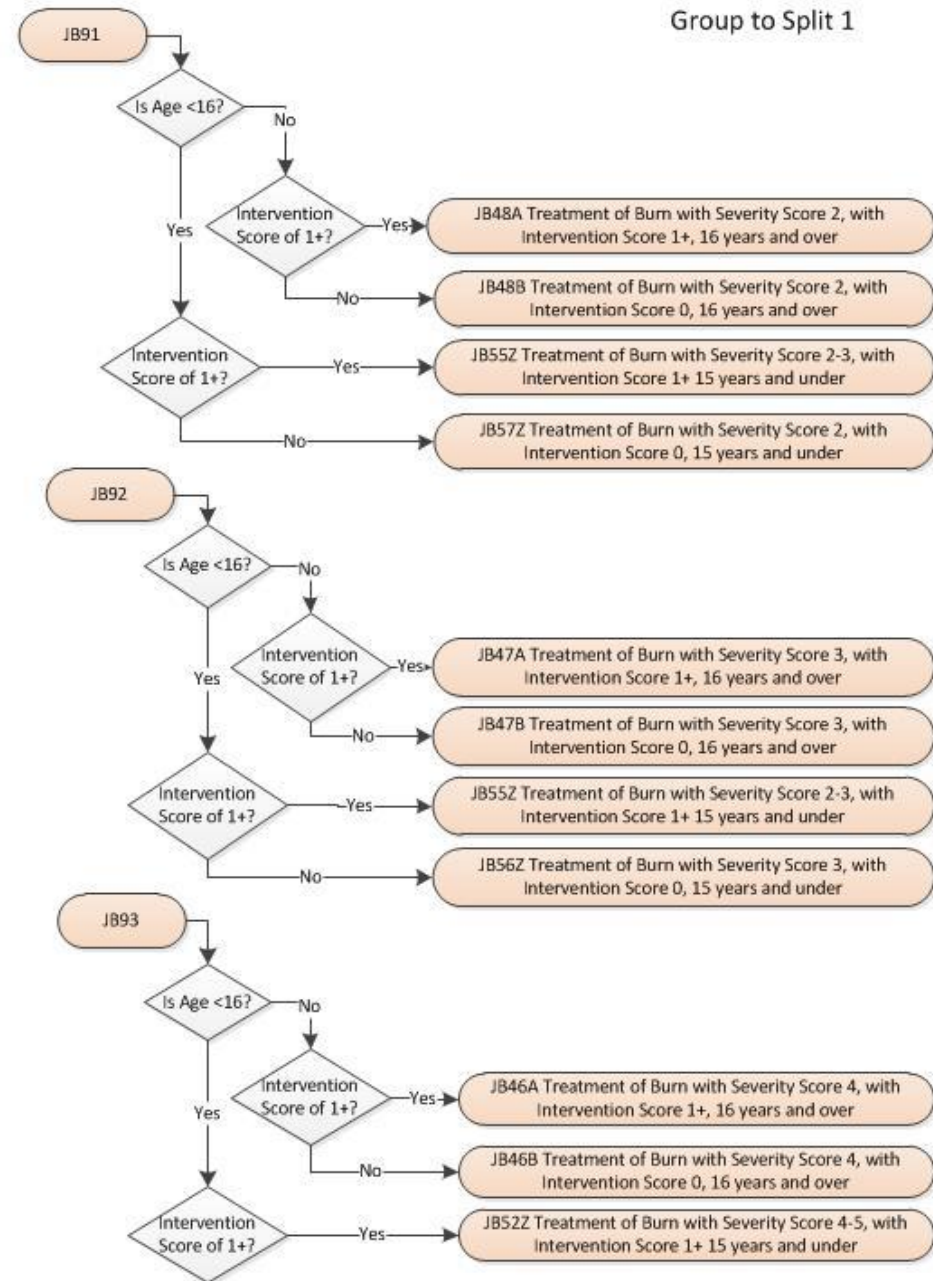
Code to Group – Core 1 (2)



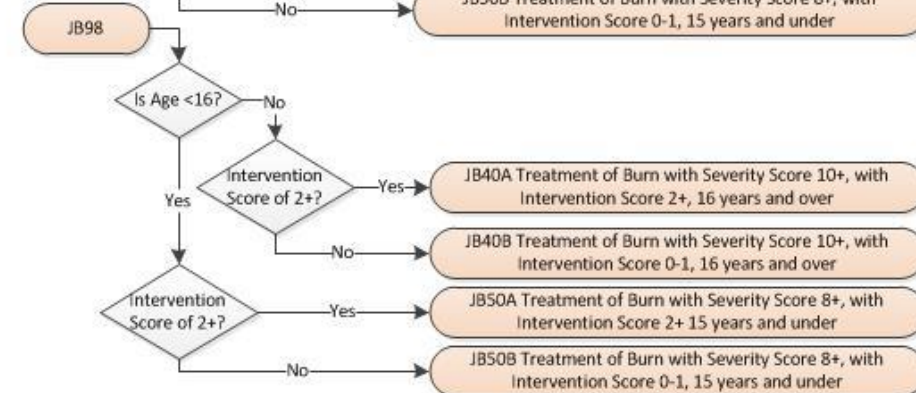
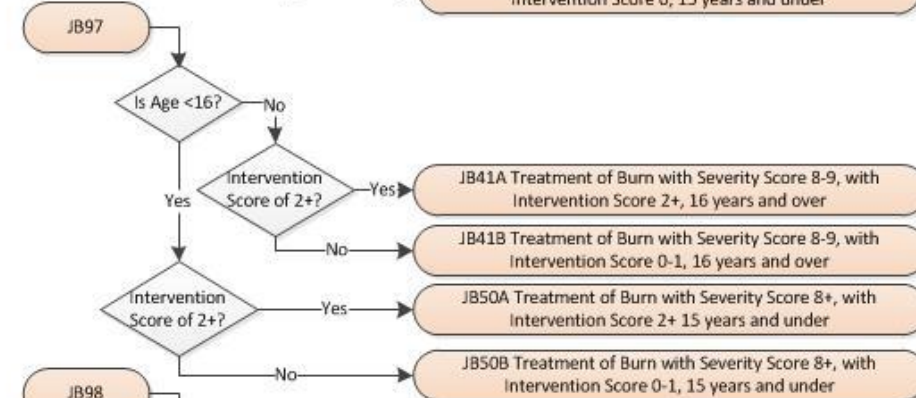
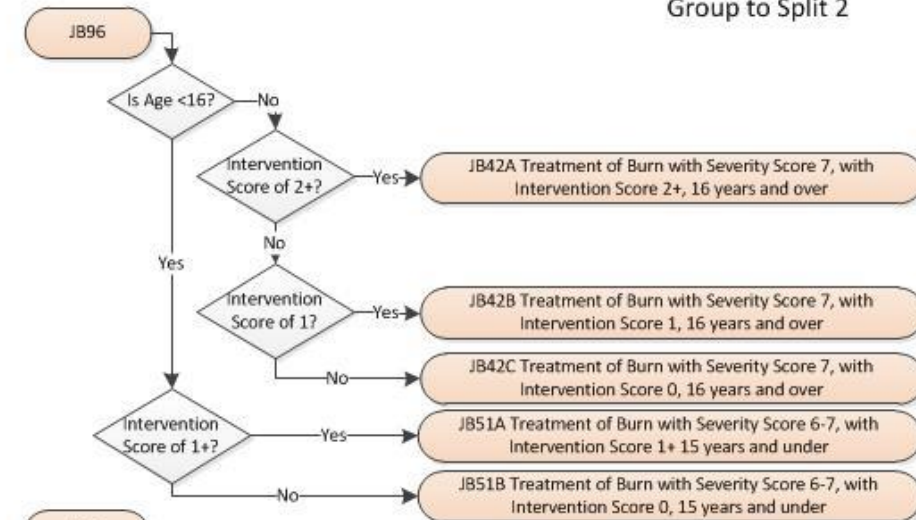
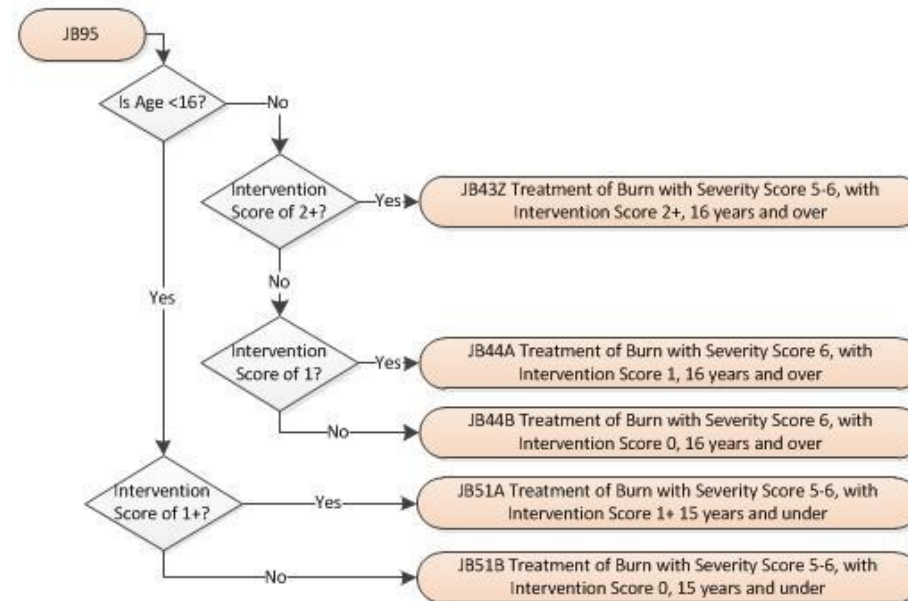
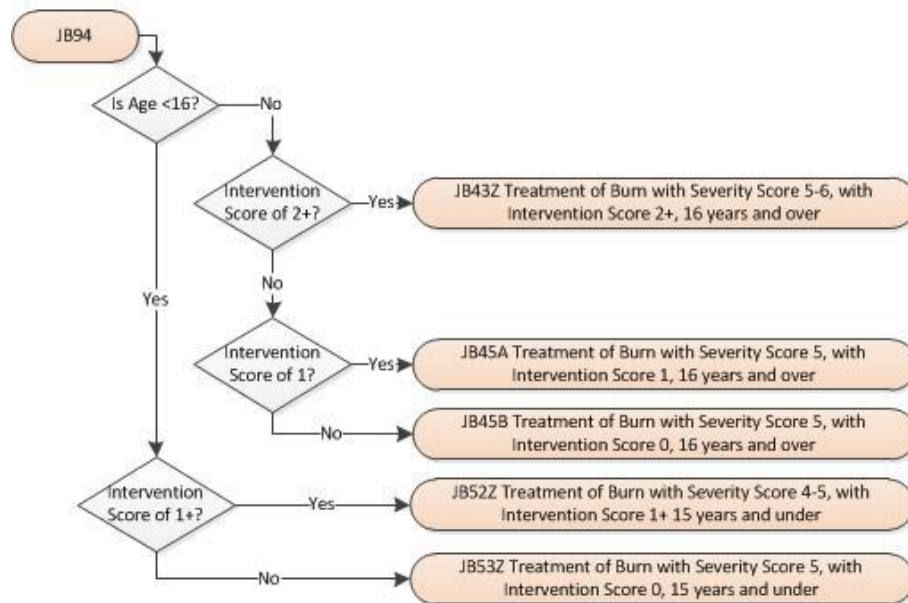




Group to Split 1



Group to Split 2



Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

Accommodation of ICD-10 emergency use codes

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been added to the complications and comorbidities list for this subchapter, **JB_CC**, as per ***R65.0 Systemic Inflammatory Response Syndrome of infectious origin without organ failure.***

Subchapter JC – Skin Procedures

Subchapter **JC Skin Procedures** covers skin procedures for patients of all ages, delivered in admitted or non-admitted care settings.

The skin procedure HRGs within this subchapter are split based on the complexity of surgery (minor, intermediate, major and multiple major). Multiple-procedure logic is employed by the major HRG root to escalate activity, where appropriate, to the multiple major HRG root.

There are also HRGs specific to high-volume procedures, e.g. photodynamic therapy, phototherapy or photochemotherapy and patch testing – with the latter split into complex patch tests and standard patch tests.

Paediatric age splits are employed by half of the HRG roots within this subchapter: there are HRG splits for post-adolescent patients (13 years and over) and others for pre-adolescent patients (12 years and under).

All minor and intermediate procedure HRGs within this subchapter have maximum length of stay logic to ensure that minor procedures, such as a dressing of bed sore, are not used to determine the HRG for a long-stay medical patient, e.g. a person who has suffered a stroke.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	12	12
Total HRG Roots	8	8
Procedure-driven HRGs	12	12
Diagnosis-driven HRGs	0	0
Age Splits	Yes	Yes
Complications and Comorbidities Splits	No	No
Intervention Splits	No	No
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	Yes	Yes

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter JD – Skin Disorders

Subchapter **JD Skin Disorders** covers all skin disorders in adult patients. It includes activity undertaken in an inpatient and day case setting.

The adult diagnosis-driven HRGs within this subchapter are all within a single HRG root, **JD07 Skin Disorders**, and have both interactive CC splits – up to a maximum of six levels – and intervention splits, to more appropriately differentiate expected resource usage between routine and complex patients.

All diagnosis-driven activity relating to the treatment of children (aged 18 years and under) groups to an HRG in Chapter **P Diseases of Childhood and Neonates**, in line with the requirements of the Casemix Design Framework.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	10	10
Total HRG Roots	1	1
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	10	10
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	Yes	Yes
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter KA – Endocrine System Disorders

Subchapter **KA Endocrine System Disorders** covers endocrine system disorders for adult patients and endocrine procedures for patients of all ages, with the exception of diabetes, which is covered in Subchapter **KB Diabetic Medicine**. It includes activity undertaken in an inpatient, day case and non-admitted care setting.

The procedure-driven HRG roots within this subchapter are divided based on the site of surgery, thus there are HRGs for thyroid, parathyroid and adrenal procedures, respectively.

The adult diagnosis-driven HRG roots within this subchapter are divided based on disorder type.

Interactive CC splits are employed within all HRG roots in this subchapter – up to a maximum of three levels – to differentiate complex patients from routine patients.

All diagnosis-driven activity relating to the treatment of children (aged 18 years and under) groups to an HRG in Chapter **P Diseases of Childhood and Neonates**, in line with the requirements of the Casemix Design Framework.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	18	18
Total HRG Roots	7	7
Procedure-driven HRGs	7	7
Diagnosis-driven HRGs	11	11
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter KB – Diabetic Medicine

Subchapter **KB Diabetic Medicine** covers all diabetic disorders in adult patients and one diabetes-related procedure for patients of all ages. It includes activity undertaken in an inpatient, day case and non-admitted care setting.

The adult diagnosis-driven HRG roots within the subchapter are divided based on the type of diabetic complication, i.e. hypoglycaemia, hyperglycaemia and lower limb complications.

Interactive CC splits are employed within all of the diagnosis-driven HRG roots in this subchapter – up to a maximum of four levels – to differentiate complex patients from routine patients.

There is a single procedure-driven HRG within this subchapter, **KB04Z Continuous Subcutaneous Insulin**

Infusion. This HRG has been designed specifically to accommodate the insertion of insulin pumps for patients of all ages.

All diagnosis-driven activity relating to the treatment of children (aged 18 years and under) groups to an HRG in Chapter **P Diseases of Childhood and Neonates**, in line with the requirements of the Casemix Design Framework.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	12	12
Total HRG Roots	4	4
Procedure-driven HRGs	1	1
Diagnosis-driven HRGs	11	11
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter KC – Metabolic Disorders

Subchapter **KC Metabolic Disorders** covers all metabolic disorders in adults aged 19 years and over. It includes activity undertaken in an inpatient and day case setting.

There are two HRG roots within this subchapter, one for inborn errors of metabolism and one for fluid or electrolyte disorders.

Interactive CC splits are employed within both HRG roots in this subchapter – up to a maximum of five levels – to differentiate complex patients from routine patients.

In addition, intervention splits are employed within the HRG root **KC05 Fluid or Electrolyte Disorders** to acknowledge where “minor interventions” undertaken during a patient admission are expected to result in additional resource usage.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	9	9
Total HRG Roots	2	2
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	9	9
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	Yes	Yes
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

All diagnosis-driven activity relating to the treatment of children (aged 18 years and under) groups to an HRG in Chapter **P Diseases of Childhood and Neonates**, in line with the requirements of the Casemix Design Framework.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter LA – Renal Procedures and Disorders

Subchapter **LA Renal Procedures and Disorders** includes specific renal procedures for patients of all ages and all adult non-malignant renal disorders. It includes activity undertaken in an inpatient, day case and non-admitted care setting.

The HRGs for dialysis for chronic kidney disease are generated from the National Renal Data Set (NRD) and sit in Subchapter **LD Renal Dialysis for Chronic Kidney Disease**.

HRGs for renal dialysis for acute kidney injury are unbundled, and these sit in Subchapter **LE Renal Dialysis for Acute Kidney Injury**.

Within this subchapter there are procedure-specific HRGs for renal transplants and related care that are split based on age: there are HRGs for adult (19 years and over) activity and others for paediatric (18 years and under) activity.

There is also an HRG specific to peritoneal dialysis-associated procedures.

All minor procedure HRGs in this subchapter have maximum length of stay logic to ensure that minor procedures, such as the insertion of a peritoneal dialysis catheter, are not used to determine the HRG for a long-stay medical patient, e.g. a person with an acute kidney injury.

The adult renal disorder HRGs are split by disorder type. Interactive CC splits, up to a maximum of five levels, are employed within all of the adult diagnosis-driven HRGs in this subchapter to more appropriately differentiate expected resource usage between routine and complex patients.

Intervention splits are also employed in all of the adult diagnosis-driven HRG roots to acknowledge where “minor interventions” undertaken during a patient admission are expected to result in additional resource usage.

HRGs covering non-transplant kidney procedures and the treatment of renal neoplasms sit within Subchapter **LB Urological and Male Reproductive System Procedures and Disorders** and Subchapter **YL Urological Imaging Interventions**.

All diagnosis-driven activity relating to the treatment of children (aged 18 years and under) groups to an HRG in Chapter **P Diseases of Childhood and Neonates**, in line with the requirements of the Casemix Design Framework.

The specific logic required to derive the HRG root **LA97 Same Day Dialysis Admission or Attendance** requires a length of stay of 0 days and either a procedure or diagnosis code indicating that a patient of any age has been specifically admitted for dialysis for the treatment of chronic kidney disease or acute kidney injury. However, it should be noted that

Composition and Concepts		
	C21/22	P20/21
Total HRGs	48	48
Total HRG Roots	14	14
Procedure-driven HRGs	14	14
Diagnosis-driven HRGs	34	34
Age Splits	Yes	Yes
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	Yes	Yes
Multiple Procedures	No	No
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	Yes	Yes

patients receiving treatment solely for chronic kidney disease should only be reported via the NRD, therefore it would not be expected for this HRG to be generated often, for chronic kidney disease patients.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter LB – Urological and Male Reproductive System Procedures and Disorders

Subchapter **LB Urological and Male Reproductive System Procedures and Disorders** covers urological and male reproductive system procedures for patients of all ages and urological and male reproductive system disorders in adults, with the exception of renal conditions and procedures relating to renal failure, which are covered in Subchapters **LA Renal Procedures and Disorders**, **LD Renal Dialysis for Chronic Kidney Disease** and **LE Renal Dialysis for Acute Kidney Injury**.

Subchapter LB includes activity undertaken in an inpatient, day case and non-admitted care setting.

It does not include urological interventional radiology procedures, which are included in Subchapter **YL Urological Imaging Interventions**.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	149	149
Total HRG Roots	62	62
Procedure-driven HRGs	93	93
Diagnosis-driven HRGs	56	56
Age Splits	Yes	Yes
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	Yes	Yes
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	Yes	Yes

The urological procedure HRGs within this subchapter are split based on whether they are open, laparoscopic or endoscopic; on the organ operated on, e.g. bladder, kidney/ureter, penis; and on the complexity of surgery.

Multiple-procedure logic is employed throughout the majority of HRGs within this subchapter, as are age splits: There are specific HRGs for adult activity (19 years and over) and others for paediatric activity (18 years and under). There are also HRGs specific to the treatment of infants (0 to 1 year of age) and those for older children (2 to 18 years). Escalation to an HRG with a higher expected resource use also occurs, where appropriate, when procedures are performed bilaterally, or where surgery is robotically assisted.

There are a handful of HRGs in this subchapter specific to high-volume procedures, e.g. diagnostic flexible cystoscopy and prostate biopsies. There are also specific HRGs for procedures that use high-cost devices, including HRGs specific to the insertion of neurostimulators and neurostimulator electrodes for the treatment of urinary incontinence.

All minor procedure HRGs in this subchapter have maximum length of stay logic to ensure that minor procedures, such as urinary catheterisation, are not used to determine the HRG for a long-stay medical patient, e.g. a person who has suffered a stroke.

The adult diagnosis-driven urological disorder HRGs within this subchapter are disorder-specific.

Interactive CC splits, up to a maximum of five levels, are employed within the majority of both diagnosis-driven and procedure-driven HRG roots in this subchapter to more appropriately differentiate expected resource usage between routine and complex patients.

Intervention splits are also employed in the majority of adult diagnosis-driven HRG roots to acknowledge where “minor interventions” undertaken during a patient admission are expected to result in additional resource usage.

All diagnosis-driven activity relating to the treatment of children (aged 18 years and under) groups to an HRG in Chapter **P Diseases of Childhood and Neonates**, in line with the requirements of the Casemix Design Framework.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter LD – Renal Dialysis for Chronic Kidney Disease

Subchapter **LD Renal Dialysis for Chronic Kidney Disease** captures all renal dialysis activity for patients of all ages recorded only in the National Renal Data Set (NRD), which is specific to renal dialysis for chronic kidney disease.

HRGs specific to dialysis for acute kidney injury can be found in unbundled Subchapter **LE Renal Dialysis for Acute Kidney Injury**.

The HRGs in this subchapter are only generated using data from the NRD, rather than from the Commissioning Data Sets (CDS). Should data relating solely to renal dialysis treatment for these patients with chronic kidney disease be inappropriately recorded in the CDS, providers should ensure that these records are not nationally priced, by use of the recognised “=” sign pricing exclusion.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	26	26
Total HRG Roots	13	13
Procedure-driven HRGs	26	26
Diagnosis-driven HRGs	0	0
Age Splits	Yes	Yes
Complications and Comorbidities Splits	N/A	N/A
Intervention Splits	N/A	N/A
Multiple Procedures	N/A	N/A
Procedure Combination Codes	N/A	N/A
Diagnosis-qualified	N/A	N/A
Subsidiary Procedure-qualified	N/A	N/A
Length of Stay-qualified	N/A	N/A

The haemodialysis HRGs are differentiated based on location (e.g. hospital, satellite or home), age (adult or child), vascular access type (e.g. catheter or fistula) and whether the patient has a blood-borne virus (that would require isolation).

The peritoneal dialysis HRGs are split into continuous ambulatory peritoneal dialysis (CAPD) and automated peritoneal dialysis (APD), with the latter further split based on whether the intervention is automated or assisted.

The HRGs in Subchapter LD are derived per session from the following data items [item reference in brackets] in the NRD:

Renal Care

[1] Renal Treatment Modality – e.g. Haemodialysis, CAPD

[6] Renal Treatment Supervision Code – e.g. home, hospital

[75] Person Observation (Blood Test HBV Surface Antigen) – e.g. negative, positive

[77] Person Observation (Blood Test HCV) – e.g. negative, positive

[79] Person Observation (Blood Test HIV) – e.g. negative, positive

Dialysis

[182] Dialysis Access Type – e.g. AV fistula, haemodialysis catheter

Patient age (in years derived from date of session – date of birth)

Annex A is a flow diagram that demonstrates how each HRG is derived.

The grouper validates against allowable values only for renal treatment modality and renal treatment supervision code. However, for dialysis access type, blank values are accepted and, if used, will group to the “via haemodialysis catheter” HRG split. The three blood-borne virus fields also allow for blank values, and if these are left blank the activity will group to the “without blood-borne viruses” HRG split.

Annex B demonstrates the acceptable values for each field required for grouping and where validation is applicable.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter LD: Worked Examples

Cases A to E illustrate how HRG assignment is derived from the data in the NRD for haemodialysis patients of differing ages, with or without the presence of blood-borne viruses, at different sites and using different access types.

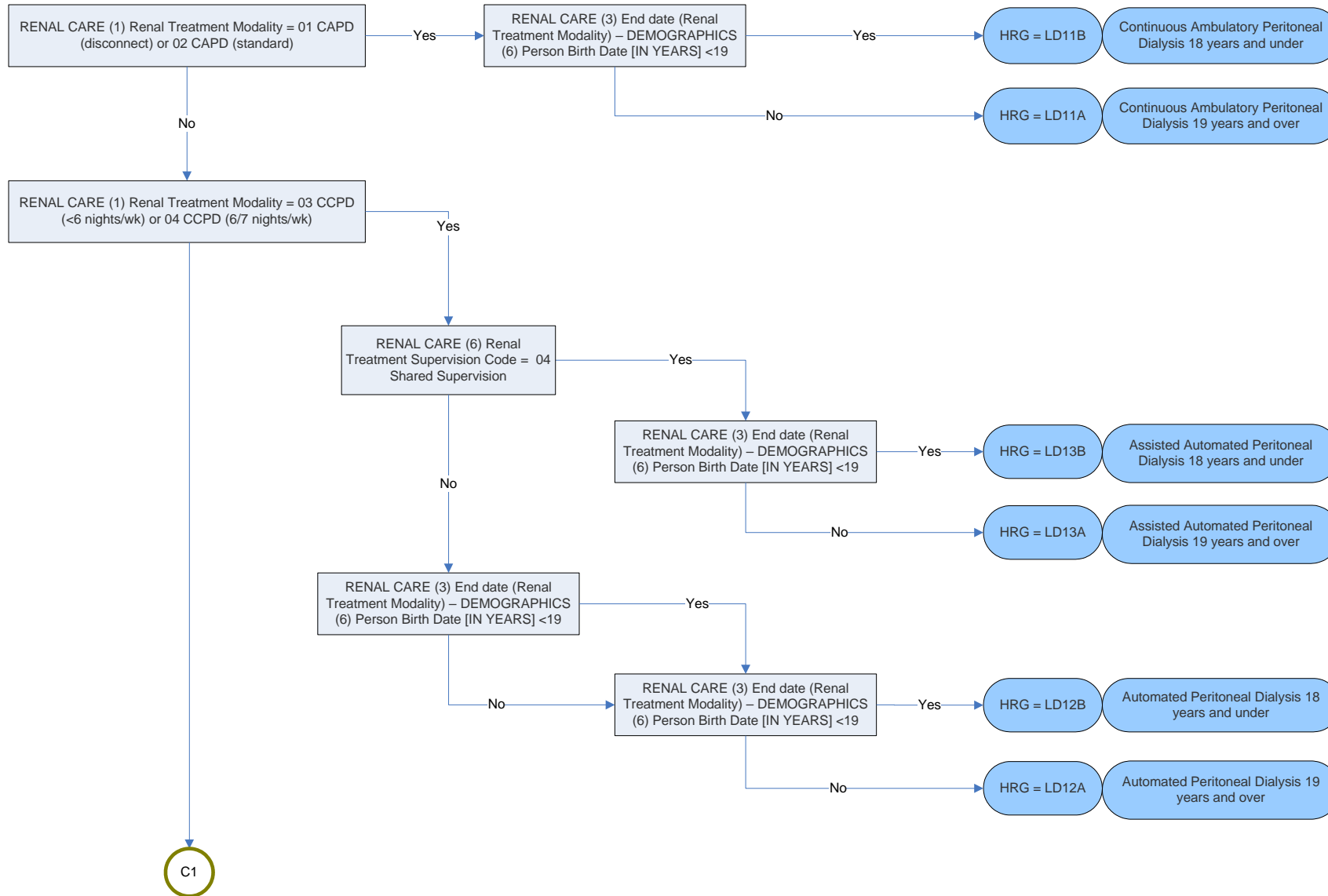
Case	Age	Renal Treatment Modality	Renal Treatment Supervision Code	Blood Tests	Type of Dialysis Access	HRG4+
A	62	05 Haemodialysis	02 Hospital	Blood test HBV surface antigen = NEG Blood test HCV antibody = NEG Blood test HIV = NEG	01 Non-tunnelled catheter	LD01A Hospital Haemodialysis or Filtration, with Access via Haemodialysis Catheter, 19 years and over
B	14	05 Haemodialysis	02 Hospital	Blood test HBV surface antigen = NEG Blood test HCV antibody = NEG Blood test HIV = NEG	01 Non-tunnelled catheter	LD01B Hospital Haemodialysis or Filtration, with Access via Haemodialysis Catheter, 18 years and under
C	25	05 Haemodialysis	02 Hospital	Blood test HBV surface antigen = NEG Blood test HCV antibody = NEG Blood test HIV = NEG	03 Arteriovenous fistula	LD02A Hospital Haemodialysis or Filtration, with Access via Arteriovenous Fistula or Graft, 19 years and over

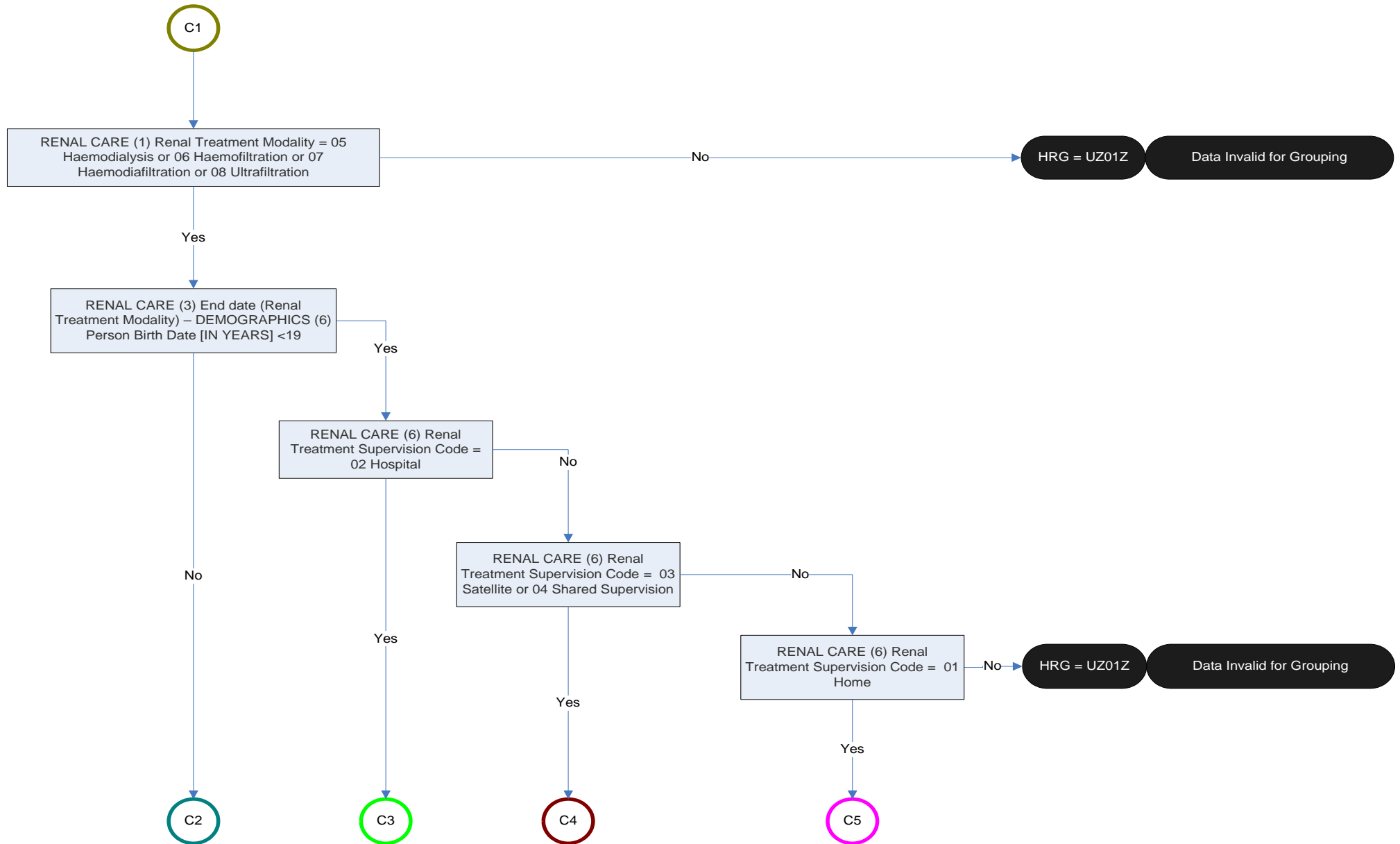
Case	Age	Renal Treatment Modality	Renal Treatment Supervision Code	Blood Tests	Type of Dialysis Access	HRG4+
D	25	05 Haemodialysis	02 Hospital	Blood test HBV surface antigen = NEG Blood test HCV antibody = POS Blood test HIV = NEG	03 Arteriovenous fistula	LD04A Hospital Haemodialysis or Filtration, with Access via Arteriovenous Fistula or Graft, with Blood-Borne Virus, 19 years and over
E	25	05 Haemodialysis	01 Home	Blood test HBV surface antigen = NEG Blood test HCV antibody = POS Blood test HIV = NEG	03 Arteriovenous fistula	LD10A Home Haemodialysis or Filtration with Access via Arteriovenous Fistula or Graft, 19 years and over

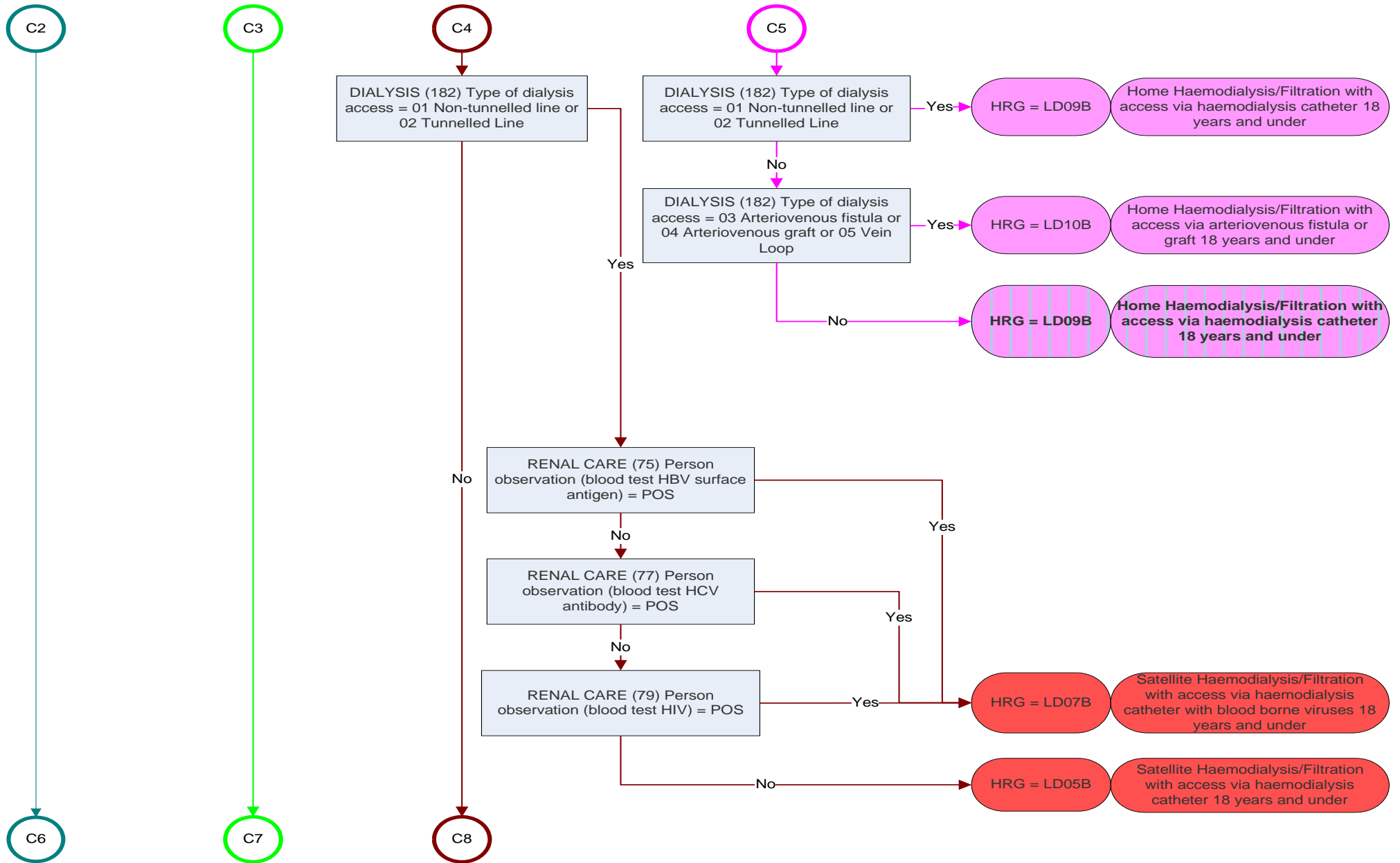
Cases F to H illustrate how HRG assignment is derived using the data from the NRD for peritoneal dialysis patients of differing ages, with or without the presence of blood-borne viruses, at different sites and using different access types.

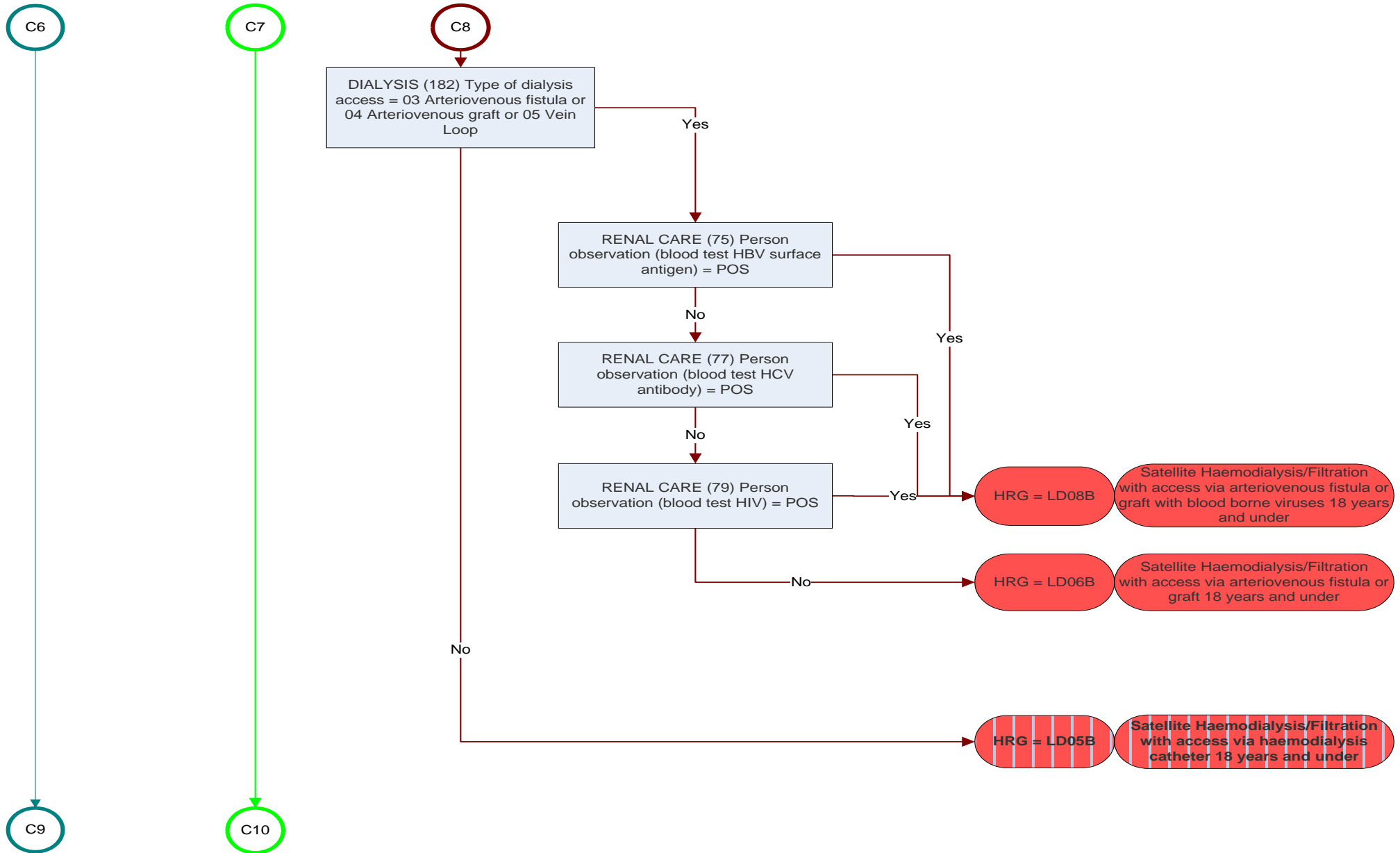
Case	Age	Renal Treatment Modality	Renal Treatment Supervision Code	Blood Tests	Type of Dialysis Access	HRG4+
F	62	02 CAPD (standard)	01 Home	Blood test HBV surface antigen = NEG Blood test HCV antibody = NEG Blood test HIV = NEG	06 PD catheter	LD11A Continuous Ambulatory Peritoneal Dialysis, 19 years and over
G	14	04 CCPD (6/7 nights/wk)	01 Home	Blood test HBV surface antigen = NEG Blood test HCV antibody = NEG Blood test HIV = NEG	06 PD catheter	LD12B Automated Peritoneal Dialysis, 18 years and under
H	62	04 CCPD (6/7 nights/wk)	04 Shared supervision	Blood test HBV surface antigen = NEG Blood test HCV antibody = NEG Blood test HIV = NEG	06 PD catheter	LD13A Assisted Automated Peritoneal Dialysis, 19 years and over

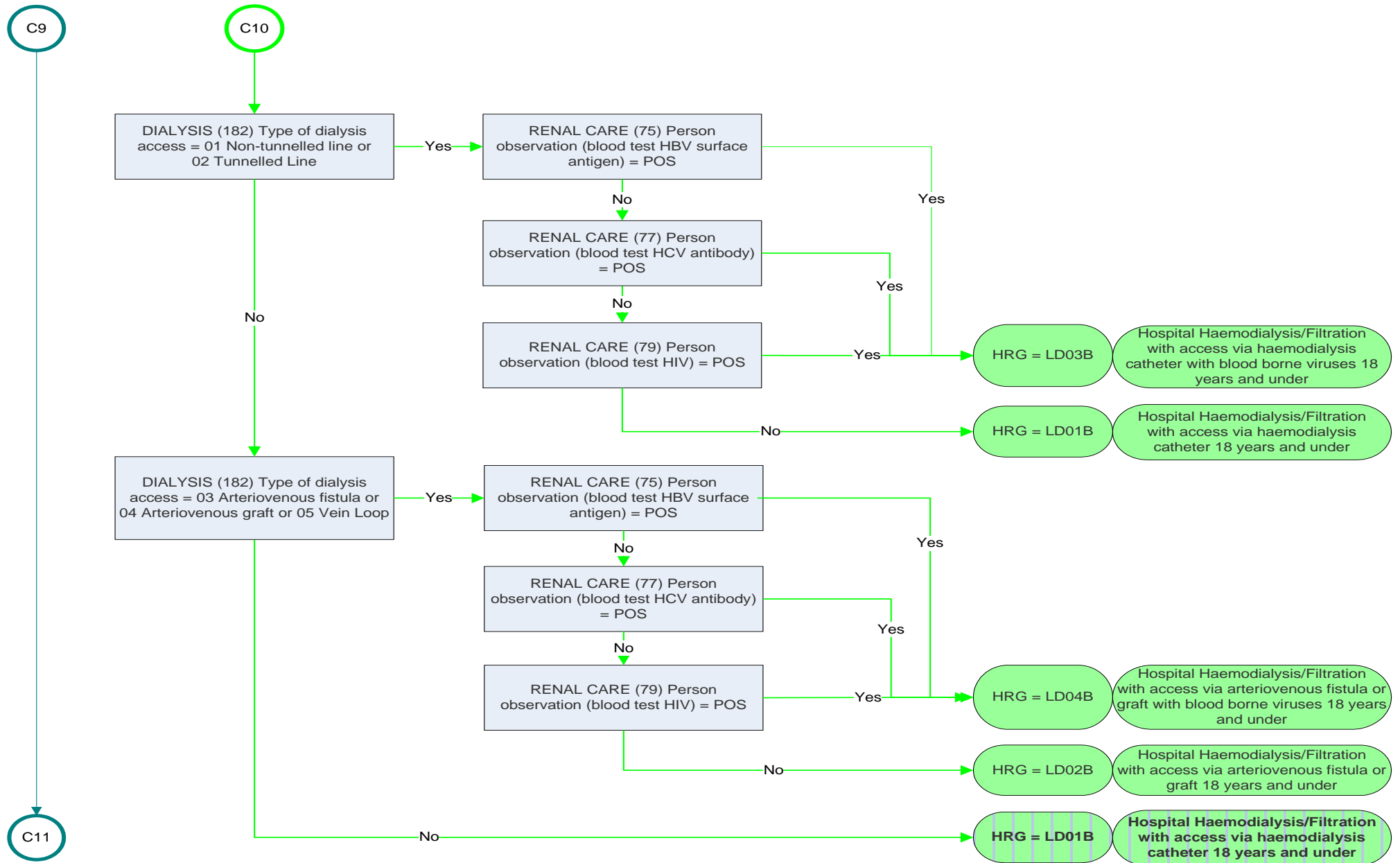
Subchapter LD: Annex A

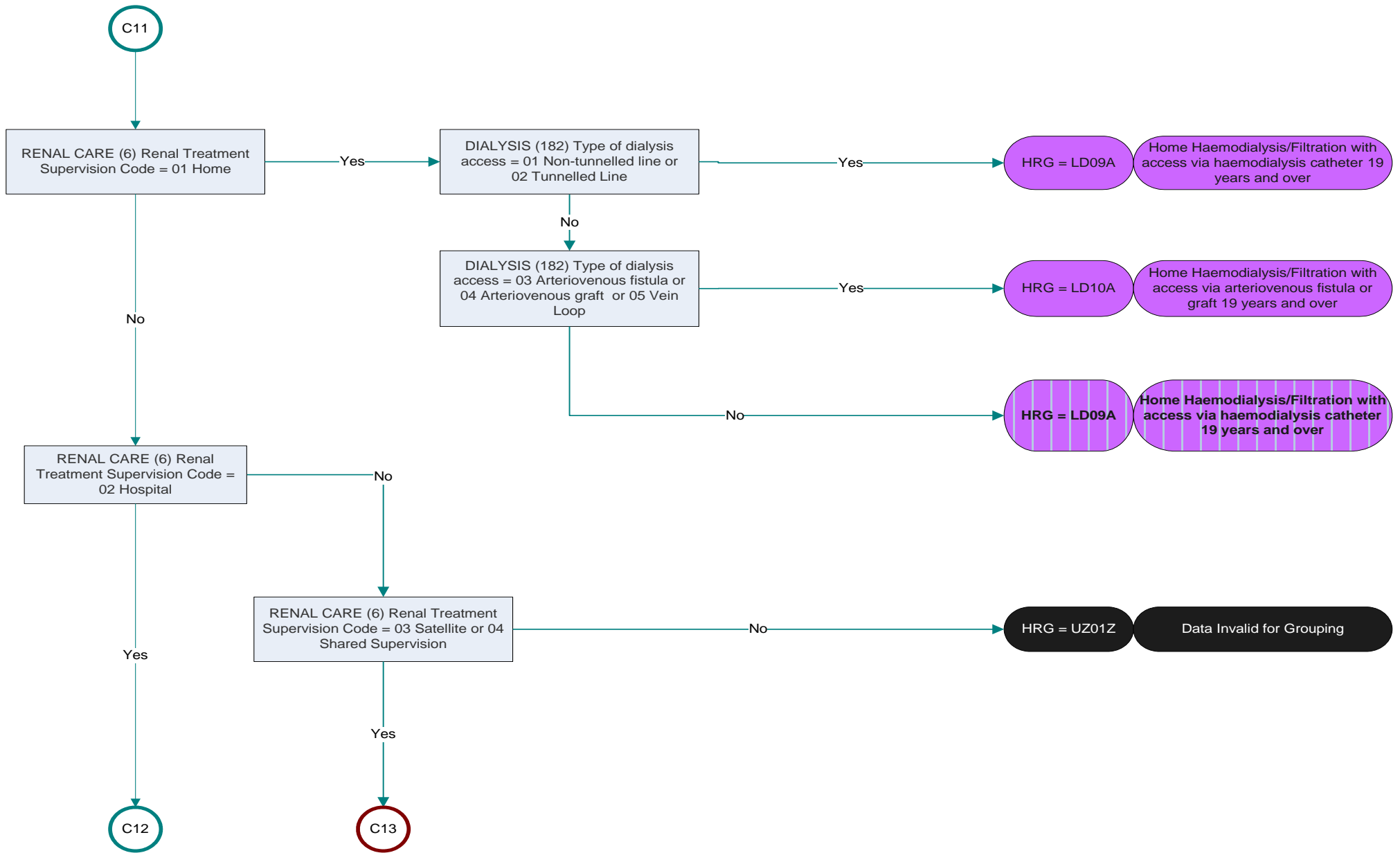


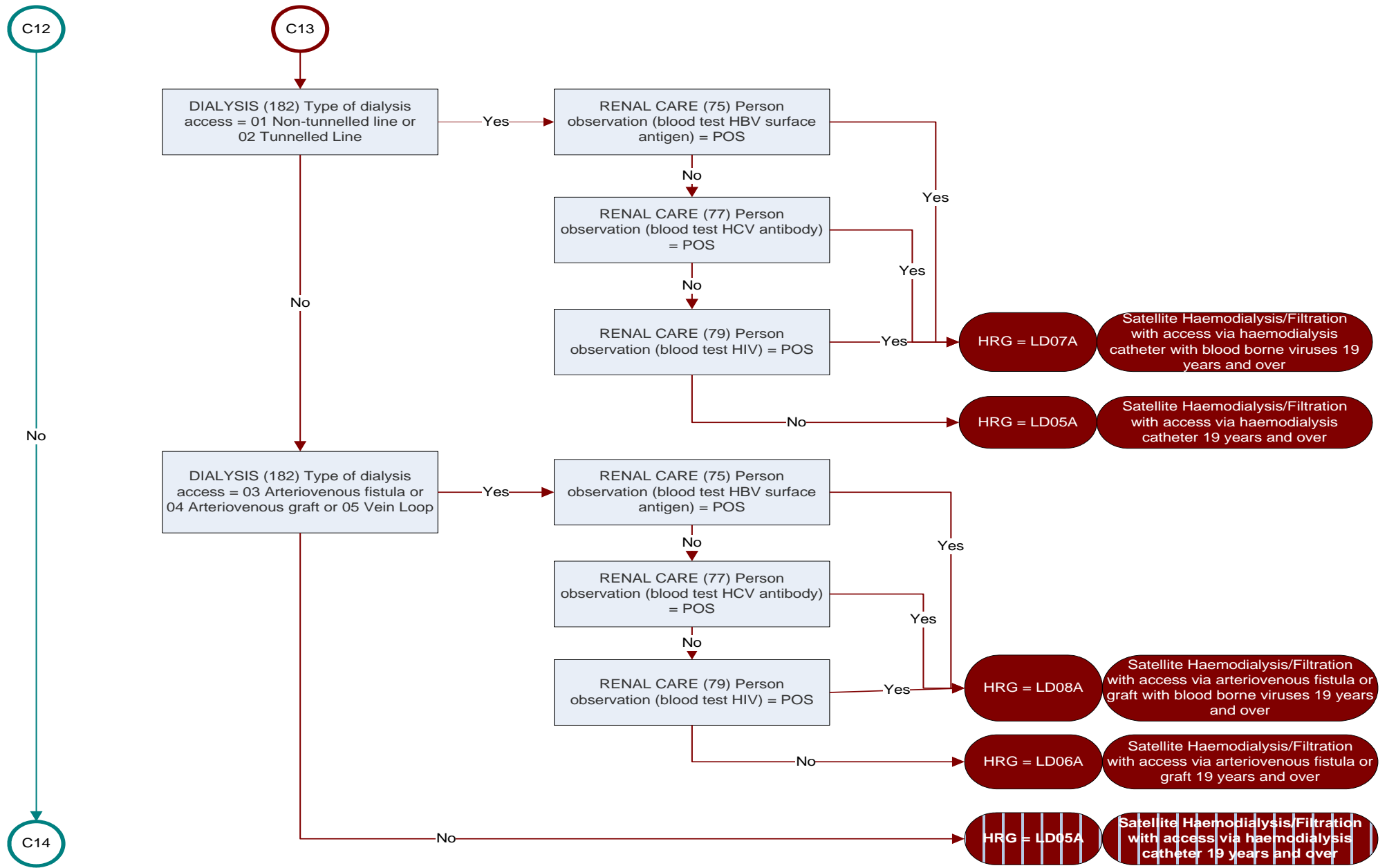


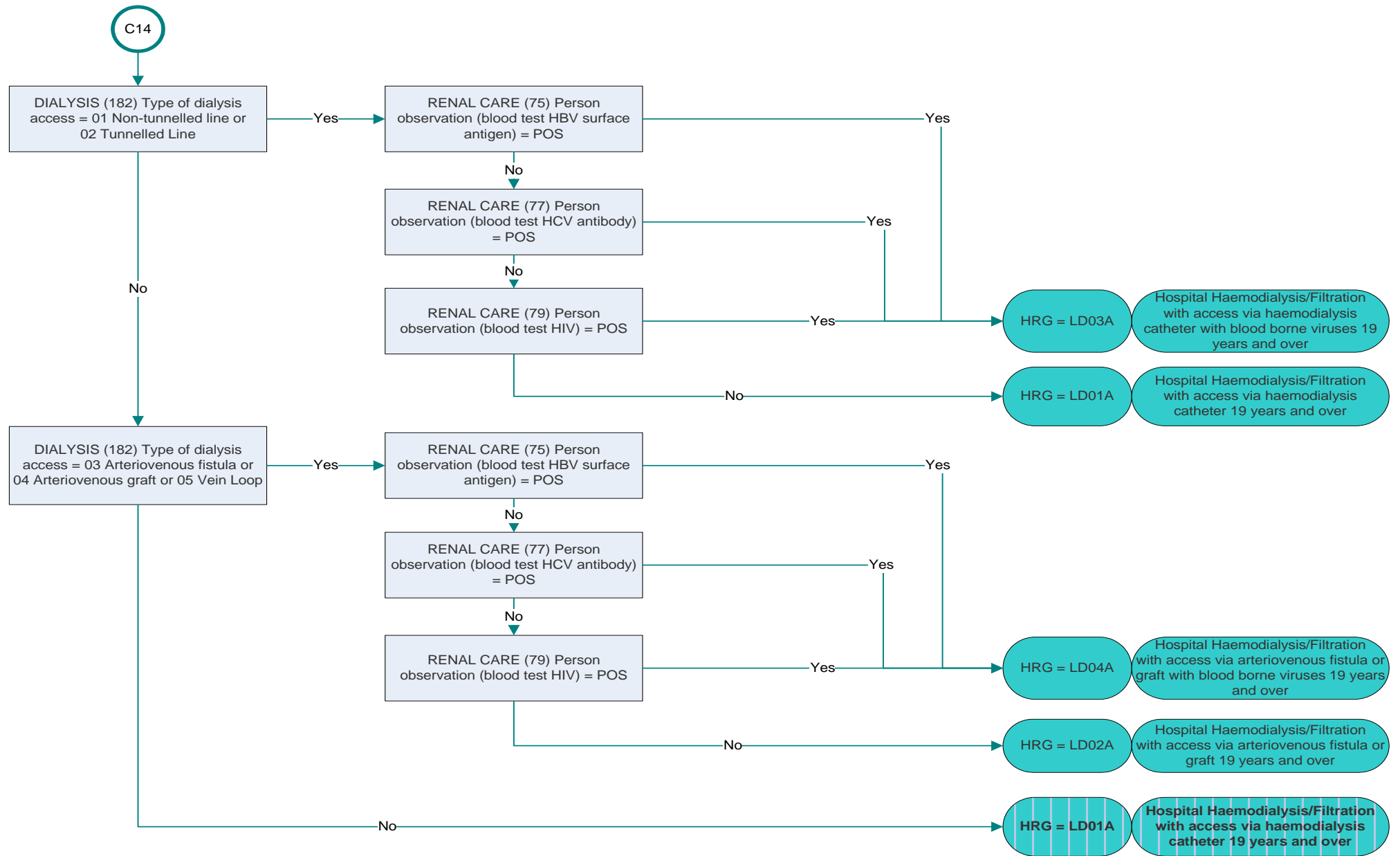












Subchapter LD: Annex B

List of required NRD fields, acceptable values and validation applicable for the generation of LD Renal Dialysis HRGs

Renal Treatment Modality	Description
01	CAPD (disconnect)
02	CAPD (standard)
03	CCPD (<6 nights/wk)
04	CCPD (6/7 nights/wk)
05	Haemodialysis
06	Haemofiltration
07	Haemodiafiltration
08	Ultrafiltration
09	Transplant (cad - HB)
10	Transplant (cad - NHB)
11	Transplant (LRD)
12	Transplant (LUD)
13	Conservative care
14	Recovery of renal function
15	None
Validation	Only on list. Leading zero must be included for values lower than 10.

* Note 09-15 will map to U group HRG (not dialysis activity)

Treatment Supervision Code	Description
01	Home
02	Hospital
03	Satellite
04	Shared supervision
Validation	Only on list. Leading zero must be included.

Type of dialysis access (Current)	Description
01	Non-tunnelled line
02	Tunnelled line
03	Arteriovenous fistula (AVF)
04	Arteriovenous graft (AVG)
05	Vein loop
06	PD catheter
07	PD catheter temp
Validation	On list plus blank. Leading zero must be included.

Person observation (blood test HBV surface antigen)	Description
POS	Positive
NEG	Negative
UNK	Unknown
Validation	On list plus blank. Must be upper case.

Person observation (blood test HCV)	Description
POS	Positive
NEG	Negative
UNK	Unknown
Validation	On list plus blank. Must be upper case.

Person observation (blood test HIV)	Description
POS	Positive
NEG	Negative
UNK	Unknown
Validation	On list plus blank. Must be upper case.

Age	Description
(number)	(Calculated from session date - date of birth)
Validation	Within range 0 to 130 years

Fields not required for grouping but expected for identification of each session

Unique Patient ID	Description
Free text	An anonymised unique ID for each patient. Not NHS number
Validation	None

Date	Description
Free text	Date in standard format, e.g. 11/11/11 or 11-11-11
Validation	None

Subchapter LE – Renal Dialysis for Acute Kidney Injury

Subchapter **LE Renal Dialysis for Acute Kidney Injury** covers renal dialysis activity specifically for the treatment of acute kidney injury as part of an admitted care episode, for patients of all ages. The HRGs are unbundled and generated in addition to the core HRG, and include activity undertaken in an inpatient and day case setting.

The HRGs in this subchapter are generated for renal dialysis for patients with acute kidney injury in the Admitted Patient Care setting.

Unlike dialysis for patients with chronic kidney disease, this activity is only generated from the Commissioning Data Sets (CDS) using OPCS-4 procedure codes plus ICD-10 diagnosis codes.

Dialysis for the treatment of chronic kidney disease is covered within Subchapter **LD Renal Dialysis for Chronic Kidney Disease**.

The HRGs are only generated when an OPCS-4 code classifying dialysis is recorded in addition to a primary or secondary diagnosis indicating acute kidney injury. These diagnoses are listed below:

D59.3 Haemolytic-uraemic syndrome
N17.0 Acute renal failure with tubular necrosis
N17.1 Acute renal failure with acute cortical necrosis
N17.2 Acute renal failure with medullary necrosis
N17.8 Other acute renal failure
N17.9 Acute renal failure, unspecified
N99.0 Postprocedural renal failure
T79.5 Traumatic anuria

An **LE01* Haemodialysis for Acute Kidney Injury** HRG is generated for each occurrence of the following OPCS-4 codes in the patient record:

X40.1 Renal dialysis
X40.3 Haemodialysis NEC

An **LE02* Peritoneal Dialysis for Acute Kidney Injury** HRG is generated for each occurrence of the following OPCS-4 codes in the patient record:

X40.2 Peritoneal dialysis NEC
X40.5 Automated peritoneal dialysis
X40.6 Continuous ambulatory peritoneal dialysis

Composition and Concepts		
	C21/22	P20/21
Total HRGs	4	4
Total HRG Roots	2	2
Procedure-driven HRGs	4	4
Diagnosis-driven HRGs	0	0
Age Splits	Yes	Yes
Complications and Comorbidities Splits	No	No
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Further differentiation is also applied, based on age, in order to take into account the difference in expected resource usage between treating a child versus treating an adult.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter MA – Female Reproductive System Procedures

Subchapter **MA Female Reproductive System Procedures** includes all female upper and lower genital tract procedures for patients of all ages. It includes activity undertaken in inpatient, day case and non-admitted care settings.

The HRGs within this subchapter are split into open procedures, laparoscopic procedures and procedures specific to either the treatment of malignancy or the treatment of pelvic peritoneum adhesion. Some of the open procedure HRGs are further subdivided into upper and lower genital tract procedures.

Related HRGs are divided into up to six levels of complexity: minimal, minor, intermediate, major, very major and complex.

There are procedure-specific HRGs for resection and ablation procedures, hysteroscopies, colposcopies, transvaginal ultrasounds and the insertion of an intra-uterine device. There are also procedure-specific HRGs for the termination of a pregnancy, split by method and gestational age.

Multiple-procedure logic is employed throughout the majority of HRGs in this subchapter. Escalation to an HRG with a higher expected resource use also occurs in this subchapter, where appropriate, for patients requiring surgery due to an ectopic pregnancy or for severe endometriosis.

Interactive CC splits are employed within many of the HRG roots in this subchapter – up to a maximum of three levels – to more appropriately differentiate expected resource usage between routine and complex patients.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	48*	48*
Total HRG Roots	34	34
Procedure-driven HRGs	48	48
Diagnosis-driven HRGs	2	2
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	Yes	Yes

* Includes two hybrid HRGs, which are driven by either procedure or diagnosis

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter MB – Female Reproductive System Disorders

Subchapter **MB Female Reproductive System Disorders** covers female reproductive system disorders for adults and some activity relating to children (per the National Service Framework definition). It includes activity undertaken in an inpatient and day case setting.

There are three HRG roots within this subchapter: one for threatened and spontaneous miscarriages and two for all other gynaecological disorders, with the latter split based on whether the disorder is malignant or non-malignant.

Interactive CC splits are employed within the majority of the HRG roots in this subchapter – up to a maximum of five levels – to more appropriately differentiate expected resource use between routine and complex patients.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	17	17
Total HRG Roots	3	3
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	17	17
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	Yes	Yes
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Intervention splits are also employed within all HRG roots in this subchapter to acknowledge where “minor interventions” undertaken during a patient admission are expected to result in additional resource usage.

The majority of diagnosis-driven activity relating to the treatment of children (aged 18 years and under) for female reproductive system disorders groups to an HRG in Chapter **P Diseases of Childhood and Neonates**, in line with the requirements of the Casemix Design Framework.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter MC – Assisted Reproduction Medicine

Subchapter **MC Assisted Reproduction Medicine** includes procedures within assisted reproductive medicine for all ages of patient. It includes activity undertaken in inpatient, day case and non-admitted care settings.

The HRGs within this subchapter are split into collection of sperm for males and into intrauterine insemination (IUI) and in-vitro fertilisation (IVF) procedures for females.

There are two HRGs for collection of sperm.

The IUI HRGs are split by with or without superovulation, and with or without donor sperm.

There is one HRG for implantation of embryo, with the other IVF HRGs being split by type of oocyte recovery; whether donor, with intracytoplasmic sperm injection (ICSI) or with pre-implantation genetic diagnosis.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	11	11
Total HRG Roots	11	11
Procedure-driven HRGs	11	11
Diagnosis-driven HRGs	0	0
Age Splits	No	No
Complications and Comorbidities Splits	No	No
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	Yes	Yes

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter NZ – Obstetric Medicine

Subchapter **NZ Obstetric Medicine** covers obstetric procedures and diagnoses for patients of all ages. It also accommodates obstetric aspects of embryology and placental disorders. It includes activity undertaken in inpatient, day case and non-admitted care settings.

The delivery HRGs within this subchapter are split based on the type of delivery: normal, assisted or caesarean section.

The normal and assisted delivery HRGs are further split to take into account delivery interventions. The splits are based on whether a single, or a combination of, the following interventions are undertaken: induction, epidural or post-partum surgical intervention.

The caesarean section HRGs are split based on whether the surgery was planned or otherwise.

The ante-natal disorder HRGs are split based on obstetric complexity level. There are HRGs specific to standard and specialised ante-natal scans as well as other ante-natal therapeutic procedures.

There are post-natal disorder HRGs as well as an HRG specific to post-natal therapeutic procedures.

There are HRGs specific to fetal medicine.

Interactive CC splits, up to a maximum of three levels, are employed within the majority of ante- and post-natal disorder HRGs as well as within the delivery HRGs, to more appropriately differentiate expected resource usage between routine and complex patients.

In accordance with national coding standards, unlike with all other CC lists where only secondary diagnoses contribute towards the CC score, for the obstetric delivery HRGs all diagnoses, including the primary diagnosis, can contribute towards to the CC score.

To reiterate, this subchapter **includes** diagnosis-driven activity relating to the treatment of children (aged 18 years and under). This activity is grouped to an HRG in this subchapter instead of to an HRG in Chapter **P Diseases of Childhood and Neonates** to more appropriately reflect the service provision of obstetric medicine.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	55	55
Total HRG Roots	25	25
Procedure-driven HRGs	43	43
Diagnosis-driven HRGs	12	12
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	Yes	Yes
Procedure Combination Codes	No	No
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	Yes	Yes

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter PB – Neonatal Disorders

Subchapter **PB Neonatal Disorders** covers neonatal medicine for patients aged 1 year and under. It includes activity undertaken in inpatient and day case settings. The subchapter comprises neonatal disorders, differentiated by source of patient admission, and healthy babies.

It does not include critical care services, which are covered in the unbundled subchapter **XA Neonatal Critical Care**. There is no grouping interaction between the generation of the PB HRGs and those for critical care, other than a length of stay adjustment (reduction) relating to critical care days on the length of stay of the core PB episode/spell.

Subchapter PB does not include procedures undertaken on neonates: these group to the procedure-driven HRGs in other (non-P*) subchapters.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	20	20
Total HRG Roots	4	4
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	20	20
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	Yes	Yes
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

The HRG **PB03Z Healthy Baby** is generated where no significant procedure is recorded, irrespective of Treatment Function Code (TFC), and specifically when one of the following 9 primary diagnoses is recorded (6 of which are generated only when the baby has no secondary diagnosis of being a carrier or no secondary diagnoses indicating that the baby is in receipt of prophylactic antibiotics with a previous infection of mother):

- **P83.1 Neonatal erythema toxicum**
- **P83.4 Breast engorgement of newborn**
- **P92.5 Neonatal difficulty in feeding at breast**
- **Z38.0 Singleton, born in hospital** (further qualified)
- **Z38.1 Singleton, born outside hospital** (further qualified)
- **Z38.2 Singleton, unspecified as to place of birth** (further qualified)
- **Z38.3 Twin, born in hospital** (further qualified)
- **Z38.4 Twin, born outside hospital** (further qualified)
- **Z38.5 Twin, unspecified as to place of birth** (further qualified)

Generation of the diagnosis-driven **PB03Z Healthy Baby** HRG is also reliant on providers following ICD-10 coding standard *DChS.XVI.1: Liveborn infants according to place of birth* (Z38), namely:

- All babies must have a code from category **Z38.-** recorded in their birth episode.

- If the newborn is diagnosed with a condition classifiable to ICD-10 Chapter XVI: **Certain conditions originating in the perinatal period (P00–P96)**, it must be coded.
- Sequencing of these codes depends on whether the baby has a condition classifiable to ICD-10 code **P00.-** to **P96.-** and whether that condition is treated/investigated.

Where babies are recorded as having a primary diagnosis of something other than the above (noting qualifications), the **PB03Z Healthy Baby** will not be generated and an HRG from the following list of HRG roots will be generated, appropriately, instead, dependent on the source of admission:

- **PB04 Neonatal Diagnoses, Admitted from Other Location or Born in Hospital**
- **PB05 Neonatal Diagnoses, Admitted from Other Hospital Provider**
- **PB06 Neonatal Diagnoses, Admitted from Home**

For patients receiving treatment for conditions originating in the perinatal period, the age check logic is “less than two years of age” to reflect that there may be a minority of patients that continue to be treated for these conditions past their first birthday.

Interactive CC splits are employed within three of the four HRG roots in this subchapter to more appropriately differentiate expected resource usage between routine and complex patients. The CC list for this subchapter is specific to paediatric neonatal disorders.

Intervention splits are also employed within one HRG root in this subchapter to acknowledge where minor interventions undertaken during a patient admission are expected to result in additional resource usage.

In accordance with national coding rules, conditions within ICD-10 code categories P00.- to P04.- require a discharge method of stillbirth in order to generate a valid HRG within this subchapter. This therefore includes ICD-10 codes **P01.3 Fetus and newborn affected by polyhydramnios** and **P01.4 Fetus and newborn affected by ectopic pregnancy**, which have additional logic to check whether the discharge method is stillbirth in order to ensure the derivation of the most appropriate HRG according to national coding rules.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

Accommodation of ICD-10 emergency use codes

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been added to the complications and comorbidities list for this subchapter, **PB_CC**, as per **R65.0 Systemic Inflammatory Response Syndrome of infectious origin without organ failure**.

Subchapter PC – Paediatric Ear Nose and Throat Disorders

Subchapter **PC Paediatric Ear, Nose and Throat Disorders** contains all diagnosis-driven activity relating to the treatment of children's (aged 18 years and under) ear, nose and throat disorders, in line with the requirements of the Casemix Design Framework.

Subchapter PC does not include neonatal critical care or paediatric critical care – these are covered in Subchapters **XA Neonatal Critical Care** and **XB Paediatric Critical Care**, respectively.

Interactive CC splits are employed within the one HRG root in this subchapter to more appropriately differentiate expected resource usage between routine and complex patients. The CC list for this subchapter is specific to Paediatric Ear Nose and Throat Disorders.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	4	4
Total HRG Roots	1	1
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	4	4
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

Accommodation of ICD-10 emergency use codes

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been added to the complications and comorbidities list for this subchapter, **PC_CC**, as per **R65.0 Systemic Inflammatory Response Syndrome of infectious origin without organ failure**.

Subchapter PD – Paediatric Respiratory Disorders

Subchapter **PD Paediatric Respiratory Disorders** contains all diagnosis-driven activity relating to the treatment of children's (aged 18 years and under) respiratory disorders, in line with the requirements of the Casemix Design Framework.

Subchapter PD does not include neonatal critical care or paediatric critical care – these are covered in Subchapters **XA Neonatal Critical Care** and **XB Paediatric Critical Care**, respectively.

Interactive CC splits are employed within all six HRG roots in this subchapter to more appropriately differentiate expected resource usage between routine and complex patients. The CC list for this subchapter is specific to Paediatric Respiratory Disorders.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	24	24
Total HRG Roots	6	6
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	24	24
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

Accommodation of ICD-10 emergency use codes

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been added to the complications and comorbidities list for this subchapter, **PD_CC**, as per **R65.0 Systemic Inflammatory Response Syndrome of infectious origin without organ failure**.

Subchapter PE – Paediatric Cardiology Disorders

Subchapter **PE Paediatric Cardiology Disorders** contains all diagnosis-driven activity relating to the treatment of children's (aged 18 years and under) cardiology disorders, in line with the requirements of the Casemix Design Framework.

Subchapter PE does not include neonatal critical care or paediatric critical care – these are covered in Subchapters **XA Neonatal Critical Care** and **XB Paediatric Critical Care**, respectively.

Interactive CC splits are employed within all HRG roots in this subchapter to more appropriately differentiate expected resource usage between routine and complex patients. The CC list for this subchapter is specific to Paediatric Cardiology Disorders.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	12	12
Total HRG Roots	3	3
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	12	12
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

Accommodation of ICD-10 emergency use codes

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been added to the complications and comorbidities list for this subchapter, **PE_CC**, as per **R65.0 Systemic Inflammatory Response Syndrome of infectious origin without organ failure**.

Subchapter PF – Paediatric Gastroenterology Disorders

Subchapter **PF Paediatric Gastroenterology Disorders** contains all diagnosis-driven activity relating to the treatment of children’s (aged 18 years and under) gastroenterology disorders, in line with the requirements of the Casemix Design Framework.

Subchapter PF does not include neonatal critical care or paediatric critical care – these are covered in Subchapters **XA Neonatal Critical Care** and **XB Paediatric Critical Care**, respectively.

Interactive CC splits are employed within all HRG roots in this subchapter to more appropriately differentiate expected resource usage between routine and complex patients. The CC list for this subchapter is specific to Paediatric Gastroenterology Disorders.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	17	17
Total HRG Roots	5	5
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	17	17
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

Accommodation of ICD-10 emergency use codes

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been added to the complications and comorbidities list for this subchapter, **PF_CC**, as per **R65.0 Systemic Inflammatory Response Syndrome of infectious origin without organ failure**.

Subchapter PG – Paediatric Hepatobiliary Disorders

Subchapter **PG Paediatric Hepatobiliary Disorders** contains all diagnosis-driven activity relating to the treatment of children's (aged 18 years and under) hepatobiliary disorders, in line with the requirements of the Casemix Design Framework.

Subchapter PG does not include neonatal critical care or paediatric critical care – these are covered in Subchapters **XA Neonatal Critical Care** and **XB Paediatric Critical Care**, respectively.

Interactive CC splits are employed within the one HRG root in this subchapter to more appropriately differentiate expected resource usage between routine and complex patients. The CC list for this subchapter is specific to Paediatric Hepatobiliary Disorders.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	3	3
Total HRG Roots	1	1
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	3	3
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

Accommodation of ICD-10 emergency use codes

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been added to the complications and comorbidities list for this subchapter, **PG_CC**.

Subchapter PH – Paediatric Rheumatology Disorders

Subchapter **PH Paediatric Rheumatology Disorders** contains all diagnosis-driven activity relating to the treatment of children’s (aged 18 years and under) rheumatology disorders, in line with the requirements of the Casemix Design Framework.

Subchapter PH does not include neonatal critical care or paediatric critical care – these are covered in Subchapters **XA Neonatal Critical Care** and **XB Paediatric Critical Care**, respectively.

Interactive CC splits are employed within the one HRG root in this subchapter to more appropriately differentiate expected resource usage between routine and complex patients. The CC list for this subchapter is specific to Paediatric Rheumatology Disorders.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	4	4
Total HRG Roots	1	1
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	4	4
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

Accommodation of ICD-10 emergency use codes

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been added to the complications and comorbidities list for this subchapter, **PH_CC**, as per **R65.0 Systemic Inflammatory Response Syndrome of infectious origin without organ failure**.

Subchapter PJ – Paediatric Dermatology Disorders

Subchapter **PJ Paediatric Dermatology Disorders** contains all diagnosis-driven activity relating to the treatment of children's (aged 18 years and under) dermatology disorders, in line with the requirements of the Casemix Design Framework.

Subchapter PJ does not include neonatal critical care or paediatric critical care – these are covered in Subchapters **XA Neonatal Critical Care** and **XB Paediatric Critical Care**, respectively.

Interactive CC splits are employed within both HRG roots in this subchapter to more appropriately differentiate expected resource usage between routine and complex patients. The CC list for this subchapter is specific to Paediatric Dermatology Disorders.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	7	7
Total HRG Roots	2	2
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	7	7
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

Accommodation of ICD-10 emergency use codes

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been added to the complications and comorbidities list for this subchapter, **PJ_CC**.

Subchapter PK – Paediatric Diabetology, Endocrinology and Metabolic Disorders

Subchapter **PK Paediatric Diabetology, Endocrinology and Metabolic Disorders** contains all diagnosis-driven activity relating to the treatment of children's (aged 18 years and under) diabetology, endocrinology and metabolic disorders, in line with the requirements of the Casemix Design Framework.

Subchapter PK does not include neonatal critical care or paediatric critical care – these are covered in Subchapters **XA Neonatal Critical Care** and **XB Paediatric Critical Care**, respectively.

Interactive CC splits are employed within all four HRG roots in this subchapter to more appropriately differentiate expected resource usage between routine and complex patients. The CC list for this subchapter is specific to Paediatric Diabetology, Endocrinology and Metabolic Disorders.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	11	11
Total HRG Roots	4	4
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	11	11
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

Accommodation of ICD-10 emergency use codes

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been added to the complications and comorbidities list for this subchapter, **PK_CC**, as per **R65.0 Systemic Inflammatory Response Syndrome of infectious origin without organ failure**.

Subchapter PL – Paediatric Renal Disorders

Subchapter **PL Paediatric Renal Disorders** contains all diagnosis-driven activity relating to the treatment of children's (aged 18 years and under) renal disorders, in line with the requirements of the Casemix Design Framework.

Subchapter PL does not include neonatal critical care or paediatric critical care – these are covered in Subchapters **XA Neonatal Critical Care** and **XB Paediatric Critical Care**, respectively.

Interactive CC splits are employed within all three HRG roots in this subchapter to more appropriately differentiate expected resource usage between routine and complex patients. The CC list for this subchapter is specific to Paediatric Renal Disorders.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	10	10
Total HRG Roots	3	3
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	10	10
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

Accommodation of ICD-10 emergency use codes

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been added to the complications and comorbidities list for this subchapter, **PL_CC**.

Subchapter PM – Paediatric Haematological-Oncology Disorders

Subchapter **PM Paediatric Haematological-Oncology Disorders** contains all diagnosis-driven activity relating to the treatment of children's (aged 18 years and under) haematological-oncology disorders, in line with the requirements of the Casemix Design Framework.

Subchapter PM does not include neonatal critical care or paediatric critical care – these are covered in Subchapters **XA Neonatal Critical Care** and **XB Paediatric Critical Care**, respectively.

Interactive CC splits are employed within some of the HRG roots in this subchapter to more appropriately differentiate expected resource usage between routine and complex patients. This subchapter has a CC list specific to paediatric haematological-oncology disorders. However, the subchapter has a second CC list that is used exclusively to determine the CC score for activity grouping to HRG root **PM45 Febrile Neutropenia with Malignancy** (see below).

Composition and Concepts		
	C21/22	P20/21
Total HRGs	14	14
Total HRG Roots	6	6
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	14	14
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	Yes	Yes

Logic has been applied across the HRG design to ensure activity groups to HRG root **PM45 Febrile Neutropenia with Malignancy** where at least one diagnosis code from each of the lists **Cancer**, **PM_Infection** and **PM_Neutropenia** is present in the episode/spell record.

To ensure that diagnosis codes used to reach HRG root **PM45 Febrile Neutropenia with Malignancy** are not double counted when calculating CC score, the CC score for an episode/spell grouping to this HRG root is calculated on a different basis to activity grouping to the other HRG roots in this subchapter.

PM45 Paediatric Febrile Neutropenia with Malignancy has its own specific CC list, **PM45_CC**, which is used in conjunction with the list **PM45_Canc_Inf_Neut** to calculate a combined CC score using both lists. List **PM45_Canc_Inf** contains all the cancer, infection and neutropenia codes that, when combined, enable the generation of HRG root **PM45 Paediatric Febrile Neutropenia with Malignancy**. Each member of this list has a list value of 1, so all activity that maps to HRG root PM45 will have a minimum score of 3 from this list (as it includes the value for the primary diagnosis). However, some patients may suffer from multiple cancers or infections, and these patients will have a higher score from this list.

Separately, a second score is derived for the same episode/spell using list **PM45_CC**. This second score is combined with the score derived using list **PM45_Canc_Inf** to create a combined CC score, from which 3 is subtracted (the value of the three codes used to reach the HRG root – to avoid double counting these in this score) to determine the final CC score.

For example, a record with a value of 4 from list **PM45_Canc_Inf** plus a value of 2 from list **PM45_CC** will generate a CC score of 3, resulting in the HRG **PM45B Paediatric Febrile Neutropenia with Malignancy, with CC Score 3-5** being generated.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

Accommodation of ICD-10 emergency use codes

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been remapped from HRG root **PX57 Paediatric, Examination, Follow-up, Special Screening or Other Admissions** to **PW16 Paediatric Major Infections** for patients 18 and under and to **PM45 Paediatric Febrile Neutropenia with Malignancy** for patients 18 and under where an additional diagnosis of cancer and agranulocytosis is recorded. This matches the mapping of the code in use for this disorder before the introduction of this emergency use code; ***R65.0 Systemic Inflammatory Response Syndrome of infectious origin without organ failure***.

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been added to the complications and comorbidities list for this subchapter, **PM_CC**, and the lists associated with the generation of HRG root **PM45 Paediatric Febrile Neutropenia with Malignancy**, **PM_Canc_Inf_Neut** and **PM_Infection**, as per ***R65.0 Systemic Inflammatory Response Syndrome of infectious origin without organ failure***.

Subchapter PN – Paediatric Non-Malignant Haematological Disorders

Subchapter **PN Paediatric Non-Malignant Haematological Disorders** contains all diagnosis-driven activity relating to the treatment of children's (aged 18 years and under) non-malignant haematological disorders, in line with the requirements of the Casemix Design Framework.

Subchapter PN does not include neonatal critical care or paediatric critical care – these are covered in Subchapters **XA Neonatal Critical Care** and **XB Paediatric Critical Care**, respectively.

Interactive CC splits are employed within all four HRG roots in this subchapter to more appropriately differentiate expected resource usage between routine and complex patients. The CC list for this subchapter is specific to Paediatric Non-Malignant Haematological Disorders.

There is one HRG root in this subchapter, **PN46 Paediatric Thalassaemia**, that is influenced or driven by OPCS-4 procedure codes. Additional logic has been added to the HRGs in this root to map paediatric patients to these HRGs when they have a blood transfusion as part of their treatment for thalassaemia.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	9*	9*
Total HRG Roots	4	4
Procedure-driven HRGs	2	2
Diagnosis-driven HRGs	9	9
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

* The design includes two hybrid HRGs which are driven by either procedure or diagnosis

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

Accommodation of ICD-10 emergency use codes

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been added to the complications and comorbidities list for this subchapter, **PN_CC**, as per **R65.0 Systemic Inflammatory Response Syndrome of infectious origin without organ failure**.

Subchapter PP – Paediatric Ophthalmic Disorders

Subchapter **PP Paediatric Ophthalmic Disorders** contains all diagnosis-driven activity relating to the treatment of children's (aged 18 years and under) ophthalmic disorders, in line with the requirements of the Casemix Design Framework.

Subchapter PP does not include neonatal critical care or paediatric critical care – these are covered in Subchapters **XA Neonatal Critical Care** and **XB Paediatric Critical Care**, respectively.

Interactive CC splits are employed within the one HRG root in this subchapter to more appropriately differentiate expected resource usage between routine and complex patients. The CC list for this subchapter is specific to Paediatric Ophthalmic Disorders.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	2	2
Total HRG Roots	1	1
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	2	2
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

Accommodation of ICD-10 emergency use codes

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been added to the complications and comorbidities list for this subchapter, **PP_CC**, as per **R65.0 Systemic Inflammatory Response Syndrome of infectious origin without organ failure**.

Subchapter PQ – Paediatric Immune System Disorders

Subchapter **PQ Paediatric Immune System Disorders** contains all diagnosis-driven activity relating to the treatment of children’s (aged 18 years and under) immune system disorders, in line with the requirements of the Casemix Design Framework.

Subchapter PQ does not include neonatal critical care or paediatric critical care – these are covered in Subchapters **XA Neonatal Critical Care** and **XB Paediatric Critical Care**, respectively.

Interactive CC splits are employed within the one HRG root in this subchapter to more appropriately differentiate expected resource usage between routine and complex patients. The CC list for this subchapter is specific to Paediatric Immune System Disorders.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	2	2
Total HRG Roots	1	1
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	2	2
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

Accommodation of ICD-10 emergency use codes

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been added to the complications and comorbidities list for this subchapter, **PQ_CC**, as per **R65.0 Systemic Inflammatory Response Syndrome of infectious origin without organ failure**.

Subchapter PR – Paediatric Nervous System Disorders

Subchapter **PR Paediatric Nervous System Disorders** contains all diagnosis-driven activity relating to the treatment of children’s (aged 18 years and under) Nervous System Disorders, in line with the requirements of the Casemix Design Framework.

Subchapter PR does not include neonatal critical care or paediatric critical care – these are covered in Subchapters **XA Neonatal Critical Care** and **XB Paediatric Critical Care**, respectively.

Interactive CC splits are employed within all five HRG roots in this subchapter to more appropriately differentiate expected resource usage between routine and complex patients. The CC list for this subchapter is specific to Paediatric Nervous System Disorders.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	22	22
Total HRG Roots	7	7
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	22	22
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

Accommodation of ICD-10 emergency use codes

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been added to the complications and comorbidities list for this subchapter, **PR_CC**, as per **R65.0 Systemic Inflammatory Response Syndrome of infectious origin without organ failure**.

Subchapter PT – Paediatric Mental Health Disorders

Subchapter **PT Paediatric Mental Health Disorders** contains all diagnosis-driven activity relating to the treatment of children's (aged 18 years and under) mental health disorders, in line with the requirements of the Casemix Design Framework.

Subchapter PT does not include neonatal critical care or paediatric critical care – these are covered in Subchapters **XA Neonatal Critical Care** and **XB Paediatric Critical Care**, respectively.

Interactive CC splits are employed within both HRG roots in this subchapter to more appropriately differentiate expected resource usage between routine and complex patients. The CC list for this subchapter is specific to Paediatric Mental Health Disorders.

Note that some paediatric activity for mental health conditions continues to map to subchapter **WD Treatment of Mental Health Patients by Non-Mental Health Service Providers**.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	4	4
Total HRG Roots	2	2
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	4	4
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

Accommodation of ICD-10 emergency use codes

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been added to the complications and comorbidities list for this subchapter, **PT_CC**.

Subchapter PV – Paediatric Trauma Medicine

Subchapter **PV Paediatric Trauma Medicine** contains all diagnosis-driven activity relating to the treatment of children's (aged 18 years and under) trauma medicine, in line with the requirements of the Casemix Design Framework.

Subchapter PV does not include neonatal critical care or paediatric critical care – these are covered in Subchapters **XA Neonatal Critical Care** and **XB Paediatric Critical Care**, respectively.

Interactive CC splits are employed within all three HRG roots in this subchapter to more appropriately differentiate expected resource usage between routine and complex patients. The CC list for this subchapter is specific to Paediatric Trauma Medicine.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	7	7
Total HRG Roots	3	3
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	7	7
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

Accommodation of ICD-10 emergency use codes

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been added to the complications and comorbidities list for this subchapter, **PV_CC**, as per **R65.0 Systemic Inflammatory Response Syndrome of infectious origin without organ failure**.

Subchapter PW – Paediatric Infectious Diseases

Subchapter **PW Paediatric Infectious Diseases** contains all diagnosis-driven activity relating to the treatment of children's (aged 18 years and under) Infectious Diseases, in line with the requirements of the Casemix Design Framework.

Subchapter PW does not include neonatal critical care or paediatric critical care – these are covered in Subchapters **XA Neonatal Critical Care** and **XB Paediatric Critical Care**, respectively.

Interactive CC splits are employed within all four HRG roots in this subchapter to more appropriately differentiate expected resource usage between routine and complex patients. The CC list for this subchapter is specific to Paediatric Infectious Diseases.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	15	15
Total HRG Roots	4	4
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	15	15
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

Accommodation of ICD-10 emergency use codes

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been remapped from HRG root **PX57 Paediatric, Examination, Follow-up, Special Screening or Other Admissions** to **PW16 Paediatric Major Infections** for patients 18 and under and to **PM45 Paediatric Febrile Neutropenia with Malignancy** for patients 18 and under where an additional diagnosis of cancer and agranulocytosis is recorded. This matches the mapping of the code in use for this disorder before the introduction of this emergency use code; **R65.0 Systemic Inflammatory Response Syndrome of infectious origin without organ failure**.

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been added to the complications and comorbidities list for this subchapter, **PW_CC**, as per **R65.0 Systemic Inflammatory Response Syndrome of infectious origin without organ failure**.

Subchapter PX – Paediatric Medicine

Subchapter **PX Paediatric Medicine** contains all diagnosis-driven activity relating to the treatment of children (aged 18 years and under) that does not otherwise fit within the more specific paediatric disorder subchapters, in line with the requirements of the Casemix Design Framework.

Subchapter PX does not include neonatal critical care or paediatric critical care – these are covered in Subchapters **XA Neonatal Critical Care** and **XB Paediatric Critical Care**, respectively.

Interactive CC splits are employed within the majority of HRG roots in this subchapter to more appropriately differentiate expected resource usage between routine and complex patients. The CC list for this subchapter is specific to Paediatric Medicine.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	46	46
Total HRG Roots	19	19
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	46	46
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

Accommodation of ICD-10 emergency use codes

U07.3 Personal history of COVID-19 has been remapped for patients 18 and under from HRG root **PX57 Paediatric, Examination, Follow-up, Special Screening or Other Admissions** to **UZ01Z Data Invalid for Grouping** as, according to national clinical coding standards, this code is not permitted to be used as a primary diagnosis, as per most similar code **Z86.1 Personal history of infectious and parasitic diseases**.

When recorded as a primary diagnosis, it will generate error code **UZ01 Invalid Primary Diagnosis: 1. Primary Diagnosis doesn't exist or 2. Primary Diagnosis Blank or 3. Diagnosis can't be used at primary position**.

U07.4 Post COVID-19 condition has not been remapped: it continues to map to HRG root **PX57 Paediatric, Examination, Follow-up, Special Screening or Other Admissions** for patients 18 and under, children based on clinical advice.

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been remapped from HRG root **PX57 Paediatric, Examination, Follow-up, Special Screening or Other Admissions** to **PW16 Paediatric Major Infections** for patients 18 and under and to **PM45 Paediatric Febrile Neutropenia with Malignancy** for patients 18 and under where an additional diagnosis of cancer and agranulocytosis is recorded. This matches the mapping of the code in use for this disorder before the introduction of this emergency use code; **R65.0 Systemic Inflammatory Response Syndrome of infectious origin without organ failure**.

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been added to the complications and comorbidities list for this subchapter, **PX_CC**, as per **R65.0 Systemic Inflammatory Response Syndrome of infectious origin without organ failure**.

Subchapter RD – Diagnostic Imaging Procedures

Subchapter **RD Diagnostic Imaging Procedures** covers diagnostic imaging for patients of all ages, delivered in admitted or non-admitted care settings.

The unbundled HRGs in this subchapter are separated based on the type of examination undertaken.

The diagnostic imaging (procedure) HRGs are split based on the modality of scan (MRI, CT, DEXA, ultrasound, contrast fluoroscopy and simple echo).

The CT and MRI HRGs are split based on the number of body areas scanned and whether contrast is used.

The ultrasound and contrast fluoroscopy HRGs are split by the time taken and by whether the scan is mobile/intraoperative. In addition, the ultrasound scans are split based on whether contrast is used. Only non-intrusive ultrasound interventions group to an HRG in this subchapter. Intrusive ultrasound interventions group to the relevant body system subchapter, e.g. transvaginal ultrasound maps to Subchapter MA.

There are also HRGs specific to more specialised scans such as complex CT, vascular ultrasound and ultrasound elastography.

Age splits are employed in several of the HRG roots specific to MRI, CT and simple echocardiogram: There are specific HRGs for adult activity (19 years and over) and others for paediatric activity (18 years and under). There are also HRGs specific to the treatment of young children (0 to 5 years of age) and those for older children (6 to 18 years).

The HRG design for this area aligns with the national coding standard for diagnostic imaging scans. Where multiple body areas are scanned using the same modality in the same visit to the radiology department, this will generate one unbundled HRG indicating multiple body areas have been scanned rather than multiple HRGs each indicating a scan of a single body area.

For example, if a patient undergoes an MRI scan of their chest, abdomen and pelvis (with post contrast) during the same trip to the radiology department, the episode will generate a single unbundled HRG for the MRI scan covering all three body areas. This record would be coded (according to the national coding standard) as follows and would generate the unbundled HRG **RD05Z Magnetic Resonance Imaging Scan of Two or Three Areas**.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	47*	47*
Total HRG Roots	37	37
Procedure-driven HRGs	47	47
Diagnosis-driven HRGs	1	1
Age Splits	Yes	Yes
Complications and Comorbidities Splits	No	No
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	No	No

* Includes one core HRG (**RD97Z**) that is driven by both diagnosis and procedure logic for admitted patient care and by procedure only for non-admitted patients. Both settings also utilise TFC.

U21.1 Magnetic resonance imaging NEC +

Y79.3 Radiology with post contrast +
Y98.3 Radiology of three body areas (or 20-40 minutes) +
Z92.4 Chest NEC
Z92.6 Abdomen NEC
O16.1 Pelvis NEC

**Differences from the HRG4+ 2020/21 Local Payment Grouper
Version 2 (COVID-19)**

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter RN – Nuclear Medicine Procedures

Subchapter **RN Nuclear Medicine Procedures** covers both diagnostic and therapeutic nuclear medicine procedures for patients of all ages, delivered in admitted or non-admitted care settings.

The unbundled HRGs in this subchapter are separated based on the type of test performed.

The diagnostic imaging procedures are split based on the modality or type of scan, e.g. PET-CT, SPECT-CT, PET, SPECT or nuclear bone scan.

The PET-CT and SPECT-CT HRGs are split based on the number of body areas scanned.

There are also HRGs specific to molecular radiotherapy procedures.

Age splits are employed within the majority of nuclear medicine HRG roots: There are specific HRGs for adult activity (19 years and over) and others for paediatric activity (18 years and under). There are also HRGs specific to the treatment of young children (0 to 5 years of age) and those for older children (6 to 18 years).

Due to limitations in the current underlying OPCS-4 classification, for the majority of activity it is not yet possible to differentiate activity based on the type of radionuclide used.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	69*	69*
Total HRG Roots	38	38
Procedure-driven HRGs	69	69
Diagnosis-driven HRGs	1	1
Age Splits	Yes	Yes
Complications and Comorbidities Splits	No	No
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	No	No

* Includes one core HRG (**RN97Z**) that is driven by both diagnosis and procedure logic for admitted patient care and by procedure only for non-admitted patients. Both settings also utilise TFC.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter SA – Haematological Procedures and Disorders

Subchapter **SA Haematological Procedures and Disorders** covers procedures for patients of all ages and adult diagnoses relating to haematological conditions. It includes activity undertaken in inpatient, day case and non-admitted care settings.

Within Subchapter SA, there are HRG roots specific to blood and bone marrow transplantation, including peripheral blood stem cell transplant HRGs that are differentiated on donor type to mirror the equivalent bone marrow transplant HRGs. All blood and bone marrow transplantation HRG roots include age splits to separate paediatric activity from adult activity.

This subchapter also includes HRGs specific to blood and bone marrow harvest, as well as HRGs specific to blood transfusion and diagnostic extraction of blood or marrow procedures.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	104*	104*
Total HRG Roots	41	41
Procedure-driven HRGs	33	33
Diagnosis-driven HRGs	72	72
Age Splits	Yes	Yes
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	Yes	Yes

* Includes one hybrid HRG, which is driven by either procedure or diagnosis

There is one HRG, **SA11Z Thalassaemia**, that can be reached through either a diagnosis code alone (indicating thalassaemia) or through a procedure code plus a primary diagnosis code. Where a procedure code classifying a blood transfusion has been recorded as the dominant procedure alongside a primary diagnosis of thalassaemia, the diagnosis takes precedence over the transfusion procedure, driving activity to SA11Z.

HRG **SA33Z Diagnostic Bone Marrow Extraction** and HRGs **SA41Z Automated Red Cell Exchange** to **SA45* Injection of Rh Immune Globulin or Other Blood Transfusion** inclusive employ maximum length of stay logic to ensure that minor procedures, such as a blood transfusion, are not used to determine the HRG for a long-stay medical patient, e.g. a child who has sickle-cell anaemia.

Interactive CC splits are employed within the majority of diagnosis-driven HRG roots in this subchapter – up to a maximum of six levels – to differentiate complex patients from routine patients.

All diagnosis-driven activity relating to the treatment of children (aged 18 years and under) groups to an HRG in Chapter **P Diseases of Childhood and Neonates**, in line with the requirements of the Casemix Design Framework.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter SB – Chemotherapy

Subchapter **SB Chemotherapy** covers both the procurement and delivery of chemotherapy regimens for patients of all ages. All but one of the HRGs in this subchapter are unbundled. This subchapter includes activity undertaken in inpatient, day case and non-admitted care settings.

There are chemotherapy procurement and chemotherapy delivery HRGs within this subchapter.

The chemotherapy procurement HRGs are separated according to high-cost drug band, with band 1 having the lowest expected cost (£0 to £200) and band 10 having the highest expected cost (£1,801 upwards).

These bands are derived from a national list owned by NHS England. In addition, there is a catch-all HRG for the procurement of drugs not on said list.

There are HRGs specific to chemotherapy delivery, distinguished by method of delivery, e.g. oral or intravenous.

There is one HRG, **SB97Z Same Day Chemotherapy Admission or Attendance**, that has been created as an “empty core” HRG. The specific logic required to derive **SB97Z Same Day Chemotherapy Admission or Attendance** requires a delivery or procurement of chemotherapy procedure code, a length of stay of 0 days, and a lack of any other significant procedure code. This design ensures that the total resource usage of a patient undergoing same day chemotherapy is associated with the unbundled HRG derived rather than with the core HRG.

The chemotherapy procurement HRGs are generated per cycle, while the delivery HRGs are generated per session, based on the OPCS-4 codes recorded.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	18*	18*
Total HRG Roots	18	18
Procedure-driven HRGs	18	18
Diagnosis-driven HRGs	1	1
Age Splits	No	No
Complications and Comorbidities Splits	No	No
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	Yes	Yes

* Includes one core HRG (**SB97Z**) that is driven by both diagnosis and procedure logic for admitted patient care and by procedure only for non-admitted patients.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter SB: Worked Examples: Regimens and Treatments

In Subchapter SB, HRGs are derived using the relevant Chemotherapy Procurement procedure codes and, where appropriate, Chemotherapy Delivery procedure codes.

Case 1: Inpatient Treatment

A soft tissue sarcoma patient receives Doxorubicin and Ifosfamide chemotherapy as an inpatient. This consists of doxorubicin treatment on day one, followed by 24 hours of Ifosfamide and Mesna continuous infusion. This is repeated every 21 days.

Coding

Primary Diagnosis: C49.9 Malignant neoplasm of connective and soft tissue, unspecified
X70.4 Procurement of drugs for chemotherapy for neoplasm for regimens in Band 4

HRG Output

Core HRG: HD40* Malignancy, of Bone or Connective Tissue
Unbundled HRG(s): SB04Z Procure Chemotherapy drugs for regimens in Band 4

Case 2: Day case

A lymphoma patient is receiving ABVD chemotherapy. This consists of four drugs and is given every 14 days.

Coding

Primary Diagnosis: C81.9 Hodgkin lymphoma, unspecified
Cycle 1:
X70.2 Procurement of drugs for chemotherapy for neoplasm for regimens in Band 2
X72.2 Delivery of complex parenteral chemotherapy for neoplasm at first attendance
Repeat for attendance of each new cycle every 14 days

HRG Output

Core HRG: SB97Z Same day Chemotherapy admission or attendance
Unbundled HRG(s): SB02Z Procure Chemotherapy drugs for regimens in Band 2
SB13Z Deliver more Complex Parenteral Chemotherapy at First Attendance

Case 3: Ambulatory Patient

A breast cancer patient is receiving Trastuzumab 7 loading dose followed by Trastuzumab 7 maintenance dose on a weekly basis. This is repeated every seven days.

Coding

Cycle 1: Trastuzumab 7 loading dose (1st attendance)

X70.5 Procurement of drugs for chemotherapy for neoplasm for regimens in Band 5

X72.3 Delivery of simple parenteral chemotherapy for neoplasm at first attendance

Cycle 2: Trastuzumab 7 maintenance dose (1st attendance)

X70.3 Procurement of drugs for chemotherapy for neoplasm for regimens in Band 3.

X72.3 Delivery of simple parenteral chemotherapy for neoplasm at first attendance

Do not use X72.4 Delivery of subsequent element of cycle of chemotherapy for neoplasm because the cycle length is seven days. These are classed as different cycles because they are different regimens.

HRG Output

HRG output is based on different cycles. For the 1st attendance of cycle 1, the grouper will output a procurement HRG and a delivery HRG. For the 1st attendance of cycle two, the grouper will again output both a procurement HRG and a delivery HRG.

1st attendance of cycle 1:

Core HRG: SB97Z Same day Chemotherapy admission or attendance

Unbundled HRG(s): SB05Z Procure Chemotherapy drugs for regimens in Band 5
SB12Z Deliver Simple Parenteral Chemotherapy at First Attendance

1st attendance of cycle 2:

Core HRG: SB97Z Same day Chemotherapy admission/attendance

Unbundled HRG(s): SB03Z Procure Chemotherapy drugs for regimens in Band 3
SB12Z Deliver Simple Parenteral Chemotherapy at First Attendance

Case 4: A regimen with inpatient and outpatient components

An inpatient receives BEP 5 day chemotherapy for a testicular solid tumour. The chemotherapy consists of three different drugs given over three inpatient days and two consecutive outpatient treatments at seven-day intervals. The whole cycle is repeated every 21 days.

Coding

Primary Diagnosis: C62.9 Malignant neoplasm of testis, unspecified

Cycle 1: Day 1 (Inpatient episode)

X70.3 Procurement of drugs for chemotherapy for neoplasm for regimens Band 3

HRG Output

Core HRG: LB35* Scrotum, Testis or Vas Deferens Disorders

Unbundled HRG: SB03Z Procure Chemotherapy drugs for regimens in Band 3

Day 8 (1st outpatient attendance)

X72.4 Delivery of subsequent element of cycle of chemotherapy for neoplasm.

HRG Output

Core HRG: SB97Z Same day Chemotherapy admission or attendance

Unbundled HRG: SB15Z Deliver subsequent elements of a Chemotherapy cycle

Day 15 (2nd outpatient attendance)

X72.4 Delivery of subsequent element of cycle of chemotherapy for neoplasm

HRG Output

Core HRG: SB97Z Same day Chemotherapy admission or attendance

Unbundled HRG: SB15Z Deliver subsequent elements of a Chemotherapy cycle

Cycle 2

Day 21 (Inpatient episode)

X70.3 Procurement of drugs for chemotherapy for neoplasm for regimens Band 3

HRG Output

Core HRG: LB35* Scrotum, Testis or Vas Deferens Disorders

Unbundled HRG: SB03Z Procure Chemotherapy drugs for regimens in Band 3

Case 5: Outpatient treatment with a subsequent element

A lung cancer patient is receiving Carboplatin + Vinorelbine chemotherapy as an outpatient. This consists of one day of treatment with Vinorelbine and carboplatin both IV. This is followed seven days later by Vinorelbine therapy oral. The cycle is repeated every 21 days.

Coding

Day 1 (1st outpatient attendance)

X70.3 Procurement of drugs for chemotherapy for neoplasms for regimens in Band 3

X72.3 Delivery of simple parenteral chemotherapy for neoplasm at first attendance

HRG Output

Core HRG: SB97Z Same day Chemotherapy admission or attendance

Unbundled HRGs: SB03Z Procure Chemotherapy drugs for regimens in Band 4

SB12Z Deliver Simple Parenteral Chemotherapy at First Attendance

Day 8 (2nd outpatient attendance)

X72.4 Delivery of subsequent element of cycle of chemotherapy for neoplasm

HRG Output

Core HRG: SB97Z Same day Chemotherapy admission or attendance

Unbundled HRG: SB15Z Deliver subsequent elements of a Chemotherapy cycle

Subchapter SC – Radiotherapy

Subchapter **SC Radiotherapy** covers both the preparation and delivery of radiotherapy for patients of all ages.

All but one of the HRGs in this subchapter are unbundled. This subchapter includes activity undertaken in inpatient, day case and non-admitted care settings.

HRGs for radiotherapy include one set for pre-treatment (planning) processes and one set for treatment delivered, with a separate HRG being allocated for each fraction delivered.

The planning HRGs are intended to cover all attendances required for completion of the planning process. It is not intended that individual attendances for parts of this process will be recorded separately.

The planning HRGs do not include the consultation at which the patient consents to radiotherapy, nor do they cover any outpatient attendance for medical review required by any change in status of the patient.

Radiotherapy HRGs are driven by OPCS-4 codes, and the majority of HRGs have a direct one-to-one mapping. Radiotherapy grouping logic relies on the coding of a secondary procedure to indicate delivery of a fraction using a megavoltage or orthovoltage machine and whether technical support was required

To reflect activity for patients that are admitted solely for the delivery of External Beam Radiotherapy as a Day Case episode or Outpatient attendance, an “empty core” HRG of **SC97Z Same Day External Beam Radiotherapy Admission or Attendance** is output as well as the unbundled External Beam radiotherapy HRGs. The specific logic required to derive the HRG **SC97Z Same Day Radiotherapy Admission or Attendance (excluding Brachytherapy)** requires a procedure code classifying the delivery of external beam radiotherapy or nuclear medicine therapy, a length of stay of 0 days and a lack of any other significant procedure code.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Composition and Concepts		
	C21/22	P20/21
Total HRGs	30*	30*
Total HRG Roots	30	30
Procedure-driven HRGs	30	30
Diagnosis-driven HRGs	1	1
Age Splits	No	No
Complications and Comorbidities Splits	No	No
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	Yes	Yes

* Includes one core HRG (**SC97Z**) that is driven by both diagnosis and procedure logic for admitted patient care and by procedure only for non-admitted patients.

Subchapter SC: Outpatient Example

Cases A to E illustrate the five fraction course of Total body irradiation (TBI) of a patient diagnosed as having Hodgkin's lymphoma prior to a bone marrow transplant. The TBI is planned and the first treatment is given immediately afterwards (same attendance):

Case	Attendance	Dominant Procedure (OPCS-4)	Other Procedures (OPCS-4)	HRG4+
A	1 st attendance	X67.2 Preparation for total body irradiation	X65.1 Delivery of a fraction of total body irradiation (TBI)	SC97Z <i>Same Day External Beam Radiotherapy Admission or Attendance</i> + SC42Z Preparation for Total Body Irradiation + SC25Z Deliver a fraction of Total Body irradiation
B	2 nd attendance	X65.1 Delivery of a fraction of total body irradiation (TBI)		SC97Z <i>Same Day External Beam Radiotherapy Admission or Attendance</i> + SC25Z Deliver a fraction of Total Body irradiation
C	3 rd attendance	X65.1 Delivery of a fraction of total body irradiation (TBI)		SC97Z <i>Same Day External Beam Radiotherapy Admission or Attendance</i> + SC25Z Deliver a fraction of Total Body irradiation
D	4 th attendance	X65.1 Delivery of a fraction of total body irradiation (TBI)		SC97Z <i>Same Day External Beam Radiotherapy Admission or Attendance</i> + SC25Z Deliver a fraction of Total Body irradiation
E	5 th attendance	X65.1 Delivery of a fraction of total body irradiation (TBI)		SC97Z <i>Same Day External Beam Radiotherapy Admission or Attendance</i> + SC25Z Deliver a fraction of Total Body irradiation

Subchapter SC: Inpatient Example

Case F highlights a patient who is diagnosed with malignant neoplasm of breast and undergoes total mastectomy, followed by radiotherapy treatment delivered as part of the inpatient episode:

Case	Age	Length of Stay (days)	Primary Diagnosis (ICD-10)	Dominant Procedure (OPCS-4)	Other Procedures (OPCS-4)	HRG4+
F	32	2	C50.9 Malignant neoplasm of breast, unspecified	B27.4 Total mastectomy	X67.4 Volume definition for simple radiotherapy with imaging and dosimetry + X65.8 Other specified radiotherapy delivery + Y91.2 Delivery of a fraction of simple radiotherapy on a megavoltage machine	JA20F Unilateral Major Breast Procedures with CC Score 0-2 + SC45Z Preparation for simple radiotherapy with imaging and dosimetry + SC22Z Deliver a fraction of treatment on a megavoltage machine

Subchapter SD – Specialist Palliative Care

Subchapter **SD Specialist Palliative Care** relates to care in which the clinical intent or treatment goal is primarily to improve the quality of life of a patient with an active, progressive disease with little or no prospect of cure. This subchapter covers both adult and paediatric activity.

Specialist palliative care (SPC) is usually evidenced by an interdisciplinary assessment and/or management of the physical, psychological, emotional and spiritual needs of the patient, and a grief and bereavement support service for the patient and their carers/family.

SPC includes care provided under the principal clinical management of a SPC medicine consultant, either in a Palliative Care unit or in a designated Palliative Care programme. It can be delivered by NHS, voluntary sector and other accredited providers.

Subchapter SD comprises:

- Specialist support services delivered to inpatients
- Outpatients, day therapy assessments and interventions for inpatients and day cases

Composition and Concepts		
	C21/22	P20/21
Total HRGs	10	10
Total HRG Roots	5	5
Procedure-driven HRGs	N/A	N/A
Diagnosis-driven HRGs	N/A	N/A
Age Splits	Yes	Yes
Complications and Comorbidities Splits	No	No
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	Yes	Yes

The main driver for these HRGs is a combination of Main Specialty Code and Treatment Function Codes

Diagnoses are used in the subchapter-specific grouping logic, in conjunction with length of stay and age, when determining the HRG. See the table below for details.

The services provided by palliative care specialists include the following:

- Clinical consultancy/care
- Personal care
- Spiritual/emotional support/counselling
- Home care/support
- Education
- Case management/care coordination

If an inpatient is not admitted under the care of a specialist palliative medicine consultant but is receiving support from a member of an SPC Team, this is classed as SPC Support.

The following specialist palliative care is not covered in HRG4+:

- General palliative care
- Community specialist palliative care
- Bereavement care as a separate HRG. However, some bereavement care costs are expected to be included within the costs covered by other HRGs. Bereavement costs

that are to be included in HRG costs are detailed in the Service Level Agreements, drafted by the National Partnership Group for Palliative Care

- Patients admitted for holiday relief/respite

SPC HRGs are classed as unbundled activity. Unbundled HRG grouping is the second stage of the grouping process, occurring immediately after the data have been validated. After the relevant activity has been unbundled from the data, multiple trauma, burns and core HRGs are produced.

For inpatient specialist palliative care (not day cases), SPC HRGs are generated on a per diem basis for the entire SPC consultant episode. The grouper generates these in addition to the core HRG, based on the number of SPC days recorded in the CDS.

For day case specialist palliative care, a single SPC HRG is generated, plus a core HRG.

For non-admitted care, HRGs have been defined for both medical and non-medical specialist palliative care attendances. For non-admitted attendances, the grouper allocates an appropriate SPC HRG, plus a core HRG, which may be a default core HRG from Subchapter **WF Non-Admitted Care Consultations** if no significant procedure has been recorded.

It should be noted that HRG root **SD03 Hospital Specialist Palliative Care Support** is NOT generated per diem, irrespective of the data items recorded.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter SD: Specialised Palliative Care HRGs Explained by Setting

Inpatient SPC HRGs:

HRG	Label	Definition	Notes
SD01A	Inpatient Specialist Palliative Care, 19 years and over	Age = 19 years and over AND Main Specialty Code = 315 (Palliative Medicine) AND Treatment Function Code = 315 (Palliative Medicine) AND SPC Length of Stay > 0 OR Discharge Method = 4 (Patient Died) AND Secondary Diagnosis (ICD-10)= Z51.5 (Palliative Care) AND NOT Primary Diagnosis (ICD-10) = Z75.5 (Holiday Relief Care)	Adult inpatients under the care of a specialist palliative medicine consultant, excluding patients discharged on the day of admission (unless they die on the day of admission), excluding patients admitted for respite care [Note: Requires SPC days CDS field to be populated]
SD01B	Inpatient Specialist Palliative Care, 18 years and under	As above with: Age = 18 years and under	Paediatric inpatients under the care of a specialist palliative medicine consultant, excluding patients discharged on the day of admission (unless they die on the day of admission), excluding patients admitted for respite care [Note: Requires SPC days CDS field to be populated]
SD02A	Inpatient Specialist Palliative Care, Same Day, 19 years and over	Age = 19 years and over AND Main Specialty Code = 315 (Palliative Medicine) AND Treatment Function Code = 315 (Palliative Medicine) AND SPC Length of Stay = 0 AND Discharge Method ≠ 4 (Patient did not die) AND Secondary Diagnosis (ICD-10)= Z51.5 Palliative care AND NOT Primary Diagnosis (ICD-10) = Z75.5 Holiday relief care	Note: a maximum of 1 SPC unbundled HRG will be generated, in addition to the core HRG, irrespective of SPC days recorded in the CDS
SD02B	Inpatient Specialist Palliative Care, Same Day, 18 years and under	As above with: Age = 18 years and under	Note: a maximum of 1 SPC unbundled HRG will be generated, in addition to the core HRG, irrespective of SPC days recorded in the CDS
SD03A	Hospital Specialist Palliative Care Support, 19 years and over	Age = 19 years and over AND Secondary Diagnosis (ICD-10)= Z51.5 Palliative care AND NOT Main Specialty Code = 315 (Palliative Medicine)	Adult inpatients not under the care of a specialist palliative medicine consultant but receiving input from a specialist palliative care specialist support service

HRG	Label	Definition	Notes
SD03B	Hospital Specialist Palliative Care Support, 18 years and under	As above with: Age = 18 years and under	Paediatric inpatients not under the care of a specialist palliative medicine consultant but receiving input from a specialist palliative care specialist support service [Note: SPC days recorded in the CDS will not generate multiple instances of this HRG]

Outpatient, Day Therapy Assessment and Intervention HRGs

HRG	Label	Definition
SD04A	Medical Specialist Palliative Care Attendance, 19 years and over	Age = 19 years and over AND Main Specialty Code = 315 (Palliative Medicine) AND Treatment Function Code = 315 (Palliative Medicine)
SD04B	Medical Specialist Palliative Care Attendance, 18 years and under	As above with: Age = 18 years and under
SD05A	Non-Medical Specialist Palliative Care Attendance, 19 years and over	Age = 19 years and over AND Main Specialty Code = 950 (Nursing Episode) OR 960 (Allied Health Profession Episode) AND Treatment Function Code = 315 (Palliative Medicine)
SD05B	Non-Medical Specialist Palliative Care Attendance, 18 years and under	As above with: Age = 18 years and under

U Error category

Error Category	Label	Definition
UZ99	Indicator flag for Specialist Palliative Care	This is an indicator flag, and not an error It stops certain criteria from being processed for SPC (please see description for UZ99 in the Subchapter UZ summary below)

The Outpatient Attendance Commissioning Data Sets (CDS) can record contacts by medical, nursing and allied health professionals (AHPs), including physiotherapists, speech and language therapists, occupational therapists, podiatrists, dieticians and clinical psychologists. Chaplains and social workers may also record contacts as AHPs.

Subchapter UZ – Undefined Groups

The single HRG in Subchapter **UZ Undefined Groups** is generated where a patient record is not valid for grouping to one of the other subchapters.

There is only one HRG in this subchapter, **UZ01Z Data Invalid for Grouping**.

This subchapter is intended to help an organisation identify invalid data and take action, for example, to understand whether clinical coding errors are due to lack of information specificity or unavailability of information at the time of the coding.

Subchapter UZ is comprised of 11 underlying U Error categories that lead to the assignment of HRG **UZ01Z Data Invalid for Grouping**.

These are as follows:

- **UZ01 Invalid Primary Diagnosis:**
 - The primary diagnosis is blank
 - The primary diagnosis ICD-10 code cannot be used in the primary position
- **UZ02 Poorly Coded Primary Diagnosis:**
 - The diagnosis ICD-10 code exists and is valid in the primary position, but it is so unspecific that the resource use cannot be defined
- **UZ03 Age Conflicting with Diagnosis**
- **UZ04 Diagnosis conflicting with anatomical sites:**
 - The ICD-10 anatomical site code, specified at the 5th digit level, conflicts with the diagnosis in the record
- **UZ05 Invalid procedure for Casemix grouping purposes**
- **UZ06 Poorly coded procedure for Casemix grouping purposes**
- **UZ11 Neonatal Critical Care Error**
- **UZ13 Adult Critical Care Error**
- **UZ14 Renal (NRD) Error**
- **UZ15 Burns Error**
 - Burns primary diagnosis code of unspecified body region or with no subsequent total body surface area (TBSA) code
- **UZ21 CCAC Inappropriate for NCC**

Note that **UZ99 Indicator flag for Specialist Palliative Care** is not an error category but an indicator flag that stops certain criteria from being processed for Specialist Palliative Care activity. It does not generate HRG **UZ01Z Data Invalid for Grouping** in and of itself.

The HRG4+ grouping software ensures that the data are complete, valid and within expected value ranges. The software applies the following three stages of validation to the data during a processing run:

- Field content within record
- Cross validation of episodes within spell
- Grouping logic (assignment of flag values)

Composition and Concepts		
	C21/22	P20/21
Total HRGs	1	1
Total HRG Roots	1	1
Procedure-driven HRGs	N/A	N/A
Diagnosis-driven HRGs	N/A	N/A

Where the HRG4+ Grouper cannot assign a valid HRG, **UZ01Z Data invalid for grouping** is returned in the output record, signifying that the record is unclassified.

If there are errors in the input data, these will be reported in the **data quality report**, as part of the Grouper output files, but processing will not be halted. There can be more than one reason for non-assignment of an HRG, so there may be more than one data quality message for each data row, all of which need to be reviewed to identify the underlying problem(s).

UZ01 Invalid Primary Diagnosis

This error indicates that there is an error with the primary diagnosis code.

UZ02 Poorly Coded Primary Diagnosis

This error is generated where a diagnosis code exists and is valid as a primary diagnosis but is too vague to determine resource use.

UZ03 Diagnosis Conflicts with Age

This error indicates that a paediatric diagnosis has been recorded for an adult patient (age 19 years and over).

UZ04 Diagnosis Conflicts with Anatomical Site

This error indicates that an invalid combination of diagnosis and anatomical site has been input. This only applies to specific musculoskeletal codes entered at ICD-10 5th digit level.

UZ05 Invalid procedure for Casemix grouping purposes

This error is reported if the OPCS-4 code with the highest procedure hierarchy in the record is a valid OPCS-4 code but is not valid for grouping, for example, if the code represents a “conversion from” code in orthopaedic surgery.

UZ06 Poorly coded procedure for Casemix grouping purposes

This error indicates that a procedure code is valid as a dominant procedure but is insufficiently specific to determine the resource use from an HRG design perspective, e.g. OPCS-4 code *X45.9 Unspecified donation of organ*.

UZ11 Neonatal Critical Care Error

This is a general error for neonatal critical care and is generated when conditions in the grouping algorithm have not been met.

UZ13 ACC Grouping Error

This is a general error for adult critical care and is generated when conditions in the grouping algorithm have not been met.

UZ14 Renal (NRD) Error

This is a general error for grouping renal activity using the national renal data set and is generated when conditions in the grouping algorithm have not been met.

UZ15 Burns Error

This error is produced when a burns primary diagnosis code of unspecified body region or total body surface area (TBSA) is recorded, or a burns diagnosis code is recorded in any position, with no subsequent TBSA code present. Failure to record TBSA contravenes national coding rules.

UZ21 CCAC Inappropriate in NCC

Certain critical care activity codes (CCAC) are not valid for neonatal critical care (NCC) grouping or are valid only when used in combination with other codes. UZ21 is generated

when the CCAC or combination of codes in the input record is not appropriate for the derivation of an NCC HRG.

UZ99 Indicator flag for Specialist Palliative Care

This indicator flag ensures Specialist Palliative Care unbundled HRGs cannot be generated when certain conditions are met, for example it enables Holiday Relief Care to be excluded from Specialist Palliative Care grouping.

Further information regarding the underlying U categories can be found in the Group to Split worksheet within the Code to Group Excel workbook.

Field Validation Errors

All clinical codes are validated against the Grouper's internal database of codes. Clinical codes in the patient record that are not on this list will result in the generation of a UZ01Z HRG.

- Diagnosis (ICD-10) codes that are not on the list are classified as invalid. These will not result in a specific error message but will be output in the Data Quality report as follows:

ICD|XXXX|Diagnosis Code is invalid in DIAG_XX

- Procedure (OPCS-4) codes that are not on the list are similarly classified as invalid. However, these will not result in a specific error message but will be output in the Data Quality report as follows:

OPCS|XXXX|Procedure code is invalid in OPER_XX

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

Accommodation of ICD-10 emergency use codes

U07.3 Personal history of COVID-19 has been remapped from HRG root **WH15 Special Screening, Examinations or Other Genetic Disorders (adult patients)** and HRG root **PX57 Paediatric, Examination, Follow-up, Special Screening or Other Admissions (child patients)** to **UZ01Z Data Invalid for Grouping** as, according to national clinical coding standards, this code is not permitted to be used as a primary diagnosis, as per most similar code **Z86.1 Personal history of infectious and parasitic diseases**. When recorded as a primary diagnosis, it will generate error code **UZ01 Invalid Primary Diagnosis: 1. Primary Diagnosis doesn't exist or 2. Primary Diagnosis Blank or 3. Diagnosis can't be used at primary position**.

Subchapter VA – Multiple Trauma

Subchapter **VA Multiple Trauma** covers high resource, complex diagnoses and treatments associated with multiple trauma cases for patients of all ages. In the HRG4+ design, multiple trauma is determined by the presence of significant simultaneous traumatic injuries involving more than one body area.

Traumatic single injuries are addressed elsewhere within the relevant body system subchapters.

This subchapter includes activity undertaken in inpatient and day case settings.

Following validation and unbundling, multiple trauma grouping takes precedence over any other grouping logic that might otherwise be applied across the episode or spell. The multiple trauma logic is made up of the following elements:

- For single-episode spells, where the episode HRG is multiple trauma, the HRG of the spell will be the same multiple trauma HRG
- A multiple trauma spell HRG will be generated where the HRG of the first episode of a multi-episode spell is multiple trauma. The multiple trauma HRG of the first episode, that of any later episode(s) and that of the spell may be different because of the additive nature of the logic employed
- For multi-episode spells where the first episode is not multiple trauma but a later episode is multiple trauma, the spell HRG will not be multiple trauma

To be derived, all multiple trauma HRGs require at least two trauma (injury) diagnosis codes (one primary), with each relating to a different body site. These injuries should be coded in accordance with ICD-10 Chapter XIX: **Injury, poisoning and certain other consequences of external causes (S00–T98)**. The trauma injury diagnoses are separated into nine categories based on body site:

- Abdominal trauma diagnoses
- Chest trauma diagnoses
- Head trauma diagnoses
- Kidney trauma diagnoses
- Lower limb trauma diagnoses
- Other trauma diagnoses
- Pelvis or spine trauma diagnoses
- Upper limb trauma diagnoses
- Urinary trauma diagnoses

Composition and Concepts		
	C21/22	P20/21
Total HRGs	24	24
Total HRG Roots	6	6
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	24	24
Age Splits	No	No
Complications and Comorbidities Splits	No	No
Intervention Splits	No	No
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

The table of non-superficial trauma injuries relating to these specific body sites can be found in the **VA_*** lists in the Other Lists worksheet of the Code to Group Excel workbook. The complementary lists to these specific body sites can be found in the **Comp_VA_*** lists in the Other Lists worksheet of the Code to Group Excel workbook. For example, the **VA_Ab** list contains all non-superficial trauma injuries relating to the abdomen. These non-superficial trauma injury codes relating to the abdomen are also necessarily present on all other complementary lists, with the exception of list **Comp_VA_Ab**.

If a patient has trauma injury diagnoses for two or more body sites within an episode, this will generate a multiple trauma HRG for that episode.

This subchapter employs grid logic that is able to take into account multiple procedures as well as multiple diagnoses to ensure the complexity involved in treating patients that have multiple traumatic injuries is accurately reflected in the HRG design. Each relevant procedure and diagnosis has been assigned a score ranging from 3 to 15. To determine which multiple trauma HRG is derived, the score of all relevant procedure codes and all relevant diagnosis codes recorded in the patient record are totalled, respectively, to determine a procedure score and a diagnosis score. This pair of scores determines which HRG is derived.

The following grid provides the scoring logic used and shows which HRG would be produced from a given pair of scores.

HRG Derivation Grid:

Procedure score => Diagnosis score	0	1 - 8	9 - 18	19 - 29	30 - 44	>=45
<=23	VA10A	VA11A	VA12A	VA13A	VA14A	VA15A
24 – 32	VA10B	VA11B	VA12B	VA13B	VA14B	VA15B
33 – 50	VA10C	VA11C	VA12C	VA13C	VA14C	VA15C
>=51	VA10D	VA11D	VA12D	VA13D	VA14D	VA15D

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter VB – Emergency Medicine

Subchapter **VB Emergency Medicine** covers activity for patients of all ages treated within the following types of emergency departments:

Type 01

Emergency Departments: Consultant-led 24-hour service with full resuscitation facilities and designated accommodation for the reception of accident and emergency patients

Type 02

Consultant-led mono-specialty accident and emergency service (e.g. ophthalmology, dental) with designated accommodation for the reception of patients, with the exception of gynaecology casualty departments

Type 03

Other types of units with designated accommodation for the reception of minor accident and emergency patients, including other open access treatment services offering at least minor injury/illness services, whether located alongside a main A&E department or at another location.

Type 04

NHS walk-in centres

The HRGs in this subchapter are split into ten levels of complexity based on a combination of investigation and treatment categories. There are also HRGs specific to emergency dental care and to patients that are dead on arrival. The Emergency Medicine HRGs do not cover activity within clinical decision units and observation type wards/units.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	12	12
Total HRG Roots	12	12
Procedure-driven HRGs	N/A	N/A
Diagnosis-driven HRGs	N/A	N/A
Age Splits	No	No
Complications and Comorbidities Splits	No	No
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Emergency Medicine HRGs with labels

HRG	HRG Label
VB01Z	Emergency Medicine, Any Investigation with Category 5 Treatment
VB02Z	Emergency Medicine, Category 3 Investigation with Category 4 Treatment
VB03Z	Emergency Medicine, Category 3 Investigation with Category 1-3 Treatment
VB04Z	Emergency Medicine, Category 2 Investigation with Category 4 Treatment
VB05Z	Emergency Medicine, Category 2 Investigation with Category 3 Treatment
VB06Z	Emergency Medicine, Category 1 Investigation with Category 3-4 Treatment
VB07Z	Emergency Medicine, Category 2 Investigation with Category 2 Treatment
VB08Z	Emergency Medicine, Category 2 Investigation with Category 1 Treatment
VB09Z	Emergency Medicine, Category 1 Investigation with Category 1-2 Treatment
VB10Z	Emergency Medicine, Dental Care

HRG	HRG Label
VB11Z	Emergency Medicine, No Investigation with No Significant Treatment
VB99Z	Emergency Medicine, Patient Dead On Arrival

The Subchapter VB HRG assigned depends on the investigations and treatments recorded within the A&E Commissioning Data Sets (CDS 110). The HRG assigned to each attendance depends on the dominant investigation and dominant treatment and their respective categories of care.

Grouping for each attendance works as follows:

1. Each **treatment** and **investigation** in the attendance record has an associated value within the relevant hierarchy (See Appendix A for investigations and Appendix B for treatments).
2. This value determines the dominant treatment and dominant investigation for the record, and thereby the categories of both.
3. Combining the investigation and treatment categories of care will result in the most resource-intensive HRG being generated, subject to the Grouping Exceptions identified below.

Records with neither an Investigation nor Treatment Code recorded will generate HRG UZ01Z. Where there is no Investigation Code recorded, the patient record will group based upon the appropriate Treatment Code.

The hierarchies presented in Appendices A and B are fundamental to which investigations and treatments are considered dominant and used for HRG derivation.

Grouping Exceptions

When determining the HRG assigned to each investigation and treatment, there are certain exceptions where the category is one of two possible values.

* If the dominant investigation is “None” (Investigation Code 24) or blank and the dominant treatment is from the following list, the HRG assigned will be VB11Z. Otherwise these treatments will be considered as category 1 and the HRG derived will be dependent on the category value of the dominant Investigation Code.

Treatment Code	Treatment Code Label	Treatment Category (5=highest; 1=lowest)
12	Intravenous cannula	1 or 0 *
221	Guidance/advice only – written	1 or 0 *
222	Guidance/advice only – verbal	1 or 0 *
241	Tetanus – immune	1 or 0 *
99	None (consider guidance/advice option)	1 or 0 *

* For treatments shown below, the following HRG rules apply depending on the dominant investigation:

Dominant Treatment	Category of Dominant Investigation	HRG
031 Primary sutures (Cat. 3 or 4) 032 Secondary/complex suture (Cat. 3 or 4)	Category 1 or blank	VB06Z (Emergency Medicine, Category 1 Investigation with Category 3-4 Treatment)
17 Urinary catheter/suprapubic (Cat. 3 or 4) 235 Anaesthesia–sedation (Cat. 3 or 4)	Category 2	VB05Z (Emergency Medicine, Category 2 Investigation with Category 3 Treatment)
512 Medication administered – intra-muscular (Cat. 3 or 4) 515 Medication administered–sublingual (Cat. 3 or 4)	Category 3	VB02Z (Emergency Medicine, Category 3 Investigation with Category 4 Treatment)

Patient Dead on Arrival HRG

HRG **VB99Z Emergency Medicine, Patient Dead On Arrival** has been created within this subchapter for patients that are dead on arrival (DOA). This HRG is derived from a value of 70 (brought in dead) in the data item A&E Patient Group. This HRG will be derived in preference to any other HRGs within this subchapter, where the relevant value is present.

The table below shows all valid codes for A&E Patient Group:

Code	Treatment
10	Road Traffic Accident
20	Assault
30	Deliberate Self-Harm
40	Sports Injury
50	Fireworks Injury
60	Other Accident
70	Brought In Dead
80	Other Than Above

Where no Investigation or Treatment Code is recorded, patient records with a value of 70 (brought in dead) in the data item A&E Patient Group will generate HRG UZ01Z.

Dental Care HRG

HRG **VB10Z Emergency Medicine, Dental Care** has been created within this subchapter to identify a specific cohort of patients that seek emergency care for dental treatment only. The table below identifies the combination of Investigation Codes and Treatment Codes that will map to HRG VB10Z, based around the Investigation Code 22 (Dental Investigation) and/or Treatment Code 56 (Dental Treatment):

Inv. Code	Investigation Description	Treat. Code	Treatment Description
01	X-ray plain film	56	Dental Treatment
22	Dental investigation	56	Dental Treatment
24	None	56	Dental Treatment
99	Other	56	Dental Treatment
22	Dental investigation	57	Prescription\medicines prepared to take away
22	Dental investigation	99	None (consider guidance/advice option)

Please note, HRG VB10Z will be derived in preference to any other HRGs within this subchapter if the above combinations (only) are recorded in the patient record.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

To confirm, this means that the input data required to generate the appropriate VB* HRGs continue to be based on the contents of Commissioning Data Set 010 Accident and Emergency, rather than CDS 011 Emergency Care (ECDS). The latter may be used to generate the HRGs once the contents (recorded via a SNOMED-CT subset as determined by the Royal College of Emergency Medicine) have been mapped to the required Investigation and Treatment Codes, as per CDS 010, on which HRG derivation currently relies.

For further information on the ECDS, please see:

<https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-sets/emergency-care-data-set-ecds/ecds-latest-update>

This website includes the Enhanced Technical Output Specification (ETOS v2.1.1). The ETOS shows the mapping of CDS010 Investigation and Treatment Codes and their SNOMED-CT equivalents, as of March 2019.

Updates to this mapping may be made during any financial year, therefore providers and commissioners are advised to regularly appraise the mapping tables available via the above link to ensure that they are up-to-date with the latest mapping available.

Subchapter VB: Appendix A – List of Investigations (with category and hierarchy value) used in the A&E CDS and required for HRG4+ derivation

Investigation Code	Investigation Code Label	Category (3=highest; 1=lowest)	Hierarchy (7=highest; 1=lowest)
01	X-ray plain film	2	6
02	Electrocardiogram	1	3
03	Haematology	2	6
04	Cross match blood/group and save serum for later cross match	2	6
05	Biochemistry	1	5
06	Urinalysis	1	3
07	Bacteriology	2	6
08	Histology	2	6
10	Ultrasound	3	7
11	Magnetic Resonance Imaging	3	7
12	Computerised Tomography (excludes genito urinary contrast examination/tomography)	3	7
13	Genito urinary contrast examination/tomography	3	7
14	Clotting studies	2	6
15	Immunology	2	6
16	Cardiac enzymes	2	6
17	Arterial/capillary blood gas	1	4
18	Toxicology	2	6
19	Blood culture	2	6
20	Serology	2	6
21	Pregnancy test	1	3
22	Dental investigation	2	2
23	Refraction, orthoptic tests and computerised visual fields	2	6
24	None	1 or 0 *	1
99	Other	1	3

The hierarchy values presented in Subchapter VB: Appendix A above are fundamental to working out which investigation is considered dominant and are used for HRG derivation.

Subchapter VB: Appendix B – List of Treatments (with category and hierarchy value) used in the A&E CDS and required for HRG4+ derivation

Treatment Code	Treatment Code Label	Category (5=highest; 1=lowest)	Hierarchy (8=highest; 1=lowest)
011	Dressing minor wound/burn/eye	2	4
012	Dressing major wound/burn/eye	3	5
02	Bandage/support	1	3
031	Primary sutures	3 or 4 *	6
032	Secondary/complex suture	3 or 4 *	6
033	Removal of sutures/clips	1	3
041	Wound closure – steristrips	2	4
042	Wound closure – wound glue	2	4
043	Wound closure – other (e.g. clips)	2	4
051	Application Plaster of Paris	2	4
052	Removal Plaster of Paris	1	3
06	Splint	2	4
08	Removal foreign body	3	5
091	Physiotherapy – strapping, ultrasound treatment, short wave diathermy, manipulation	2	4
092	Physiotherapy – gait re-education, falls prevention	2	4
101	Manipulation of upper limb fracture	4	7
102	Manipulation of lower limb fracture	4	7
103	Manipulation of dislocation	4	7
11	Incision & drainage	3	5
12	Intravenous cannula	1 or 0 *	2
13	Central line	3	5
14	Lavage/emesis/charcoal/eye irrigation	2	4
15	Intubation & Endotracheal tubes/laryngeal mask airways/rapid sequence induction	4	7
16	Chest drain	4	7
17	Urinary catheter/suprapubic	3 or 4 *	6
181	Defibrillation	4	7
182	External pacing	4	7
19	Resuscitation/cardiopulmonary resuscitation	5	8
20	Minor surgery	3	5
21	Observation/electrocardiogram, pulse oximetry/head injury/trends	1	3
221	Guidance/advice only – written	1 or 0 *	2

Treatment Code	Treatment Code Label	Category (5=highest; 1=lowest)	Hierarchy (8=highest; 1=lowest)
222	Guidance/advice only – verbal	1 or 0 *	2
231	Anaesthesia – general anaesthetic	4	7
232	Anaesthesia – local anaesthetic	2	4
233	Anaesthesia – regional block	2	4
234	Anaesthesia – entonox	2	4
235	Anaesthesia – sedation	3 or 4 *	6
236	Anaesthesia – other	2	4
241	Tetanus – immune	1 or 0 *	2
242	Tetanus – tetanus toxoid course	2	4
243	Tetanus – tetanus toxoid booster	2	4
244	Tetanus – human immunoglobulin	2	4
245	Tetanus – combined tetanus/diphtheria course	2	4
246	Tetanus – combined tetanus/diphtheria booster	2	4
25	Nebuliser/spacer	3	5
27	Other (consider alternatives)	1	3
281	Parenteral thrombolysis – streptokinase parenteral thrombolysis	4	7
282	Parenteral thrombolysis – recombinant – plasminogen activator	5	8
291	Other Parenteral drugs – intravenous drug, e.g. stat/bolus	4	7
292	Other Parenteral drugs – intravenous infusion	4	7
30	Recording vital signs	1	3
31	Burns review	1	3
32	Recall/x-ray review	1	3
33	Fracture review	1	3
34	Wound cleaning	1	3
35	Dressing/wound review	1	3
36	Sling/collar cuff/broad arm sling	1	3
37	Epistaxis control	2	4
38	Nasal airway	2	4
39	Oral airway	2	4
40	Supplemental oxygen	3	5
41	Continuous positive airways pressure/nasal intermittent positive pressure ventilation/bag valve mask	3	5
42	Arterial line	3	5
43	Infusion fluids	2	4
44	Blood product transfusion	4	7

Treatment Code	Treatment Code Label	Category (5=highest; 1=lowest)	Hierarchy (8=highest; 1=lowest)
45	Pericardiocentesis	4	7
46	Lumbar puncture	4	7
47	Joint aspiration	3	5
48	Minor plastic procedure/split skin graft	4	7
49	Active rewarming of the hypothermic patient	3	5
50	Cooling – control body temperature	1	3
511	Medication administered – oral	2	4
512	Medication administered – intra-muscular	3 or 4 *	6
513	Medication administered – subcutaneous	3	5
514	Medication administered – per rectum	2	4
515	Medication administered – sublingual	3 or 4 *	6
516	Medication administered – intra-nasal	2	4
517	Medication administered – eye drops	1	3
518	Medication administered – ear drops	1	3
519	Medication administered – topical skin cream	1	3
521	Occupational Therapy – OT functional assessment	3	5
522	Occupational Therapy – OT activities of daily living equipment provision	1	3
53	Loan of walking aid (crutches)	1	3
54	Social work intervention	3	5
551	Eye – orthoptic exercises	1	3
552	Eye – laser of retina/iris or posterior capsule	5	8
553	Eye – retrobulbar injection	3	5
554	Eye – epilation of lashes	3	5
555	Eye – subconjunctival injection	4	7
56	Dental treatment	2	2
57	Prescription\medicines prepared to take away	1	3
99	None (consider guidance/advice option)	1 or 0 *	1

The hierarchy values presented in Subchapter VB: Appendix B are fundamental to working out which treatment is considered dominant and are used for HRG derivation.

Subchapter VB: Worked Examples

The examples below show how the different Investigation Codes and Treatment Codes are grouped in HRG4+.

Case	Invest.1	Invest. 2	Treat. 1	Treat. 2	Dominant investigation	Dominant treatment	HRG4+
A	01-X-Ray (category 2)	02-Electrocardiogram (category 1)	11-Incision & drainage (category 3)	511-Medication administered-oral (category 2)	01-X-ray (as category 2>1)	11-Incision & drainage (as category 3>2)	VB05Z Category 2 Investigation with Category 3 Treatment
B	01-X-Ray (category 2)	02-Electrocardiogram (category 1)	282-Parenteral thrombolysis – recombinant – plasminogen activator (category 5)	99-None (consider guidance/advice option) (category 0 or 1)	01-X-ray (as category 2>1)	282-Parenteral thrombolysis – recombinant – plasminogen activator (as category 5>1 and 0)	VB01Z Any Investigation with Category 5 Treatment
C	22-Dental investigation	24-None	56-Dental treatment	99-None (consider guidance/advice option)	22-Dental investigation	56-Dental treatment	VB10Z Dental Care
D	24-None		56-Dental treatment	99-None (consider guidance/advice option)	24-None	56-Dental treatment	VB10Z Dental Care
E	22-Dental investigation	24-None	222-Guidance/advice only – verbal	99-None (consider guidance/advice option)	22-Dental investigation	222-Guidance/advice only – verbal	VB08Z Emergency Medicine, Category 2 Investigation with Category 1 Treatment
F	13-Genito urinary contrast examination/ tomography (category 3)	03-Haematology (category 2)	031-** Primary sutures (category 3 or 4)	511-Medication administered – oral (category 2)	13-Genito urinary contrast examination/ tomography (category 3)	031-Primary sutures	VB02Z Category 3 Investigation with Category 4 Treatment
G	05-Biochemistry (category 1)	24-None	17-Urinary catheter/suprapubic (category 3 or 4)	12-Intravenous cannula (category 0 or 1)	05-Biochemistry (category 1)	17-Urinary catheter/suprapubic	VB06Z Category 1 Investigation with Category 3-4 Treatment

** “Primary sutures” is considered category 4 in this example as it is recorded with a category 3 dominant investigation, see page above for further detail

Subchapter VC – Rehabilitation

Subchapter **VC Rehabilitation** covers all activities relating to the assessment for, and the delivery of, rehabilitation for patients of all ages. It includes activity undertaken in inpatient, day case and non-admitted care settings.

Subchapter VC comprises:

- Assessment for rehabilitation
- Specific rehabilitation services for both inpatient and outpatients
- Rehabilitation services delivered to adults, children and older people
- Rehabilitation services delivered by the NHS and, potentially, other accredited providers

The Rehabilitation HRGs do not cover the following:

- Rehabilitation within an acute care treatment episode
- The identification of highly complex specialist rehabilitation

Composition and Concepts		
	C21/22	P20/21
Total HRGs	23	23
Total HRG Roots	23	23
Procedure-driven HRGs	23	23
Diagnosis-driven HRGs	0	0
Age Splits	No	No
Complications and Comorbidities Splits	N/A	N/A
Intervention Splits	N/A	N/A
Multiple Procedures	N/A	N/A
Procedure Combination Codes	N/A	N/A
Diagnosis-qualified	N/A	N/A
Subsidiary Procedure-qualified	N/A	N/A
Length of Stay-qualified	N/A	N/A

Rehabilitation HRGs are unbundled on a per diem basis and are only generated where care is identified as taking place under a specialist rehabilitation consultant or within a discrete rehabilitation unit. They require the use of OPCS-4 codes **U50.-** to **U54.-** to generate a rehabilitation HRG, plus an appropriate duration of rehabilitative care to ensure that the HRGs are rightly generated on a per diem basis.

Rehabilitation assessment is identified by OPCS-4 code **X60.-**. A rehabilitation diagnosis code is not required to generate any of the three rehabilitation assessment HRGs, which are typically generated in an outpatient care setting only, in support of national coding guidance.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19)

Subchapter WD – Treatment of Mental Health Patients by Non-Mental Health Service Providers

Subchapter **WD Treatment of Mental Health Patients by Non-Mental Health Service Providers** covers the treatment of mental health patients by NHS organisations that do not provide specialist mental health services but do provide treatment to patients of all ages with a mental health primary diagnosis prior to discharge or transfer to a specialist mental health provider.

Mental health services provided by specialist mental health providers are captured using the mental health clustering classification and therefore fall outside of the HRG design.

The HRGs are differentiated based on type of mental health disorder in line with ICD-10 diagnosis code definitions, and they do not yet unitise interactive CC splits or intervention splits.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	9	9
Total HRG Roots	9	9
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	9	9
Age Splits	No	No
Complications and Comorbidities Splits	No	No
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

Note that patients younger than 19 years old with a primary mental health diagnosis are grouped to HRGs in Subchapter **PT Paediatric Mental Health Disorders**.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter WF – Non-Admitted Consultations

Subchapter **WF Non-Admitted Consultations** covers non-admitted consultations, including outpatients and ward attenders, for patients of all ages.

Subchapter WF comprises:

- Unidisciplinary face-to-face first and follow-up attendances
- Multiprofessional face-to-face first and follow-up attendances
- Unidisciplinary non face-to-face first and follow-up attendances
- Multiprofessional non face-to-face first and follow-up attendances

Where significant procedures are coded in outpatient attendances, the appropriate procedure-driven HRG will be generated.

For outpatients or ward attenders, a significant procedure may not always be recorded. In these cases, activity is grouped to Subchapter WF, with the HRG derived based on the type of attendance (using the FIRST ATTENDANCE data item in the NHS Data Model and Dictionary), modified by the presence of the following OPCS-4 codes:

- ***X62.2 Assessment by multi-professional team NEC***
- ***X62.3 Assessment by multi-disciplinary team NEC***

The matrix below shows how the type of attendance and the presence of OPCS-4 codes for uni-professional or multi-professional assessments drive the derivation of the HRGs in this subchapter:

Composition and Concepts		
	C21/22	P20/21
Total HRGs	8	8
Total HRG Roots	2	2
Procedure-driven HRGs	8	8
Diagnosis-driven HRGs	0	0
Age Splits	No	No
Complications and Comorbidities Splits	No	No
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

		Attendance Type*			
		1 First Attendance Face-to-face	2 Follow-up Attendance Face-to-face	3 First Telephone or Telemedicine Consultation	4 Follow-up Telephone or Telemedicine Consultation
OPCS-4 Code	None ** or X62.1 Assessment by uni-professional team NEC or X62.8 Other specified assessment or X62.9 Unspecified assessment	WF01B	WF01A	WF01D	WF01C
	X62.2 Assessment by multi-professional team NEC or X62.3 Assessment by multi-disciplinary team NEC	WF02B	WF02A	WF02D	WF02C

* Attendance Type refers to the NHS Data Dictionary item FIRST ATTENDANCE

** None or OPCS-4 codes with a procedure hierarchy value of 1 (which are ignored for grouping)

Where a patient record contains more than one code from OPCS-4 category **X62.- Assessment**, but only codes from this category, the first highest in the patient record will drive grouping.

Where either **X62.2 Assessment by multi-professional team NEC** or **X62.3 Assessment by multi-disciplinary team NEC** is recorded in addition to other codes from category X62.-, the first highest of the multi- codes will drive grouping. This is because X62.2 and X62.3 each have a procedure hierarchy value of 4, reflecting the additional expected resource use of providing multi-professional or multi-disciplinary care, whereas codes **X62.1 Assessment by uni professional team NEC**, **X62.8 Other specified assessment** and **X62.9 Unspecified assessment** have a procedure hierarchy value of 3.

Although national coding guidance stipulates that codes in OPCS-4 category **X62.- Assessment** should not be used to record anything other than outpatient care, if the dominant procedure code in an Admitted Patient Care record is within this code category, the HRG generated will default to either **WF01A Non-Admitted Face-to-Face Attendance, Follow-up** or **WF02A Multiprofessional Non-Admitted Face-to-Face Attendance, Follow-up**, depending on the actual OPCS-4 code recorded, and irrespective of length of stay of the episode or spell. This is because where no ATTEND TYPE is available in the Data Set, the Grouper will effectively set the ATTEND TYPE to 2 as the default.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter WH – Poisoning, Toxic Effects, Special Examinations, Screening and Other Healthcare Contacts

Subchapter **WH Poisoning, Toxic Effects, Special Examinations, Screening and Other Healthcare Contacts** is made up of a range of disparate healthcare activity including poisoning, toxic effects, special examinations and screening.

It includes activity undertaken in inpatient, day case and non-admitted care settings.

This subchapter includes a single procedure-driven HRG root, for lymphatic system procedures for patients of all ages.

The majority of diagnosis-driven HRG roots within this subchapter are for adult care activities only; however, the HRG roots for procedures not carried out, certain

diagnoses related to donation and certain diagnoses related to procreative management are for patients of all ages.

There are specific HRG roots for acute disorders including transplant rejection, other post-procedure complications and follow-up care, as well as HRG roots specific to poisonings, allergies and effects of environment. The remaining HRG roots cover various signs and symptoms and healthcare contacts, e.g. abdominal pain, senility, abnormal findings and respite care.

There is one HRG root (**WH50 Procedure Not Carried Out**) specific to planned procedures not carried out – with two HRG splits based on “patient reason” and “other/unspecified reason”. The HRG splits are:

- **WH50A Procedure Not Carried Out, for Medical or Patient Reasons**
- **WH50B Procedure Not Carried Out, for Other or Unspecified Reasons**

Both of these HRGs can be generated in two ways.

WH50A Procedure Not Carried Out, for Medical or Patient Reasons can be derived with a primary diagnosis of any of the following three ICD-10 codes:

- **Z28.0 Immunization not carried out because of contraindication**
- **Z28.1 Immunization not carried out because of patient's decision for reasons of belief or group pressure**

Composition and Concepts		
	C21/22	P20/21
Total HRGs	68	68
Total HRG Roots	28	28
Procedure-driven HRGs	2	2
Diagnosis-driven HRGs	66	66
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	Yes	Yes
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	Yes	Yes

- **Z28.2 Immunization not carried out because of patient's decision for other and unspecified reasons**

WH50B Procedure Not Carried Out, for Other or Unspecified Reasons can be derived with a primary diagnosis of either of the following two ICD-10 codes:

- **Z28.8 Immunization not carried out for other reasons**
- **Z28.9 Immunization not carried out for unspecified reason**

Alternatively, HRG WH50A employs global exception logic (Core 5) and can be generated when no significant procedure is recorded, with any primary diagnosis, and a secondary diagnosis from ICD-10 category **Z53.- Persons encountering health services for specific procedures, not carried out**, as follows:

- **Z53.0 Procedure not carried out because of contraindication**
- **Z53.1 Procedure not carried out because of patient's decision for reasons of belief and group pressure**
- **Z53.2 Procedure not carried out because of patient's decision for other and unspecified reasons**

HRG WH50B also employs global exception logic (Core 5) and can be generated when no significant procedure is recorded, with any primary diagnosis, and a secondary diagnosis from ICD-10 category **Z53.- Persons encountering health services for specific procedures, not carried out**, as follows:

- **Z53.8 Procedure not carried out for other reasons**
- **Z53.9 Procedure not carried out, unspecified reason**

Note that the dummy HRG root WH99 enables direct mapping to **WH50B Procedure Not Carried Out, for Other or Unspecified Reasons**.

Interactive CC splits are employed within the majority of HRG roots in this subchapter – up to a maximum of four levels – to more appropriately differentiate expected resource usage between routine and complex patients.

In addition, intervention splits, including at times those that differentiate between whether a single intervention or multiple interventions have been undertaken, are employed within the majority of HRG roots in this subchapter.

All diagnosis-driven activity (with the exception of procedures not carried out, and some donation and proactive management diagnoses) relating to the treatment of children (aged 18 years and under) groups to an HRG in Chapter **P Diseases of Childhood and Neonates**, in line with the requirements of the Casemix Design Framework.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

Accommodation of ICD-10 emergency use codes

U07.3 Personal history of COVID-19 has been remapped from HRG root **WH15 Special Screening, Examinations or Other Genetic Disorders** to **UZ01Z Data Invalid for**

Grouping as, according to national clinical coding standards, this code is not permitted to be used as a primary diagnosis, as per most similar code **Z86.1 Personal history of infectious and parasitic diseases**.

U07.4 Post COVID-19 condition has not been remapped: it continues to map to HRG root **WH15 Special Screening, Examinations or Other Genetic Disorders** for adult patients, based on clinical advice.

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been remapped from HRG root **WH15 Special Screening, Examinations or Other Genetic Disorders** to HRG root **WJ06 Sepsis** for adult patients. This matches the mapping of the code in use for this disorder before the introduction of this emergency use code; **R65.0 Systemic Inflammatory Response Syndrome of infectious origin without organ failure**.

Subchapter WJ – Infectious Diseases and Immune System Disorders

Subchapter **WJ Infectious Diseases and Immune System Disorders** covers multi-systemic infectious diseases and immune system disorders.

This subchapter is for adult activity only, with the exception of several genitourinary infection HRG roots that are intended to cover patients of all ages.

It includes activity undertaken in inpatient and day case settings.

There are disease-specific HRGs for infections such as sepsis, septic shock, unknown fever, HIV and genitourinary medicine (GUM) disorders. There is one HRG root specific to all other immune system disorders.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	38	38
Total HRG Roots	8	8
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	38	38
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	Yes	Yes
Multiple Procedures	No	No
Procedure Combination Codes	No	No
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	No	No

The remainder of multi-systemic infectious diseases are split across three HRG roots based on the complexity of the disorder – standard, major and complex.

Interactive CC splits are employed within the majority of HRG roots in this subchapter – up to a maximum of four levels – to more appropriately differentiate expected resource usage between routine and complex patients.

In addition, intervention splits, including where the presence of multiple interventions affects grouping, are employed within the majority of the HRG roots in this subchapter.

All diagnosis-driven activity (with the exception of some genitourinary infection activities) relating to the treatment of children (aged 18 years and under) groups to an HRG in Chapter **P Diseases of Childhood and Neonates**, in line with the requirements of the Casemix Design Framework.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

Accommodation of ICD-10 emergency use codes

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been remapped from HRG root **WH15 Special Screening, Examinations or Other Genetic Disorders** to HRG root **WJ06 Sepsis** for adult patients. This matches the mapping of the code in use for this disorder before the introduction of this emergency use code; **R65.0 Systemic Inflammatory Response Syndrome of infectious origin without organ failure**.

U07.5 Multisystem inflammatory syndrome associated with COVID-19 has been added to the complications and comorbidities list for this subchapter, **WJ_CC**, as per **R65.0 Systemic Inflammatory Response Syndrome of infectious origin without organ failure**.

Subchapter XA – Neonatal Critical Care

Subchapter **XA Neonatal Critical Care** includes unbundled HRGs and covers neonatal critical care, including transportation (retrieval).

Other critical care services are addressed in Subchapters **XC Adult Critical Care** and **XB Paediatric Critical Care**.

The HRGs within this subchapter are split into five levels of complexity: there is one HRG specific to neonatal intensive care activity (NICU) – **XA01Z Neonatal Critical Care, Intensive Care** – and one HRG specific to neonatal high dependency care (NHDU) – **XA02Z Neonatal Critical Care, High Dependency**, and there are three HRGs specific to neonatal special care baby unit (SCBU) or transitional care activity – **XA03Z Neonatal Critical Care, Special Care, without External Carer**, **XA04Z Neonatal Critical Care, Special Care, with External Carer** and **XA05Z Neonatal Critical Care, Neonatology Supported Care**.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	6	6
Total HRG Roots	6	6
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	0	0
Age Splits	N/A	N/A
Complications and Comorbidities Splits	N/A	N/A
Intervention Splits	N/A	N/A
Multiple Procedures	N/A	N/A
Procedure Combination Codes	N/A	N/A
Diagnosis-qualified	N/A	N/A
Subsidiary Procedure-qualified	N/A	N/A
Length of Stay-qualified	N/A	N/A

The XA HRGs are generated from information within the Neonatal Critical Care Minimum Data Set (Version 2.0, 2016) on a per diem basis, based on the Critical Care Unit Function (CCUF) and Critical Care Activity Code (CCAC) recorded. See SCCI Information Standard 0075 for further information regarding the updated 2016 NCCMDS: <https://digital.nhs.uk/data-and-information/information-standards/information-standards-and-data-collections-including-extractions/publications-and-notifications/information-standards-notices-2016>.

For this subchapter, grouping is based on data items from the Neonatal Critical Care Minimum Data Set (Version 2.0, 2016), but additional data items are required from the Admitted Patient Care data set (Discharge Date and Discharge Method). The main driver for grouping is the CCAC.

One neonatal critical care HRG is generated for each day the baby receives critical care. The HRGs are unbundled, being generated in addition to the HRGs for the associated admitted patient care episode and spell.

Please see the grouping algorithm flowchart at the end of the subchapter summary for this subchapter for further information.

There is also an HRG specific to neonatal transportation – **XA06Z Neonatal Critical Care, Transportation**. This HRG is derived from the Admitted Patient Care data set as the Neonatal Critical Care data set does not incorporate data items that can be used to identify transportation. This represents the transfer of a baby in neonatal critical care from one provider trust to another.

Grouping is driven by the following parameters:

- Admission method
- Source of admission
- Treatment function code
- Neonatal level of care

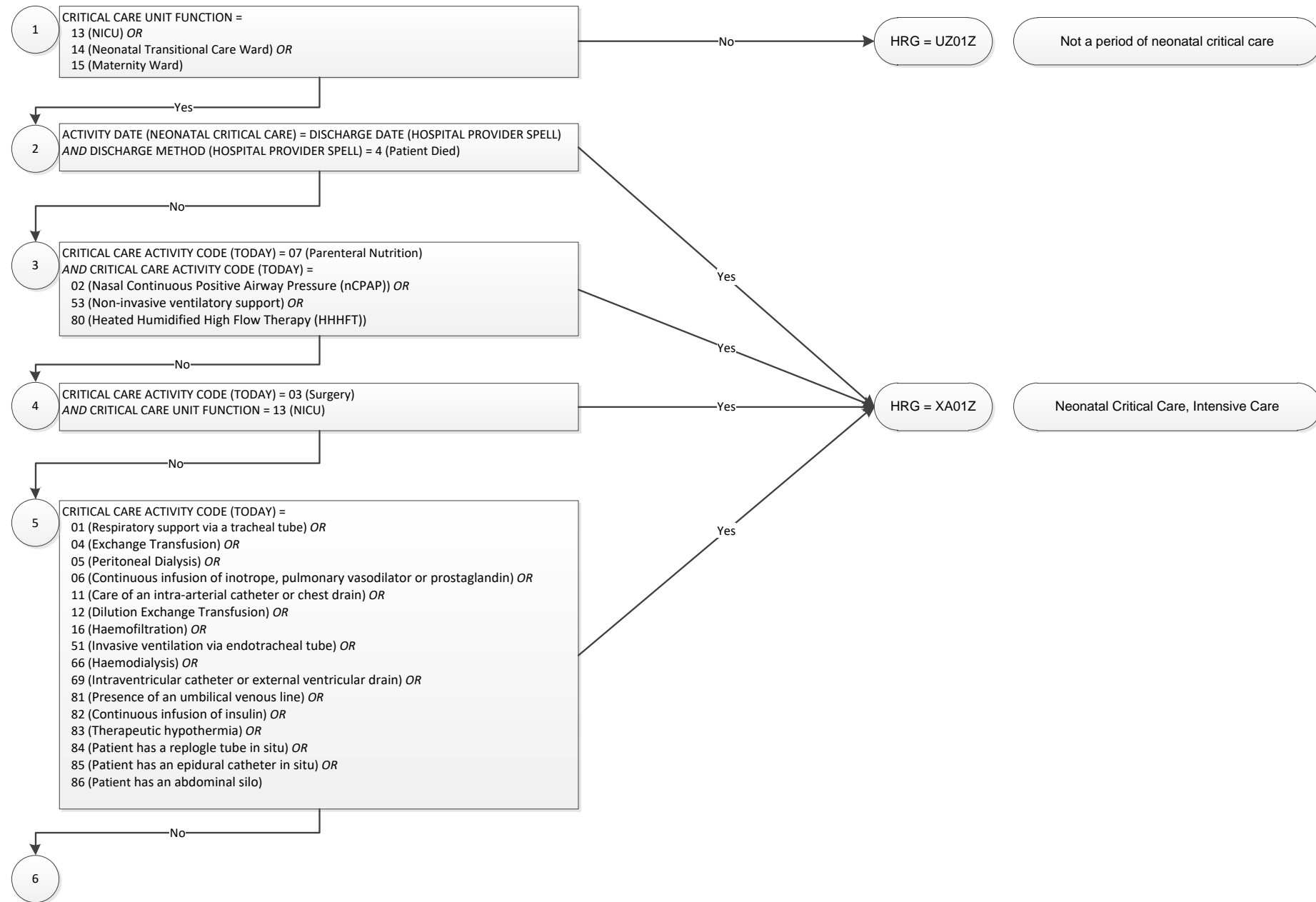
All of the following criteria must be met in order to derive the transportation HRG:

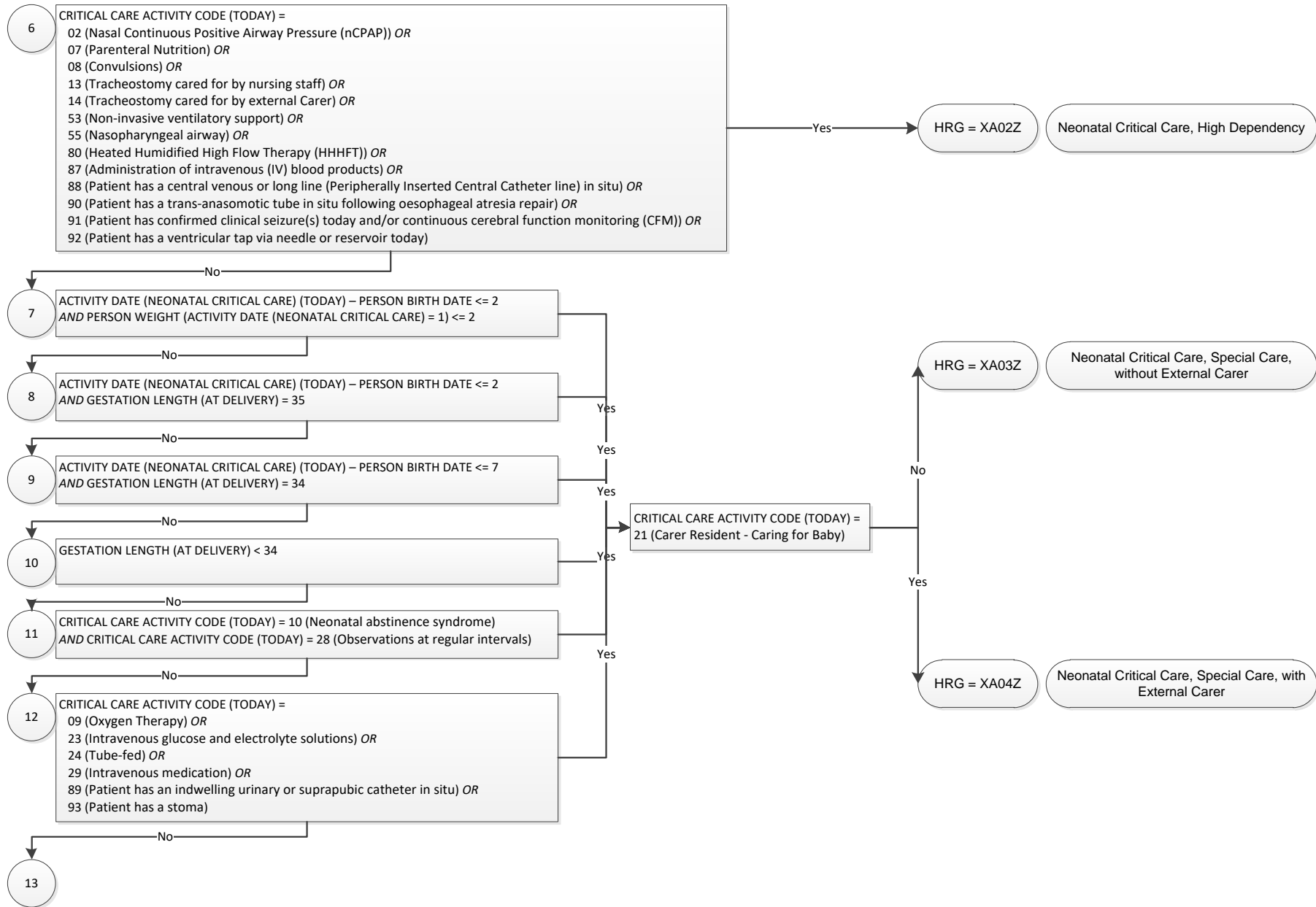
Data Item	Value	Notes
Admission Method	81: Transfer of any admitted patient from other hospital provider other than in an emergency (Data submitted using CDS 6.1 or 6.2) <u>or</u> 28: Other Means (includes transfer of an admitted patient from another hospital provider in an emergency) (Data submitted using CDS 6.1 only) <u>or</u> 2B: Transfer of an admitted PATIENT from another Hospital Provider in an emergency (Data submitted using CDS 6.2 only)	Hospital transfer
Source of Admission	52: NHS other hospital provider – ward for maternity patients or neonates <u>or</u> 87: Non NHS run hospital	Confirms the transfer is from another hospital (Admission Method 28 includes other locations)
Treatment Function Code	422: Neonatology – Special Care, High Dependency and Intensive Care	
Neonatal Level of Care	3: Level 1 Intensive Care (Maximal Intensive Care) <u>or</u> 2: Level 2 Intensive Care (High Dependency Intensive Care)	

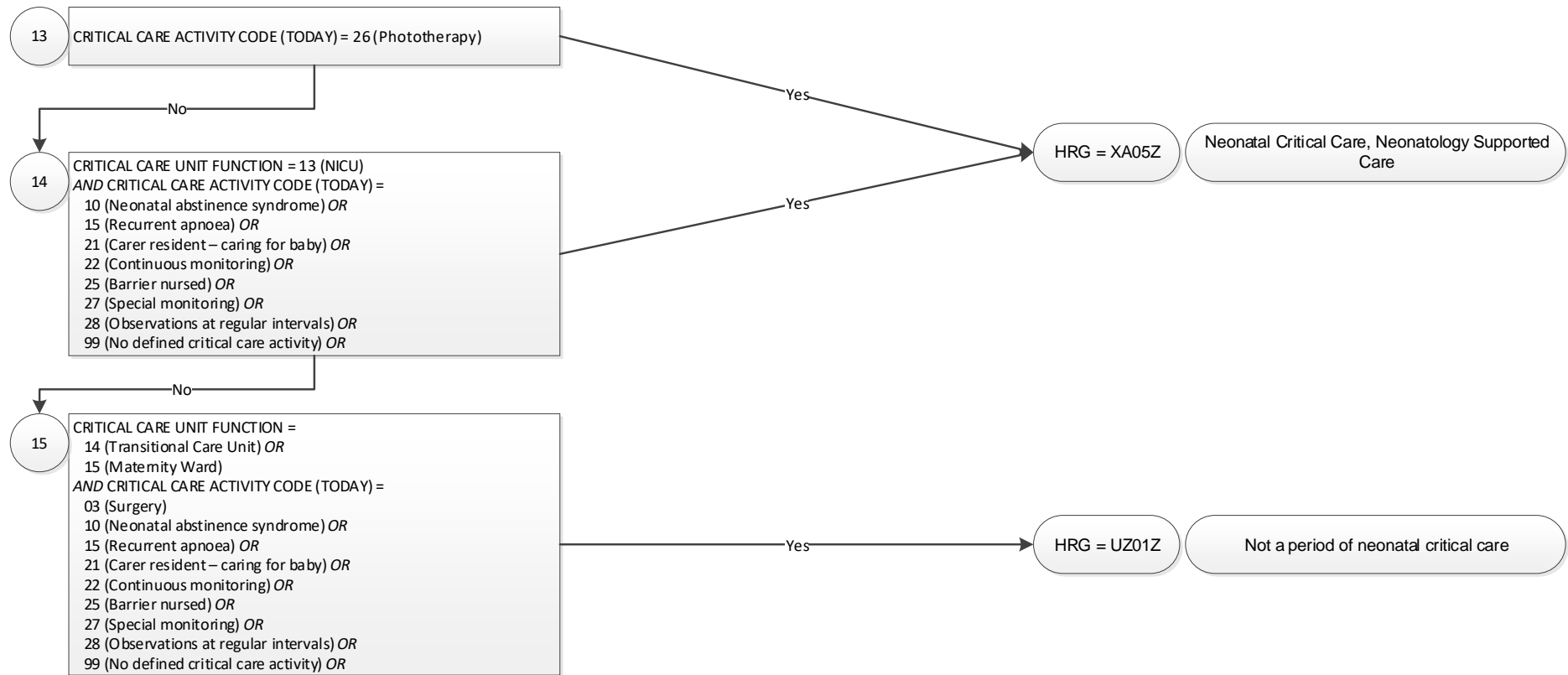
Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).







Subchapter XB – Paediatric Critical Care

Subchapter **XB Paediatric Critical Care** includes unbundled HRGs and covers paediatric critical care, including transportation (retrieval). Other critical care services are addressed in Subchapters **XC Adult Critical Care** and **XA Neonatal Critical Care**.

The HRGs within this subchapter are split into eight levels of complexity: there are five HRGs specific to paediatric intensive care activity, which would be undertaken in a paediatric intensive care unit (PICU), and three HRGs specific to paediatric high dependency care activity, which may take place in a PICU or paediatric high dependency ward.

The XB HRGs are generated from information within the Paediatric Critical Care Minimum Data Set (Version 2.0, 2016) on a per diem basis, based on the Critical Care Unit Function (CCUF) and Critical Care Activity Code (CCAC) recorded. See SCCI Information Standard 0076 for further information regarding the updated 2016 PCCMDS: <https://digital.nhs.uk/data-and-information/information-standards/information-standards-and-data-collections-including-extractions/publications-and-notifications/information-standards-2016>.

Grouping is based primarily on data items from the Paediatric Critical Care Minimum Data Set (Version 2.0, 2016), but additional data items are required from the Admitted Patient Care data set (including Discharge Date, Discharge Method and Diagnosis).

One paediatric critical care HRG is generated for each day the child receives critical care. The HRGs are unbundled, being generated in addition to the HRGs for the associated admitted patient care episode and spell.

Please see the grouping algorithm flowchart at the end of the subchapter summary for this subchapter for further information.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	9	9
Total HRG Roots	9	9
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	0	0
Age Splits	N/A	N/A
Complications and Comorbidities Splits	N/A	N/A
Intervention Splits	N/A	N/A
Multiple Procedures	N/A	N/A
Procedure Combination Codes	N/A	N/A
Diagnosis-qualified	N/A	N/A
Subsidiary Procedure-qualified	N/A	N/A
Length of Stay-qualified	N/A	N/A

There is also an HRG specific to paediatric transportation – **XB08Z Paediatric Critical Care, Transportation**. This HRG is derived from the Admitted Patient Care data set.

All of the following criteria must be met in order to derive the transportation HRG:

Data Item	Value	Notes
Admission Method	81: Transfer of any admitted patient from other hospital provider other than in an emergency (Data submitted using CDS 6.1 or 6.2) <u>or</u> 28: Other Means (includes transfer of an admitted patient from another hospital provider in an emergency) (Data submitted using CDS 6.1 only) <u>or</u> 2B: Transfer of an admitted PATIENT from another Hospital Provider in an emergency (Data submitted using CDS 6.2 only)	Hospital transfer
Source of Admission	51: NHS other hospital provider – ward for general patients or the younger physically disabled or A&E department <u>or</u> 87: Non NHS run hospital	Confirms the transfer is from another hospital (Admission Method 28 includes other locations)
Treatment Function Code of the first episode in the spell	242: Paediatric Intensive Care – Only to be used by designated Paediatric Intensive Care Units	

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter XB: Worked Examples

Case A: A patient is being treated in the paediatric critical care unit and has apnoea requiring intervention.

Case	Critical Care Unit Function Code	Patient Age (Days)	Discharge Method (Hospital Provider Spell)	Main Critical Care Activity Code	Other Critical Care Activity Codes	ICD-10 Diagnosis Code		HRG4+
A	04 (Paediatric Intensive Care Unit)	10	1 (Patient discharged on clinical advice or with clinical consent)	58 Apnoea requiring intervention				XB07Z Paediatric Critical Care, Basic Critical Care

Case B: A patient is being treated on a ward for children and young people and has central venous pressure monitoring.

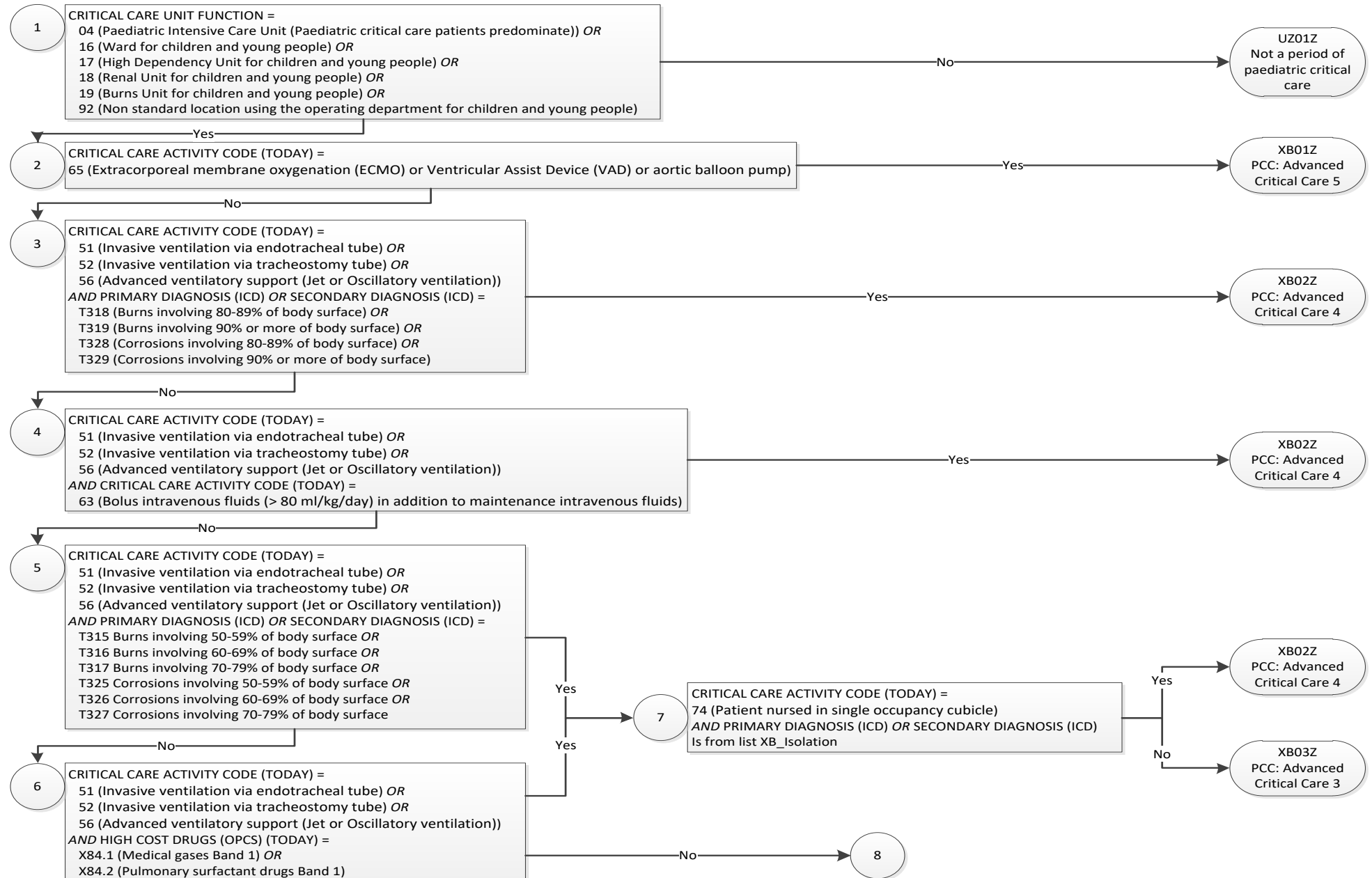
B	16 (Ward for children and young people)	10	1 (Patient discharged on clinical advice or with clinical consent)	62 Central venous pressure monitoring				XB06Z Paediatric Critical Care, Intermediate Critical Care
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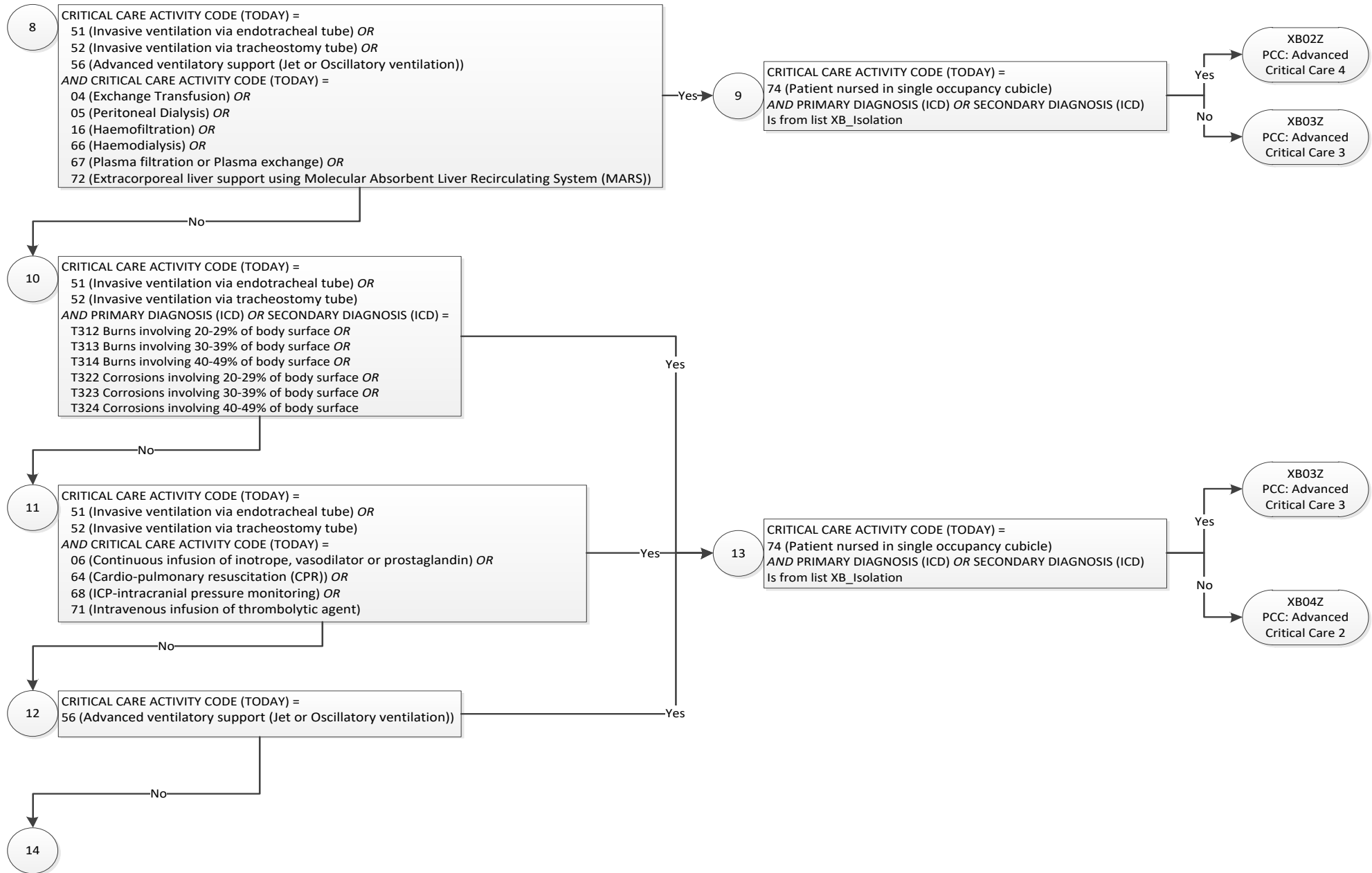
Case C: A patient is being treated in the paediatric critical care unit and has invasive ventilation after being severely burned. This illustrates how the diagnosis is used in deriving the HRG.

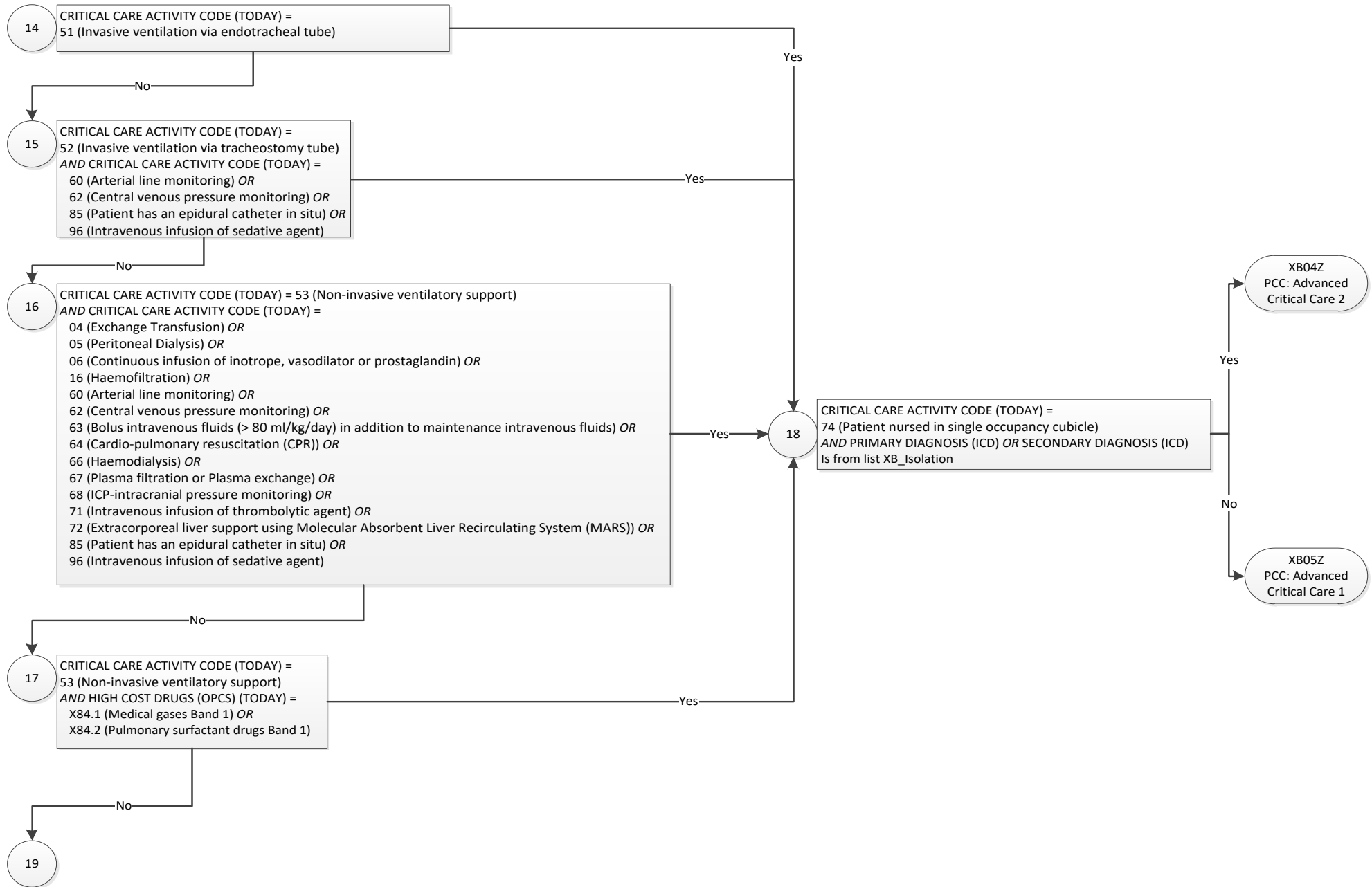
C	04 (Paediatric Intensive Care Unit)	10	1 (Patient discharged on clinical advice or with clinical consent)	51 Invasive ventilation via endotracheal tube		T31.5	Burns involving 50-59% of body surface	XB03Z Paediatric Critical Care, Advanced Critical Care 3
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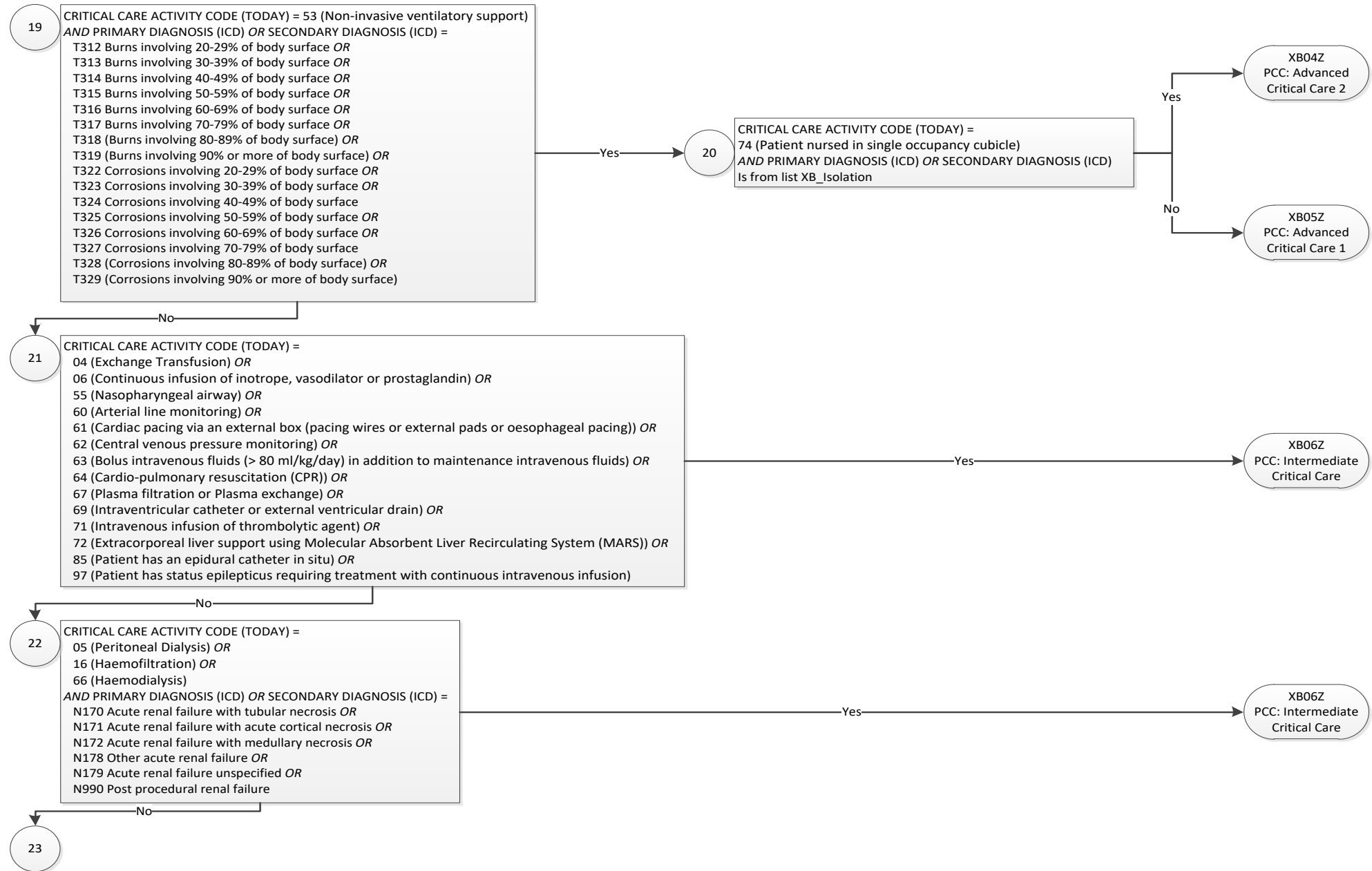
Case D: A patient with renal hypoplasia who develops adenoviral pneumonia is admitted to a single occupancy cubicle in the paediatric critical care unit. This illustrates how both the diagnosis and CCAC affect the HRG derived.

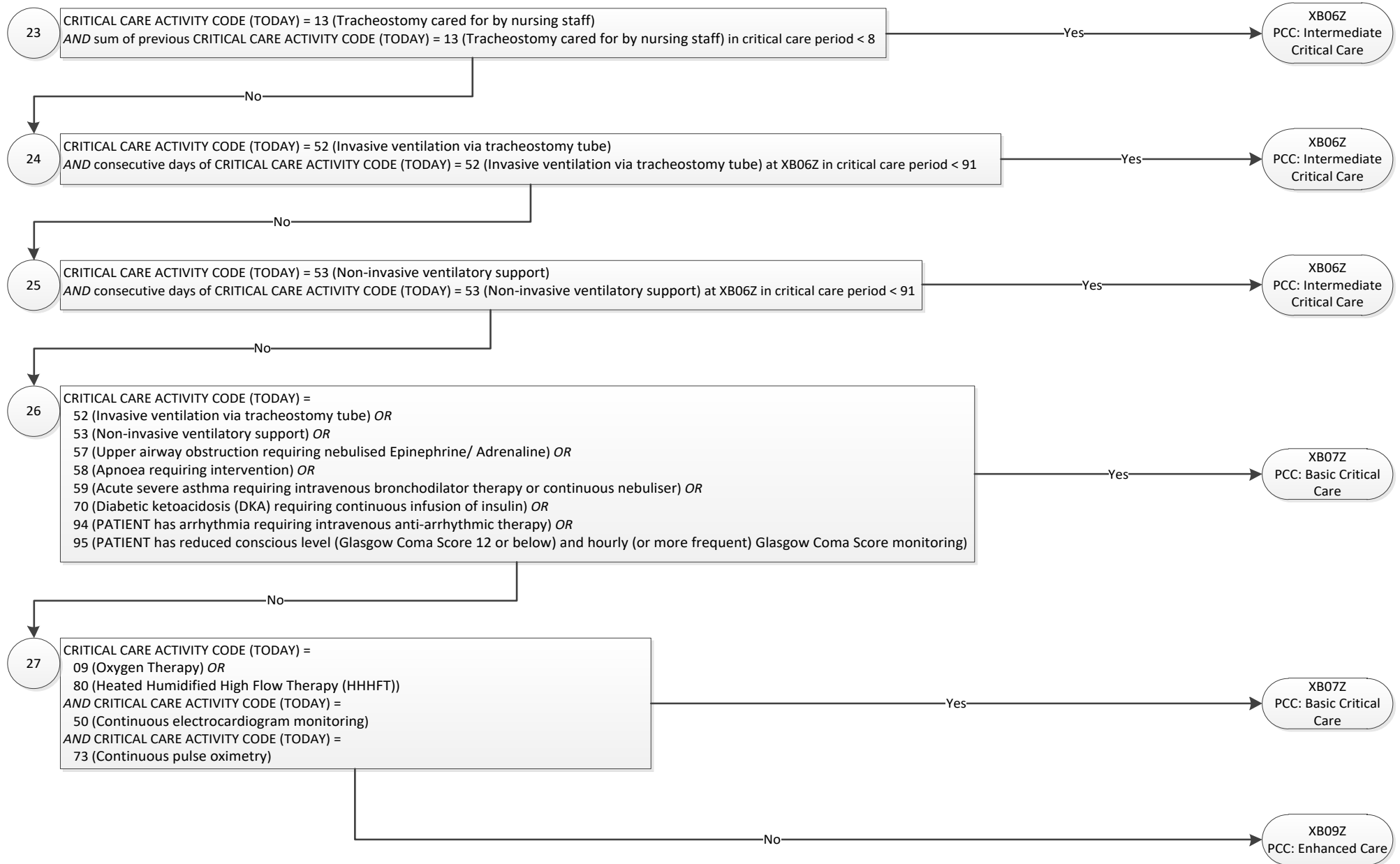
D	04 (Paediatric Intensive Care Unit)	10	1 (Patient discharged on clinical advice or with clinical consent)	51 Invasive ventilation via endotracheal tube	05 Peritoneal dialysis + 74 Patient nursed on single occupancy cubicle	Q60.5 + J12.0	Renal hypoplasia, unspecified + Adenoviral pneumonia	XB02Z Paediatric Critical Care, Advanced Critical Care 4
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Subchapter XB: Appendix E – List XB_ISOLATION

ICD-10 code	Description
A00.0	Cholera due to <i>Vibrio cholerae</i> 01, biovar cholerae
A00.1	Cholera due to <i>Vibrio cholerae</i> 01, biovar eltor
A00.9	Cholera, unspecified
A01.0	Typhoid fever
A01.1	Paratyphoid fever A
A01.2	Paratyphoid fever B
A01.3	Paratyphoid fever C
A01.4	Paratyphoid fever, unspecified
A02.0	Salmonella enteritis
A02.1	Salmonella sepsis
A02.2	Localized salmonella infections
A03.0	Shigellosis due to <i>Shigella dysenteriae</i>
A03.1	Shigellosis due to <i>Shigella flexneri</i>
A03.2	Shigellosis due to <i>Shigella boydii</i>
A03.3	Shigellosis due to <i>Shigella sonnei</i>
A03.8	Other shigellosis
A03.9	Shigellosis, unspecified
A04.3	Enterohaemorrhagic <i>Escherichia coli</i> infection
A04.5	<i>Campylobacter</i> enteritis
A04.7	Enterocolitis due to <i>Clostridium difficile</i>
A07.2	Cryptosporidiosis
A08.0	Rotaviral enteritis
A08.1	Acute gastroenteropathy due to Norwalk agent
A08.2	Adenoviral enteritis
A08.3	Other viral enteritis
A08.4	Viral intestinal infection, unspecified
A09.0	Other and unspecified gastroenteritis and colitis of infectious origin
A09.9	Gastroenteritis and colitis of unspecified origin
A15.0	Tuberculosis of lung, confirmed by sputum microscopy with or without culture
A15.1	Tuberculosis of lung, confirmed by culture only
A15.2	Tuberculosis of lung, confirmed histologically
A15.3	Tuberculosis of lung, confirmed by unspecified means
A15.4	Tuberculosis of intrathoracic lymph nodes, confirmed bacteriologically and histologically
A15.5	Tuberculosis of larynx, trachea and bronchus, confirmed bacteriologically and histologically
A15.6	Tuberculous pleurisy, confirmed bacteriologically and histologically
A15.7	Primary respiratory tuberculosis, confirmed bacteriologically and histologically
A15.8	Other respiratory tuberculosis, confirmed bacteriologically and histologically
A15.9	Respiratory tuberculosis unspecified, confirmed bacteriologically and histologically
A17.0	Tuberculous meningitis
A19.2	Acute miliary tuberculosis, unspecified
A36.0	Pharyngeal diphtheria
A36.1	Nasopharyngeal diphtheria
A36.2	Laryngeal diphtheria

ICD-10 code	Description
A36.3	Cutaneous diphtheria
A36.8	Other diphtheria
A36.9	Diphtheria, unspecified
A37.0	Whooping cough due to <i>Bordetella pertussis</i>
A37.1	Whooping cough due to <i>Bordetella parapertussis</i>
A37.8	Whooping cough due to other <i>Bordetella</i> species
A37.9	Whooping cough, unspecified
A38.X	Scarlet fever
A39.0	Meningococcal meningitis
A39.2	Acute meningococcaemia
A39.4	Meningococcaemia, unspecified
A39.9	Meningococcal infection, unspecified
A87.1	Adenoviral meningitis
A98.4	Ebola virus disease
B00.0	Eczema herpeticum
B00.1	Herpesviral vesicular dermatitis
B00.2	Herpesviral gingivostomatitis and pharyngotonsillitis
B00.3	Herpesviral meningitis
B00.4	Herpesviral encephalitis
B00.5	Herpesviral ocular disease
B00.7	Disseminated herpesviral disease
B00.8	Other forms of herpesviral infection
B00.9	Herpesviral infection, unspecified
B01.0	Varicella meningitis
B01.1	Varicella encephalitis
B01.2	Varicella pneumonia
B01.8	Varicella with other complications
B01.9	Varicella without complication
B02.0	Zoster encephalitis
B02.1	Zoster meningitis
B02.2	Zoster with other nervous system involvement
B02.3	Zoster ocular disease
B02.7	Disseminated zoster
B02.8	Zoster with other complications
B02.9	Zoster without complication
B05.0	Measles complicated by encephalitis
B05.1	Measles complicated by meningitis
B05.2	Measles complicated by pneumonia
B05.3	Measles complicated by otitis media
B05.4	Measles with intestinal complications
B05.8	Measles with other complications
B05.9	Measles without complication
B15.0	Hepatitis A with hepatic coma
B15.9	Hepatitis A without hepatic coma
B17.2	Acute hepatitis E

ICD-10 code	Description
B20.0	HIV disease resulting in mycobacterial infection
B20.1	HIV disease resulting in other bacterial infections
B20.2	HIV disease resulting in cytomegaloviral disease
B20.3	HIV disease resulting in other viral infections
B20.4	HIV disease resulting in candidiasis
B20.5	HIV disease resulting in other mycoses
B20.6	HIV disease resulting in Pneumocystis jirovecii pneumonia
B20.7	HIV disease resulting in multiple infections
B20.8	HIV disease resulting in other infectious and parasitic diseases
B20.9	HIV disease resulting in unspecified infectious or parasitic disease
B23.0	Acute HIV infection syndrome
B24.X	Unspecified human immunodeficiency virus [HIV] disease
B26.0	Mumps orchitis
B26.1	Mumps meningitis
B26.2	Mumps encephalitis
B26.3	Mumps pancreatitis
B26.8	Mumps with other complications
B26.9	Mumps without complication
B30.0	Keratoconjunctivitis due to adenovirus
B30.1	Conjunctivitis due to adenovirus
B44.0	Invasive pulmonary aspergillosis
B44.1	Other pulmonary aspergillosis
B44.2	Tonsillar aspergillosis
B44.7	Disseminated aspergillosis
B44.8	Other forms of aspergillosis
B44.9	Aspergillosis, unspecified
B97.0	Adenovirus as the cause of diseases classified to other chapters
B97.4	Respiratory syncytial virus as the cause of diseases classified to other chapters
D70.X	Agranulocytosis
D81.0	Severe combined immunodeficiency [SCID] with reticular dysgenesis
D81.1	Severe combined immunodeficiency [SCID] with low T- and B-cell numbers
D81.2	Severe combined immunodeficiency [SCID] with low or normal B-cell numbers
D84.8	Other specified immunodeficiencies
J10.0	Influenza with pneumonia, seasonal influenza virus identified
J10.1	Influenza with other respiratory manifestations, seasonal influenza virus identified
J12.0	Adenoviral pneumonia
J12.1	Respiratory syncytial virus pneumonia
J12.2	Parainfluenza virus pneumonia
J15.2	Pneumonia due to staphylococcus
J15.8	Other bacterial pneumonia
J20.4	Acute bronchitis due to parainfluenza virus
J20.5	Acute bronchitis due to respiratory syncytial virus
J21.0	Acute bronchiolitis due to respiratory syncytial virus
J21.8	Acute bronchiolitis due to other specified organisms
J21.9	Acute bronchiolitis, unspecified

ICD-10 code	Description
L12.3	Acquired epidermolysis bullosa
L51.1	Bullous erythema multiforme
L51.2	Toxic epidermal necrolysis [Lyell]
T31.2	Burns involving 20-29% of body surface
T31.3	Burns involving 30-39% of body surface
T31.4	Burns involving 40-49% of body surface
T31.5	Burns involving 50-59% of body surface
T31.6	Burns involving 60-69% of body surface
T31.7	Burns involving 70-79% of body surface
T31.8	Burns involving 80-89% of body surface
T31.9	Burns involving 90% or more of body surface
T32.2	Corrosions involving 20-29% of body surface
T32.3	Corrosions involving 30-39% of body surface
T32.4	Corrosions involving 40-49% of body surface
T32.5	Corrosions involving 50-59% of body surface
T32.6	Corrosions involving 60-69% of body surface
T32.7	Corrosions involving 70-79% of body surface
T32.8	Corrosions involving 80-89% of body surface
T32.9	Corrosions involving 90% or more of body surface
T86.0	Bone-marrow transplant rejection
U04.9	Severe acute respiratory syndrome [SARS], unspecified
U82.1	Resistance to methicillin
U82.2	Extended spectrum betalactamase (ESBL) resistance
U82.8	Resistance to other betalactam antibiotics
U82.9	Resistance to betalactam antibiotics, unspecified
U83.0	Resistance to vancomycin
U83.7	Resistance to multiple antibiotics
U83.8	Resistance to other single specified antibiotic
U84.1	Resistance to antifungal drug(s)
U84.2	Resistance to antiviral drug(s)
U84.3	Resistance to tuberculostatic drug(s)
U84.7	Resistance to multiple antimicrobial drugs
Z94.3	Heart and lungs transplant status
Z94.4 with Z94.0	Liver transplant status with Kidney transplant status
Z94.4 with Z94.8	Liver transplant status with Other transplanted organ and tissue status
A40.0 with M72.6*	Sepsis due to streptococcus, group A with Necrotizing fasciitis

* Fifth character code

Subchapter XC – Adult Critical Care

Subchapter **XC Adult Critical Care** includes unbundled HRGs and covers adult critical care services. Other critical care services are addressed in Subchapters **XA Neonatal Critical Care** and **XB Paediatric Critical Care**.

Subchapter XC comprises HRGs specific to the numbers of organs the patient needs supported – from 0 to 6+ – and the HRGs are generated from information within the Critical Care Minimum Data Set (MDS).

The adult critical care HRGs are unbundled from the rest of the patient episode. The HRGs are based on the data in the Critical Care MDS and differentiate on the level of support required by the patient, which is determined by the number of organ systems supported.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	7	7
Total HRG Roots	7	7
Procedure-driven HRGs	0	0
Diagnosis-driven HRGs	0	0
Age Splits	N/A	N/A
Complications and Comorbidities Splits	N/A	N/A
Intervention Splits	N/A	N/A
Multiple Procedures	N/A	N/A
Procedure Combination Codes	N/A	N/A
Diagnosis-qualified	N/A	N/A
Subsidiary Procedure-qualified	N/A	N/A
Length of Stay-qualified	N/A	N/A

Adult critical care HRGs are generated per Critical Care Period, i.e. one (Total number of unique organs supported within the critical care period) HRG is generated for each Critical Care Period and not on a per-diem basis, although Grouper output will also identify the numbers of days of each critical care period.

In addition to the Critical Care Unit Function Field, the following additional fields from the Critical Care MDS are used in the derivation of these HRGs. These fields are related to the organ support groups.

- Advanced Respiratory Support Days
- Basic Respiratory Support Days
- Advanced Cardiovascular Support Days
- Basic Cardiovascular Support Days
- Renal Support Days
- Neurological Support Days
- Dermatological Support Days
- Liver Support Days

Gastrointestinal support days do not contribute to the derivation of critical care HRGs, on clinical advice. The expected cost of providing this support is subsumed within other organ support groups.

Where basic respiratory and basic cardiovascular support occur on one day, it is counted as one organ for the purposes of grouping.

Note that the field “Organ Support Maximum” is not used in grouping: the number of organ systems supported is calculated based on the existence of support days for each of the organ systems.

In addition to the fields listed above, the grouper requires Critical Care Start Date and Critical Care Discharge Date in the input data. These are used to calculate critical care days in the grouper output file. They are not used in HRG derivation.

Please see the grouping algorithm flowchart at the end of the subchapter summary for this subchapter for further information.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter XC: Worked Examples

Advanced Respiratory Support days	Basic Respiratory Support days	Advanced Cardiovascular support days	Basic Cardiovascular support days	Renal Support days	Neurological Support days	Dermatological Support days	Liver Support days	L2 Days	L3 Days	CC Start date	CC Discharge Date	Unit Function	Length of Stay	HRG4+	Comment
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Case A illustrates a patient having basic and advanced respiratory support.

1	1	0	0	0	0	0	0	1	1	01 Jan 20	02 Jan 20	1	2	XC05Z	Two organ systems supported
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Case B illustrates a patient having basic and advanced respiratory support plus basic and advanced cardiovascular support.

5	10	4	4	0	0	0	0	10	5	01 Jan 20	15 Jan 20	2	15	XC04Z	Three organ systems supported
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Case C illustrates a patient having basic and advanced respiratory support plus liver support.

2	1	0	0	0	0	0	1	0	3	01 Jan 20	03 Jan 20	2	3	XC04Z	Three organ systems supported
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Advanced Respiratory Support days	Basic Respiratory Support days	Advanced Cardiovascular support days	Basic Cardiovascular support days	Renal Support days	Neurological Support days	Dermatological Support days	Liver Support days	L2 Days	L3 Days	CC Start date	CC Discharge Date	Unit Function	Length of Stay	HRG4+	Comment
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Case D illustrates a patient having basic and advanced cardiovascular support.

0	0	5	5	0	0	0	0	10	0	01 Jan 20	10 Jan 20	1	10	XC06Z	One organ system supported
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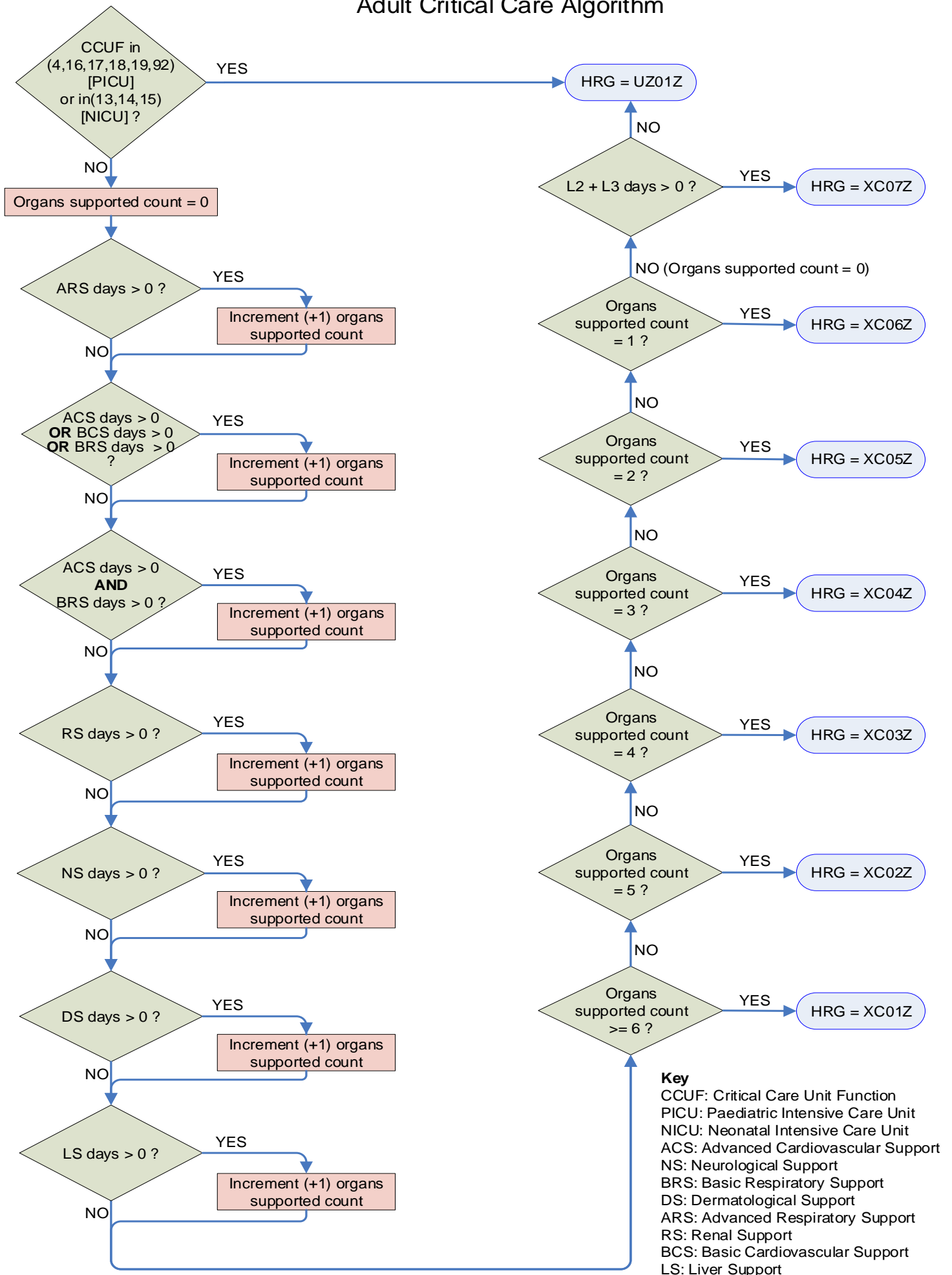
Case E illustrates a patient with no organ systems supported and neither Level 2 nor Level 3 care.

0	0	0	0	0	0	0	0	0	0	01 Jan 20	05 Jan 20	1	5	UZ01Z	Data Invalid for Grouping
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Case F illustrates a patient with no organ systems support days and Level 2 care.

0	0	0	0	0	0	0	0	1	0	01 Jan 20	05 Jan 20	5	5	XC07Z	No organ systems supported
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Adult Critical Care Algorithm



Subchapter XD – High Cost Drugs

Subchapter **XD High Cost Drugs** comprises unbundled HRGs for select high-cost drugs across all body systems, for patients of all ages.

The list of named high-cost drugs was created by the Payment by Results team within the Department of Health (now NHS England and NHS Improvement pricing teams) in conjunction with advice from the High Cost Drugs Steering Group.

In Subchapter XD, there is a one-to-one mapping of high-cost drug OPCS-4 codes to a high-cost drug HRG.

Where multiple high-cost drugs are recorded, multiple high-cost drug HRGs will be generated, as one unbundled HRG is generated for each distinct high-cost drug code recorded in the patient record.

Multiple doses of the same drug will only generate one unbundled high-cost drug HRG, however, because the current HRG4+ design cannot consider dosage due to a lack of such information in the underlying OPCS-4 codes or other data fields within the Commissioning Data Sets (CDS).

Composition and Concepts		
	C21/22	P20/21
Total HRGs	58	58
Total HRG Roots	58	58
Procedure-driven HRGs	58	58
Diagnosis-driven HRGs	0	0
Age Splits	N/A	N/A
Complications and Comorbidities Splits	N/A	N/A
Intervention Splits	N/A	N/A
Multiple Procedures	N/A	N/A
Procedure Combination Codes	N/A	N/A
Diagnosis-qualified	N/A	N/A
Subsidiary Procedure-qualified	N/A	N/A
Length of Stay-qualified	N/A	N/A

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter YA – Neurological Imaging Interventions

Subchapter **YA Neurological Imaging Interventions** covers neurological imaging interventions for patients of all ages. It includes activity undertaken in inpatient, day case and non-admitted care settings.

This activity is separate from the neurosurgery procedures mapped to Subchapter **AA Nervous System Procedures and Disorders** and from the other non-vascular imaging interventions found in the other subchapters within Chapter **Y Vascular Procedures and Disorders and Imaging Interventions**.

The HRGs in this subchapter are specific to the type of intracranial and extracranial imaging intervention performed.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	11	11
Total HRG Roots	8	8
Procedure-driven HRGs	11	11
Diagnosis-driven HRGs	0	0
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	Yes	Yes

They also differentiate between categories of embolisation based on size and complexity, and they take into account where multiple procedures have been performed.

YA11Z Percutaneous Transluminal Arteriography, of Intracranial or Extracranial Blood Vessel employs maximum length of stay logic to ensure that relatively minor procedures such as cerebral angiography are not used to determine the HRG for a long-stay medical patient, e.g. a person who has suffered a stroke.

Interactive CC splits are employed within many of the HRG roots in this subchapter to more appropriately differentiate expected resource usage between routine and complex patients.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter YD – Thoracic Imaging Interventions

Subchapter **YD Thoracic Imaging Interventions** covers thoracic imaging interventions for patients of all ages. It includes activity undertaken in inpatient, day case and non-admitted care settings.

This activity is separate from the open and endoscopic thoracic procedures mapped to Subchapter **DZ Respiratory System Procedures and Disorders**, and from the other non-vascular imaging interventions found in other subchapters within Chapter **Y Vascular Procedures and Disorders and Imaging Interventions**.

The HRGs in this subchapter are specific to the type of thoracic imaging intervention performed and consist of HRGs specific to thoracic ablative procedures, biopsy, drainage interventions and aspiration interventions, respectively.

With the exception of the ablation HRG, all HRGs within this subchapter employ maximum length of stay logic to ensure that relatively minor procedures such as thoracentesis are not used to determine the HRG for a long-stay medical patient, e.g. a person who has tuberculosis.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Composition and Concepts		
	C21/22	P20/21
Total HRGs	5	5
Total HRG Roots	5	5
Procedure-driven HRGs	5	5
Diagnosis-driven HRGs	0	0
Age Splits	No	No
Complications and Comorbidities Splits	No	No
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	Yes	Yes

Subchapter YF – Gastrointestinal Imaging Interventions

Subchapter **YF Gastrointestinal Imaging Interventions** covers gastrointestinal imaging interventions for patients of all ages. It includes activity undertaken in inpatient, day case and non-admitted care settings.

This activity is separate from the open and endoscopic digestive system procedures mapped to Subchapter **FE Digestive System Endoscopic Procedures** and **FF Digestive System Open and Laparoscopic Procedures** and from the other non-vascular imaging interventions found in the other subchapters within Chapter **Y Vascular Procedures and Disorders and Imaging Interventions**.

The HRGs in this subchapter are specific to the type of gastrointestinal imaging intervention performed, and they consist of HRGs specific to the insertion of gastrostomy and jejunostomy tubes and the drainage of abdominal abscesses.

The drainage of abdominal abscess HRGs employ multiple-procedure logic to take into account the expected additional resource usage of patients that undergo multiple drainage interventions.

The insertion of gastrostomy and jejunostomy HRGs within this subchapter employ maximum length of stay logic to ensure that relatively minor procedures such as these are not used to determine the HRG for a long-stay medical patient, e.g. a person who has Crohn's disease.

Interactive CC splits are employed within the HRG roots specific to drainage of abscess to more appropriately differentiate expected resource usage between routine and complex patients. This Subchapter shares a common CC list with Chapter F, Digestive System (List ID **FDFFYYF_CC**).

Composition and Concepts		
	C21/22	P20/21
Total HRGs	8	8
Total HRG Roots	4	4
Procedure-driven HRGs	8	8
Diagnosis-driven HRGs	0	0
Age Splits	Yes	Yes
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	Yes	Yes

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter YG – Hepatobiliary and Pancreatic Imaging Interventions

Subchapter **YG Hepatobiliary and Pancreatic Imaging Interventions** covers hepatobiliary and pancreatic imaging interventions for patients of all ages. It includes activity undertaken in inpatient, day case and non-admitted care settings.

This activity is separate from the open and endoscopic hepatobiliary and pancreatic procedures mapped to Subchapters **GA Hepatobiliary and Pancreatic System Open Procedures** and **GB Hepatobiliary and Pancreatic System Endoscopic Procedures**, respectively, and from the other non-vascular imaging interventions found in the other subchapters within Chapter **Y Vascular Procedures and Disorders and Imaging Interventions**.

The HRGs in this subchapter are specific to the type of hepatobiliary and pancreatic imaging interventions performed and include HRGs specific to ablative procedures, the insertion of stents, drainage and biopsies.

The insertion of stents and drainage HRGs employ multiple-procedure logic to take into account the expected additional resource usage of patients that have multiple stents inserted or undergo stent insertion with drainage. The stent HRGs also differentiate on type of stent, i.e. standard or metal.

HRG root **YG11 Percutaneous Punch Biopsy of Lesion of Liver** includes an age split to separate paediatric activity (18 years and under) from adult activity (19 years and over).

Several HRGs within this subchapter employ maximum length of stay logic to ensure that relatively minor procedures such as biopsies are not used to determine the HRG for a long-stay medical patient, e.g. a person with liver failure.

Interactive CC splits are employed within many of the HRG roots in this subchapter to more appropriately differentiate expected resource usage between routine and complex patients. This Subchapter shares a common CC list with Chapter G, Hepatobiliary and Pancreatic System (List ID **GAGBGY_G**).

Composition and Concepts		
	C21/22	P20/21
Total HRGs	16	16
Total HRG Roots	10	10
Procedure-driven HRGs	16	16
Diagnosis-driven HRGs	0	0
Age Splits	Yes	Yes
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	Yes	Yes

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter YH – Musculoskeletal Imaging Interventions

Subchapter **YH Musculoskeletal Imaging Interventions** covers musculoskeletal imaging interventions for patients of all ages. It includes activity undertaken in inpatient, day case and non-admitted care settings. However, it does not include any activity included in a Pain Management Programme found within Subchapter **AB Pain Management**.

The activity mapped to this subchapter is separate from the spinal and orthopaedic procedures mapped to Chapter **H Musculoskeletal System** and from the other non-vascular imaging interventions found in the other subchapters within Chapter **Y Vascular Procedures and Disorders and Imaging Interventions**.

The HRGs in this subchapter are specific to the type of musculoskeletal imaging intervention performed, and they include HRGs specific to ablative procedures, vertebroplasty, aspiration and biopsies.

The vertebroplasty HRGs are differentiated based on levels of spine – one, two, or three or more levels.

With the exception of the vertebroplasty and ablative procedure HRGs, all HRGs within this subchapter employ maximum length of stay logic to ensure that relatively minor procedures such as biopsies are not used to determine the HRG for a long-stay medical patient, e.g. a person who has metastatic bone cancer.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	8	8
Total HRG Roots	8	8
Procedure-driven HRGs	8	8
Diagnosis-driven HRGs	0	0
Age Splits	No	No
Complications and Comorbidities Splits	No	No
Intervention Splits	No	No
Multiple Procedures	No	No
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	No	No
Length of Stay-qualified	Yes	Yes

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter YJ – Breast Imaging Interventions

Subchapter **YJ Breast Imaging Interventions** covers breast imaging interventions for patients of all ages. It includes activity undertaken in inpatient, day case and non-admitted care settings.

This activity is separate from the open breast procedures mapped to Subchapter **JA Breast Procedures and Disorders** and from the other non-vascular imaging interventions found in the other subchapters within Chapter **Y Vascular Procedures and Disorders and Imaging Interventions**.

The HRGs in this subchapter are specific to the type of breast imaging intervention performed, and they include HRGs specific to various types of biopsies and aspirations.

All HRGs in this subchapter employ multiple-procedure logic to take into account the expected additional resource usage of patients that undergo multiple biopsies or aspirations, e.g. bilateral interventions.

All HRGs within this subchapter have maximum length of stay logic to ensure that relatively minor procedures such as biopsies are not used to determine the HRG for a long-stay medical patient, e.g. a person who has metastatic breast cancer.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	12	12
Total HRG Roots	12	12
Procedure-driven HRGs	12	12
Diagnosis-driven HRGs	0	0
Age Splits	No	No
Complications and Comorbidities Splits	No	No
Intervention Splits	No	No
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	Yes	Yes

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter YL – Urological Imaging Interventions

Subchapter **YL Urological Imaging Interventions** covers urological interventions for patients of all ages. It includes activity undertaken in inpatient, day case and non-admitted care settings.

This activity is separate from the open urological procedures mapped to Subchapter **LB Urological and Male Reproductive System Procedures and Disorders** and from the other non-vascular imaging interventions found in the other subchapters within Chapter **Y Vascular Procedures and Disorders and Imaging Interventions**.

The HRGs within this subchapter are specific to the type of urological imaging intervention performed, and they include distinct HRGs for biopsy, ablative, insertion of stent and nephrostomy procedures.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	8	8
Total HRG Roots	7	7
Procedure-driven HRGs	8	8
Diagnosis-driven HRGs	0	0
Age Splits	Yes	Yes
Complications and Comorbidities Splits	No	No
Intervention Splits	No	No
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	No	No
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	Yes	Yes

The insertion of stent and nephrostomy HRGs employ multiple-procedure logic to take into account the expected additional resource usage of patients that have multiple stents inserted or undergo multiple drainage interventions, including bilateral procedures.

HRG root **YL20 Percutaneous Needle Biopsy of Lesion of Kidney** includes an age split to separate paediatric activity (18 years and under) from adult activity (19 years and over).

With the exception of the ablative procedure HRGs, all HRGs within this subchapter employ maximum length of stay logic to ensure that relatively minor procedures such as insertion of nephrostomy are not used to determine the HRG for a long-stay medical patient, e.g. a person who has chronic kidney disease.

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter YQ – Vascular Open Procedures and Disorders

Subchapter **YQ Vascular Open Procedures and Disorders** covers vascular open procedures for patients of all ages and adult disorders. It includes activity undertaken in inpatient, day case and non-admitted care settings.

This activity is separate from the interventions that map to **YR Vascular Imaging Interventions**.

The HRGs in this subchapter are split based on the site of the blood vessel, e.g. abdominal, lower limb or upper limb; however, there are also procedure-specific HRGs, e.g. for amputation procedures and varicose vein surgery.

Multiple-procedure logic is employed within the majority of HRGs in this subchapter.

In addition, escalation to an HRG with a higher expected resource usage also occurs, where appropriate, if a procedure is revisional or undertaken bilaterally.

The minor procedure HRGs, e.g. varicose vein surgery and vascular access procedures, have maximum length of stay logic to ensure that minor procedures such as arteriovenous (AV) fistula insertion are not used to determine the HRG for a long-stay medical patient, e.g. a person who has chronic kidney disease.

There are two adult diagnosis-driven HRG roots within this subchapter, one specific to deep vein thrombosis (DVT) and another that covers all other peripheral vascular disease.

Interactive CC splits are employed within the majority of HRG roots in this subchapter – up to a maximum of six levels – to more appropriately differentiate expected resource usage between routine and complex patients.

All diagnosis-driven activity relating to the treatment of children (aged 18 years and under) groups to an HRG in Chapter **P Diseases of Childhood and Neonates**, in line with the requirements of the Casemix Design Framework.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	60	60
Total HRG Roots	27	27
Procedure-driven HRGs	49	49
Diagnosis-driven HRGs	11	11
Age Splits	No	No
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	Yes	Yes

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

Subchapter YR – Vascular Imaging Interventions

Subchapter **YR Vascular Imaging Interventions** covers vascular imaging interventions for patients of all ages. It includes activity undertaken in inpatient, day case and non-admitted care settings.

This activity is separate from the open vascular procedures and non-vascular imaging interventions found in the other subchapters within Chapter **Y Vascular Procedures and Disorders and Imaging Interventions**.

This subchapter consists of HRGs specific to endovascular aortic aneurysm repair (EVAR), angioplasty and stenting, embolisation, varicose vein interventions, vascular access procedures and other percutaneous diagnostic or therapeutic vascular interventions.

Multiple-procedure logic is employed within the majority of therapeutic HRGs within this subchapter. In addition, escalation to a higher expected resource HRG also occurs where there are certain types of stents or stent grafts used, depending on type of aneurysm, and where appropriate if a procedure is undertaken bilaterally.

Age splits are employed in several of the vascular access HRGs: there are specific HRGs for adult activity (19 years and over) and others for paediatric activity (18 years and under).

The minor procedure HRGs, e.g. varicose vein interventions, vascular access procedures and diagnostic imaging interventions, have maximum length of stay logic to ensure that minor procedures such as CV catheter insertion are not used to determine the HRG for a long-stay medical patient, e.g. a person who is receiving treatment for cancer.

Interactive CC splits are employed within several of the therapeutic vascular imaging intervention HRG roots in this subchapter – up to a maximum of four levels – to more appropriately differentiate expected resource usage between routine and complex patients.

Composition and Concepts		
	C21/22	P20/21
Total HRGs	58	58
Total HRG Roots	37	37
Procedure-driven HRGs	58	58
Diagnosis-driven HRGs	0	0
Age Splits	Yes	Yes
Complications and Comorbidities Splits	Yes	Yes
Intervention Splits	No	No
Multiple Procedures	Yes	Yes
Procedure Combination Codes	Yes	Yes
Diagnosis-qualified	Yes	Yes
Subsidiary Procedure-qualified	Yes	Yes
Length of Stay-qualified	Yes	Yes

Differences from the HRG4+ 2020/21 Local Payment Grouper Version 2 (COVID-19)

No changes

No changes directly impacting this subchapter have been made in the HRG4+ 2021/22 Consultation Grouper when compared to the HRG4+ 2020/21 Local Payment Grouper v2 (COVID-19).

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/downloads-grouper-and-tools>.

This documentation suite provides a comprehensive resource intended to help users understand HRG design concepts and logic as well as use 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. This 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 **Summary of Changes** document provides an overview of the main differences between the current grouper design and its relevant predecessor.
- The **Chapter Summaries** document provides an overview of the scope, composition and relevant grouping logic of individual HRG subchapters, and it highlights significant changes made in the latest HRG design.
- The **Code to Group Workbook** is an Excel workbook 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 (CC) lists for HRG subchapters. The workbook also includes information on Programme Budgeting Category (PBC) mapping as well as a comprehensive list of HRG codes and labels.