

Home Health Grouper Software

# **Installation and User Manual**

For PC/batch

Software version 05.0.24 January 2024

PBL-057

z/OS is a registered trademark of IBM Corporation in the United States and/or other countries. Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

If this product includes UB-04 information: Copyright 2023, American Hospital Association ("AHA"), Chicago, Illinois. Reproduced with permission. No portion of this publication may be reproduced, sorted in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior express, written consent of AHA.

# Table of Contents

<b>Chapter 1: Summary of changes .....</b>	<b>5</b>
Software .....	5
Software Logic and Interface Changes.....	5
Grouper tables.....	5
Documentation.....	5
Frequently asked questions.....	6
<b>Chapter 2: Introduction to the Home Health Grouper Software (HHGS) ....</b>	<b>7</b>
Versions of the software .....	7
Purpose of the HHGS functionality.....	8
HIPPS code generation .....	8
Period timing and referral source.....	10
Claim Date Spanning .....	10
Clinical group assignment .....	11
<i>Principal diagnosis code Validity check</i> .....	12
<i>Primary Awarding</i> .....	13
Functional impairment elements and scoring .....	13
<i>Functional impairment scoring</i> .....	17
<i>Thresholds for functional level</i> .....	19
Comorbidity adjustments .....	21
<i>Low comorbidity adjustment subgroups</i> .....	22
<i>High comorbidity adjustment interaction subgroups</i> .....	23
Placeholder .....	26
<b>Chapter 3: Installing and testing the software for the batch platform .....</b>	<b>27</b>
<b>Chapter 4: Data processing.....</b>	<b>29</b>
Program input.....	29
Program output .....	31
Return codes .....	31
Validity flags .....	32
<b>Chapter 5: Installing and testing the interactive module for the PC platform.....</b>	<b>35</b>
Viewing the content tables.....	35
<b>Chapter 6: Data entry for the PC platform .....</b>	<b>37</b>
Data entry fields .....	38

Menu items.....	42
Command buttons and tabs .....	42
Error messages .....	43
<b>Chapter 7: Program output for the PC platform.....</b>	<b>45</b>
Viewing an output report .....	45
Output report fields.....	47
Saving an output report.....	48
<b>Appendix A: HHGS overview of logic .....</b>	<b>49</b>
<b>Appendix B: Clinical group assignment .....</b>	<b>53</b>
<b>Appendix C: Date Validation &amp; Claim Span logic.....</b>	<b>55</b>
<b>Appendix D: Grouper Call Example .....</b>	<b>57</b>

# Chapter 1: Summary of changes

Modifications made to this new release v05.0.24 January 2024 of the Home Health Grouper Software (HHGS) are summarized in the following sections.

## Software

The following tables impacting grouping logic and HIPPS code assignments are updated effective January 1, 2024. Refer to the Summary of Data Changes document accompanying the software to review the details related to table changes.

- **Comorbidity Subgroup Changes:** updates to the list of comorbidity groups and those identified for low comorbidity adjustment
- **Comorbidity Subgroup Interaction Changes:** updates to the list of comorbidity interactions and those identified for high comorbidity adjustment
- **Functional Impairment Response Changes:** updates to point values for specified functional impairment responses
- **Clinical Group Threshold Changes:** updates to threshold value ranges for Clinical Groups

## Software Logic and Interface Changes

- There are no software logic or interface changes for v05.0.24.

## Grouper tables

The following new Grouper tables have been modified:

- **Comorbidity\_Groups:** additions and deletions of comorbidity groups and modifications to low comorbidity adjustment flag for subgroups
- **Comorbidity\_Interactions:** additions and deletions of comorbidity interactions
- **FI\_Responses:** updated point values for specific functional impairments
- **Clinical\_Groups:** updated threshold value ranges for Clinical Groups

## Documentation

- Modified the grouper version references to include new version 05.0.24 (Table 1)

- Modified the Principal diagnosis code Validity check section to include additional information for spanning claims
- Updated the functional Impairment scoring table (Table 5)
- Updated the thresholds for functional impairment level by clinical group table (Table 6)
- Updated the low comorbidity adjustment subgroups table (Table 7)
- Updated the high comorbidity adjustment interaction subgroup table (Table 8)
- Updated the Chapter 6 screenshot for Claim input tab for data entry (Figure 1)
- Included the Through Date in the Chapter 6 Claim detail and diagnosis code fields table (Table 13)

## Frequently asked questions

For a list of frequently asked questions and answers related to HHGS, please reference the FAQ document located on the CMS website at:

<https://www.cms.gov/files/document/home-health-pc-grouper-faqs.pdf>

# Chapter 2: Introduction to the Home Health Grouper Software (HHGS)

Prior to January 1, 2020, home health claims were processed using the Home Health Prospective Payment System (HH-PPS) under a 60-day episode of care and a 60-day case-mix adjusted payment amount. As a result of the Affordable Care Act of 2010, the HH-PPS was reviewed by the Centers for Medicare & Medicaid Services (CMS) who determined the need for payment reform for home health. This reform was made into law under the Bipartisan Budget Act of 2018. Effective January 1, 2020, Medicare provides payment for home health care to home health agencies (HHAs) under the HH-PPS by means of a national, standardized 30-day period of care payment rate calculated by the Home Health Grouper Software. The Home Health Grouper Software was developed using the Patient-Driven Groupings Model (PDGM). Final regulations and approval for this model and the update to HH-PPS using the Home Health Grouper Software were published in the CY 2019 Federal Register.

Effective January 1, 2020, the Home Health Grouper Software (HHGS) categorizes each home health period of care into meaningful payment groups called Home Health Resource Groups (HHRGs). Each 30-day period is grouped into one of 432 possible HHRGs using five clinical variables.

- **Referral source:** Indicates whether the patient is being admitted for home health care from an institutional or community source.
- **Period timing:** Indicates whether a period of care is an initial home health event classified as early, or a subsequent home health event classified as late.
- **Clinical grouping:** Indicates the primary reason a patient is receiving home health services.
- **Functional impairment level:** Indicates the patient's level of functional impairment which is identified by responses to specific items from the home health Outcome and Assessment Information Set (OASIS).
- **Comorbidity adjustment:** Indicates if there are certain comorbid conditions present that would affect the resource usage needed to treat the patient. Comorbid conditions are commonly reported as secondary diagnoses submitted on a home health claim.

HHAs are required to use the 10th version of the International Classification of Diseases (ICD-10-CM) for reporting the principal and secondary diagnoses which are used in the HHGS for clinical grouping assignment. Although procedure codes are not used in producing HHRGs, agencies are required to use HCPCS procedure codes when billing for home health services.

## Versions of the software

The following table lists the versions and date ranges of the Home Health Grouper Software. As new versions are added, this table will be updated to indicate the version of the program in the current release. The first level of the version number denotes the grouper version number and

the third level denotes the effective year of the release. The second level denotes the number of revisions since the original release. For example, 01.0.20 would be the first release in January 2020, and 02.0.20 would be the first release in October 2020.

**Table 1. Program versions**

Version	Effective date range
05.0.24	01/01/2024 - 12/31/2033*
04.2.23	10/01/2023 - 12/31/2023
04.1.23	04/01/2023 - 09/30/2023
04.0.23	01/01/2023 - 03/31/2023
03.3.22	10/01/2022 - 12/31/2022
03.2.22	04/01/2022 - 09/30/2022
03.1.22	01/01/2022 - 03/31/2022
03.0.21	10/01/2021 - 12/31/2021
02.1.21	01/01/2021 - 09/30/2021
02.0.20	10/01/2020 - 12/31/2020
01.1.20	04/01/2020 - 09/30/2020
01.0.20	01/01/2020 - 03/31/2020

\* The ending date of the current version will be modified to the actual ending date at the time of the next release.

## Purpose of the HHGS functionality

The Home Health Grouper Software (HHGS) uses clinical information submitted on home health claims to categorize patients into clinical categories and provide adjustments based on a patient's resource needs. After the software has determined the categorization and adjustment, a Health Insurance Prospective Payment System (HIPPS) code is produced, upon which payment is established under the Home Health PPS Pricer program.

## HIPPS code generation

The Home Health Grouper Software (HHGS) outputs a HIPPS code using a distinct five-position, alphanumeric code. A HIPPS code represents a set of patient characteristics or case-mix on which payment determinations are made.

The following five positions are the clinical characteristics which make up a HIPPS rate code:

- The first position is a numeric value representing the home health referral source and the period timing present on a home health claim.
- The second position is an alphabetic character representing the clinical group assignment based on the principal diagnosis (pdx) reported on a home health claim.
- The third position is an alphabetic character representing a patient's functional impairment level score based on responses to certain items in the OASIS assessment record.
- The fourth position is a numeric value representing an adjustment due to comorbid diagnoses submitted as secondary diagnoses on a home health claim.
- The fifth position is a numeric place holder value for potential future use.

The following table includes all values used in the generation of a HIPPS code. For example, if HIPPS code 1HA21 represents a patient that is referred from a community source with a period timing of "early," the primary need for home health care is cardiac related, a low functional level, and with a comorbid condition present.

**Table 2. HIPPS code values**

Position	Description	Valid values
1	Source and timing	1 - Community Early 2 - Institutional Early 3 - Community Late 4 - Institutional Late
2	Clinical group	A - MMTA Other B - Neurological Rehab C - Wounds D - Complex Nursing E - Musculoskeletal Rehab F - Behavioral Health G - MMTA – Surgical Aftercare H - MMTA – Cardiac I - MMTA – Endocrine J - MMTA – Gastrointestinal/ Genitourinary K - MMTA – Infectious L - MMTA – Respiratory
3	Functional level	A - Low B - Medium C - High
4	Comorbidity	1 - No 2 - Low 3 - High
5	Placeholder	1 - placeholder

## Period timing and referral source

Effective January 1, 2020, a home health period of care is defined as a 30-day unit of payment. The Home Health Grouper Software (HHGS) utilizes period timing to distinguish variations in resource needs. The first 30-day period typically requires more resources to treat a patient in comparison to a subsequent 30-day period. Each period is defined as either “early” or “late”, where the first 30-day period in a sequence of periods is always considered “early” and all subsequent periods of care after the first 30 days are considered “late.” A new 30-day period of care cannot be considered early unless there is a gap of more than 60 days between the end of the last period and the start of the new period.

The referral source in combination with an “early” or “late” period of care determines the first position of the HIPPS code. A referral source is defined as “institutional” or “community” based on the healthcare setting utilized in the 14 days prior to the home health admission. An “institutional” admission includes any inpatient acute care hospitalizations, skilled nursing facility (SNF) stays, inpatient rehabilitation facility (IRF) stays, inpatient psychiatric facility (IPF) stays, or long-term care hospital (LTCH) stays. “Institutional” admissions also include acute care stays that occurred during a previous 30-day home health period of care that is within 14 days prior to the subsequent, contiguous 30-day period of care where the patient was not discharged and readmitted (in other words, the Admission date and the From date for the subsequent 30-day period of care do not match). In home health claims processing, the presence of Occurrence Code 61 (Acute care hospital discharge) or 62 (SNF, IRF, LTCH, or IPF discharge) determines if the referral source is institutional. All other admission types are considered “community” admissions.

## Claim Date Spanning

Effective October 1, 2023, both the From and Through date fields are required when reporting a HH period of care in the grouper in order to monitor the reported principal diagnosis over a quarter boundary date.

For claims dated April 1, 2023, through September 30, 2023, in order to recognize claims that may be submitted for a Home Health period of care that span a quarter boundary date where the grouper version changes (i.e., April, October, and/or January), the HHGS calculates the claim Through date by adding 29 days to the From date in order to produce a 30-day Home Health period of care. This calculation is performed in order to monitor the reported principal diagnosis over a quarter boundary date.

**Note:** The monitoring of the principal diagnosis code for the quarter boundary does not impact the Functional Impairment scoring, which continues to be based on the from date of the claim.

## Clinical group assignment

The Home Health Grouper Software (HHGS) evaluates each 30-day period of care for clinical group assignment based on the principal diagnosis (pdx) reported on the home health claim. The clinical group assignment identifies the primary reason for home health care for each period. Although all diagnosis codes are used for grouping and validation purposes, some diagnosis codes are not assigned to a clinical group and should not be reported as the principal diagnosis. If a diagnosis code is not assigned to a clinical group, it is either not a condition that would be primarily treated in a home health setting, the code could be identified as an unspecified diagnosis, an unacceptable diagnosis, or the diagnosis code should not be reported as a principal diagnosis according to ICD-10-CM coding guidelines such as a diagnosis code that is identified as an External Cause of Injury (ECOI), or as a Manifestation code. (Please refer to the associated flag assignments in the Diagnosis\_Codes table, where applicable.)

Effective April 1, 2023, if the diagnosis code reported as the principal diagnosis is applicable to any of the previously mentioned conditions, the HHGS generates return code 03 (page 31) with a validity flag to provide further reasoning as to why the reported principal diagnosis is causing an error. Additionally, in the instance the diagnosis code reported does not have a clinical group assigned (identified in the Diagnosis\_Codes table as clinical group “NA”) and there are no other conditions present to identify why the diagnosis code has not been assigned to a clinical group, the HHGS generates error return code 05 (page 31). When either return code 03 or 05 are returned, no HIPPS code is generated to indicate the claim should be returned to the provider for more definitive coding.

*Example #1: Unacceptable Pdx* - The principal diagnosis reported is identified in the Diagnosis\_Codes report table as an “Unacceptable Pdx” (identified by a value of “1” in the Unacceptable Pdx column). The HHGS generates RC 03 for the principal diagnosis error and validity flag 1 (page 32) to provide further reasoning for the error. In this case, the code is unacceptable and should not be reported as the principal diagnosis.

*Example #2: Code First with condition (Information Only)* - The principal diagnosis reported is identified in the Diagnosis\_Codes report table as code first (identified by a value greater than 0) and has a secondary diagnosis on the claim that may need to be sequenced first according to the ICD-10-CM guidelines. The HHGS software generates validity flag 5 (page 32), with a message to the user to verify that the proper sequencing of diagnosis codes needs review. NOTE: If a code first code is reported as the principal diagnosis and is not identified for any other applicable principal diagnosis errors, and there is no secondary diagnosis code(s) reported, validity flag 5 is not returned.

**Table 3. Clinical groups**

Group ID	Group name	Primary reason for home health encounter
A	MMTA - Other	Assessment, evaluation, teaching, and medication management for a variety of medical and surgical conditions not classified in one of the previously listed groups

Group ID	Group name	Primary reason for home health encounter
B	Neurological/Stroke Rehabilitation	Therapy (physical, occupational, or speech) for a neurological condition or stroke
C	Wounds - Post-Op Wound Aftercare and Skin/Non-Surgical Wound Care	Assessment, treatment, and evaluation of a surgical wound(s); assessment, treatment, and evaluation of non-surgical wounds, ulcers, burns, and other lesions
D	Complex Nursing Interventions	Assessment, treatment, and evaluation of complex medical and surgical conditions including IV, TPN, enteral nutrition, ventilator, and ostomies
E	Musculoskeletal Rehabilitation	Therapy (physical, occupational, or speech) for a musculoskeletal condition
F	Behavioral Health Care	Assessment, treatment, and evaluation of psychiatric conditions and substance use disorders
G	MMTA - Surgical Aftercare	Assessment, evaluation, teaching, and medication management for surgical aftercare
H	MMTA - Cardiac/Circulatory	Assessment, evaluation, teaching, and medication management for cardiac or other circulatory related conditions
I	MMTA - Endocrine	Assessment, evaluation, teaching, and medication management for endocrine related conditions
J	MMTA - Gastrointestinal/Genitourinary	Assessment, evaluation, teaching, and medication management for gastrointestinal or genitourinary related conditions
K	MMTA - Infectious Disease/Neoplasms/Blood-forming Diseases	Assessment, evaluation, teaching, and medication management for conditions related to infectious diseases, neoplasms, and blood-forming diseases
L	MMTA - Respiratory	Assessment, evaluation, teaching, and medication management for respiratory related conditions

### *Principal diagnosis code Validity check*

In the instance that a claim is submitted with a from date that spans a quarter boundary in which a grouper version has changed (e.g., 09/29, previous quarter/version boundary through 10/01 or after, new quarter/version boundary), and a principal diagnosis code that is invalid based on the from date is reported but has a valid predecessor diagnosis code, the reported invalid principal diagnosis code is substituted with the valid predecessor code and treated as the principal diagnosis. Since the valid predecessor code is substituted in place of the invalid

reported principal diagnosis code, no error return code, to indicate that the principal diagnosis code is invalid is generated.

Note: In the GUI interface of the PC product, when the principal diagnosis code reported is not valid as of the claim's reported from date, but is valid during the dates of the spanning claim, upon entry, the grouper shows the code (as of the from date) as being invalid however, since the code is actually valid during the dates that the claim spans, grouping still occurs and you will not see an error in component output or detailed report because the predecessor is used instead. A note is provided in the Detailed Report output indicating when the predecessor DX was used for the spanning claim.

However, in the instance that the principal diagnosis code reported is invalid and the claim does not span a quarter boundary where a grouper version changes, return code 03 (page [31](#)) and validity flag 6 (Invalid principal diagnosis) (page [32](#)) are generated on output.

**Note:** This validity check is only performed for the principal diagnosis code. If a reported secondary diagnosis code is invalid, it is ignored by the grouper for any additional processing.

*Example #1:* A claim is submitted with a from date of 09/21/2023 (spans to October grouper version with new diagnosis code updates) and has a reported principal diagnosis code which is valid for October 2023 but not valid with the previous diagnosis code update in April 2023. The HHGS substitutes the reported principal diagnosis code with the valid predecessor diagnosis code to determine the clinical group assignment and no return code is generated.

*Example #2:* A claim is submitted with a from date of 03/01/2023 and has a reported principal diagnosis code that is not valid until 04/01/2023. Since the claim does not span (From date + 29 days= 03/30/2023) into the April quarterly version boundary in which the grouper version changes to include those diagnosis code updates, the principal diagnosis code reported is invalid and return code 03 and validity flag 6 are generated on output.

### *Primary Awarding*

There is an instance in which a valid principal diagnosis is not used in clinical group assignment; when a "Primary Awarding" diagnosis code is reported in the first secondary diagnosis position. If a diagnosis code is identified as Primary Awarding, it is treated as the principal diagnosis and is used to determine the clinical group assignment. The unused principal diagnosis is excluded from all additional processing, such as comorbidity adjustment. For example, if diagnosis code Z45.2 is reported in the first secondary position on a HH claim, the reported principal diagnosis is not used. Diagnosis code Z45.2 is identified as a primary awarding diagnosis and is promoted for use as the principal diagnosis code and is used to determine the clinical group assignment. Refer to the Diagnosis\_Codes table for a full code list that includes indicators for "Primary Awarding" diagnosis codes.

## **Functional impairment elements and scoring**

The functional impairment status of a patient is used in determining an appropriate case-mix adjustment, which is accomplished by evaluating a defined set of responses to questions

submitted on the Outcome and Assessment Information Set (OASIS). The inability to perform activities of daily living (ADL) directly affects the amount of resources that are required to appropriately treat a patient. Therefore, the OASIS elements listed in the following table are used to determine the function level of a patient, as these elements directly address a person's ADL. All other OASIS elements are not used by the Home Health Grouper Software (HHGS).

Note that field element M1033: Risk of Hospitalization is separated into 10 fields on input to the HHGS. This requires each of the 10 response values for M1033 to be submitted on input with a valid value of 0 (no) or 1 (yes) depending on OASIS response values 1-10 being checked for element M1033. For example, if response values 3,4,5, and 6 were checked for M1033 on the OASIS, then the input value to the HHGS for the third, fourth, fifth, and sixth M1033 element is 1 and all other M1033 element values are 0. If response value 10 is 1 (yes) all other response values for M1033 must be 0 (no); otherwise, the HHGS generates return code 7 to indicate an error in processing M1033.

The following table represents the HHGS elements used for functional impairment scoring as well as the valid values for scoring each element, which are determined by response values submitted on the OASIS.

**Table 4. Functional impairment elements**

<b>Element name</b>	<b>Valid values</b>
M1033-HOSP-RISK-HSTRY-FALLS	History of falls (two or more falls - or any fall with an injury - in the past 12 months) 0 - No 1 - Yes
M1033-HOSP-RISK-WEIGHT-LOSS	Unintentional weight loss of a total of 10 pounds or more in the past 12 months 0 - No 1 - Yes
M1033-HOSP-RISK-MLTPL-HOSPZTN	Multiple hospitalizations (two or more) in the past 6 months 0 - No 1 - Yes
M1033-HOSP-RISK-MLTPL-ED-VISIT	Multiple emergency department visits (two or more) in the past six months 0 - No 1 - Yes
M1033-HOSP-RISK-MNTL-BHV-DCLN	Decline in mental, emotional, or behavioral status in the past three months 0 - No 1 - Yes

Element name	Valid values
M1033-HOSP-RISK-COMPLIANCE	Reported or observed history of difficulty complying with any medical instructions (for example, medications, diet, exercise) in the past three months 0 - No 1 - Yes
M1033-HOSP-RISK-5PLUS-MDCTN	Currently taking five or more medications 0 - No 1 - Yes
M1033-HOSP-RISK-CRNT-EXHSTN	Currently reports exhaustion 0 - No 1 - Yes
M1033-HOSP-RISK-OTHR-RISK	Other risk(s) not listed in 1 - 8 0 - No 1 - Yes
M1033-HOSP-RISK-NONE-ABOVE	None of the above 0 - No 1 - Yes Note: If input value is 1 (Yes) all other input values for M1033 must be 0 (No).
M1800-CRNT-GROOMING	00 - Able to groom self-unaided, with or without the use of assistive devices or adapted methods. 01 - Grooming utensils must be placed within reach before able to complete grooming activities. 02 - Someone must assist the patient to groom self. 03 - Patient depends entirely upon someone else for grooming needs.
M1810-CRNT-DRESS-UPPER	00 - Able to get clothes out of closets and drawers, put them on and remove them from the upper body without assistance. 01 - Able to dress upper body without assistance if clothing is laid out or handed to the patient. 02 - Someone must help the patient put on upper body clothing. 03 - Patient depends entirely upon another person to dress the upper body.

Element name	Valid values
M1820-CRNT-DRESS-LOWER	<p>00 - Able to obtain, put on, and remove clothing and shoes without assistance.</p> <p>01 - Able to dress lower body without assistance if clothing and shoes are laid out or handed to the patient.</p> <p>02 - Someone must help the patient put on undergarments, slacks, socks or nylons, and shoes.</p> <p>03 - Patient depends entirely upon another person to dress lower body.</p>
M1830-CRNT-BATHG	<p>00 - Able to bathe self in shower or tub independently, including getting in and out of tub/shower.</p> <p>01 - With the use of devices, is able to bathe self in shower or tub independently, including getting in and out of the tub/shower.</p> <p>02 - Able to bathe in shower or tub with the intermittent assistance of another person: (a) for intermittent supervision or encouragement or reminders, OR (b) to get in and out of the shower or tub, OR (c) for washing difficult-to-reach areas.</p> <p>03 - Able to participate in bathing self in shower or tub but requires presence of another person throughout the bath for assistance or supervision.</p> <p>04 - Unable to use the shower or tub, but able to bathe self independently with or without the use of devices at the sink, in chair, or on commode.</p> <p>05 - Unable to use the shower or tub, but able to participate in bathing self in bed, at the sink, in bedside chair, or on commode, with the assistance or supervision of another person.</p> <p>06 - Unable to participate effectively in bathing and is bathed totally by another person.</p>
M1840-CRNT-TOILTG	<p>00 - Able to get to and from the toilet and transfer independently with or without a device.</p> <p>01 - When reminded, assisted, or supervised by another person, able to get to and from the toilet and transfer.</p> <p>02 - Unable to get to and from the toilet but is able to use a bedside commode (with or without assistance).</p> <p>03 - Unable to get to and from the toilet or bedside commode, but is able to use a bedpan/urinal independently.</p> <p>04 - Is totally dependent in toileting.</p>

Element name	Valid values
M1850-CRNT-TRNSFRNG	00 - Able to independently transfer. 01 - Able to transfer with minimal human assistance or with use of an assistive device. 02 - Able to bear weight and pivot during the transfer process but unable to transfer self. 03 - Unable to transfer self and is unable to bear weight or pivot when transferred by another person. 04 - Bedfast, unable to transfer but is able to turn and position self in bed. 05 - Bedfast, unable to transfer and is unable to turn and position self.
M1860-CRNT-AMBLTN	00 - Able to independently walk on even and uneven surfaces and negotiate stairs with or without railings (specifically, needs no human assistance or assistive device). 01 - With the use of a one-handed device (for example, cane, single crutch, hemi-walker), able to independently walk on even and uneven surfaces and negotiate stairs with or without railings. 02 - Requires use of a two-handed device (for example, walker or crutches) to walk alone on a level surface and/or requires human supervision or assistance to negotiate stairs or steps or uneven surfaces. 03 - Able to walk only with the supervision or assistance of another person at all times. 04 - Chairfast, unable to ambulate but is able to wheel self independently. 05 - Chairfast, unable to ambulate and is unable to wheel self. 06 - Bedfast, unable to ambulate or be up in a chair.

### Functional impairment scoring

Each OASIS element response is assigned awarding points that reflect resource needs with higher intensity needs being assigned a greater number of points. To determine an overall functional level score, the HHGS sums up the total points awarded for each element. The following table represents each element response and the points awarded for functional impairment scoring. Note that Element M1033: Risk of Hospitalization only awards points when at least four or more items from element M1033 (1-7) are selected with Yes.

**Table 5. Functional impairment scoring**

<b>Elements</b>	<b>Response values</b>	<b>Points</b>
M1033: Risk of Hospitalization	1-7	If four or more items have a Yes response, award 11 points
M1033: Risk of Hospitalization	8-10	0
M1800: Grooming	0	0
M1800: Grooming	1	0
M1800: Grooming	2	3
M1800: Grooming	3	3
M1810: Current Ability to Dress Upper Body	0	0
M1810: Current Ability to Dress Upper Body	1	0
M1810: Current Ability to Dress Upper Body	2	5
M1810: Current Ability to Dress Upper Body	3	5
M1820: Current Ability to Dress Lower Body	0	0
M1820: Current Ability to Dress Lower Body	1	0
M1820: Current Ability to Dress Lower Body	2	3
M1820: Current Ability to Dress Lower Body	3	11
M1830: Bathing	0	0
M1830: Bathing	1	0
M1830: Bathing	2	0
M1830: Bathing	3	7
M1830: Bathing	4	7
M1830: Bathing	5	14
M1830: Bathing	6	14
M1840: Toilet Transferring	0	0
M1840: Toilet Transferring	1	0
M1840: Toilet Transferring	2	6
M1840: Toilet Transferring	3	6
M1840: Toilet Transferring	4	6
M1850: Transferring	0	0
M1850: Transferring	1	3

Elements	Response values	Points
M1850: Transferring	2	6
M1850: Transferring	3	6
M1850: Transferring	4	6
M1850: Transferring	5	6
M1860: Ambulation and Locomotion	0	0
M1860: Ambulation and Locomotion	1	0
M1860: Ambulation and Locomotion	2	6
M1860: Ambulation and Locomotion	3	4
M1860: Ambulation and Locomotion	4	20
M1860: Ambulation and Locomotion	5	20
M1860: Ambulation and Locomotion	6	20

### Thresholds for functional level

After the overall functional score has been calculated, the HHGS assigns a functional impairment level using the clinical group that was assigned by the principal diagnosis. Each clinical group maintains a threshold of point ranges that determines if the functional impairment level is low, medium, or high. For example, if the clinical group assigned is Musculoskeletal Rehabilitation, the second position of the HIPPS is "E." To determine the third value of the HIPPS, refer to the threshold of total points by functional impairment level for the Musculoskeletal Rehabilitation clinical group (see following table). If the overall function score is 42 then this score falls into the range of points for a medium functional impairment level and the third value of the HIPPS is "B."

The following table represents the functional score thresholds which determine the level of impairment applicable to each clinical group.

**Table 6. Thresholds for functional impairment level by clinical group**

Clinical group	Functional impairment level	Total points
Behavioral Health	Low	0-28
Behavioral Health	Medium	29-41
Behavioral Health	High	42+
Complex Nursing Interventions	Low	0-28
Complex Nursing Interventions	Medium	29-52
Complex Nursing Interventions	High	53+

<b>Clinical group</b>	<b>Functional impairment level</b>	<b>Total points</b>
Musculoskeletal Rehabilitation	Low	0-28
Musculoskeletal Rehabilitation	Medium	29-41
Musculoskeletal Rehabilitation	High	42+
Neurological Rehabilitation	Low	0-34
Neurological Rehabilitation	Medium	35-49
Neurological Rehabilitation	High	50+
Wound	Low	0-28
Wound	Medium	29-49
Wound	High	50+
MMTA - Surgical Aftercare	Low	0-28
MMTA - Surgical Aftercare	Medium	29-39
MMTA - Surgical Aftercare	High	44+
MMTA - Cardiac and Circulatory	Low	0-31
MMTA - Cardiac and Circulatory	Medium	32-43
MMTA - Cardiac and Circulatory	High	40+
MMTA - Endocrine	Low	0-27
MMTA - Endocrine	Medium	28-39
MMTA - Endocrine	High	40+
MMTA - Gastrointestinal tract and Genitourinary system	Low	0-31
MMTA - Gastrointestinal tract and Genitourinary system	Medium	32-46
MMTA - Gastrointestinal tract and Genitourinary system	High	47+
MMTA - Infectious Disease, Neoplasms, and Blood-Forming Diseases	Low	0-28
MMTA - Infectious Disease, Neoplasms, and Blood-Forming Diseases	Medium	29-43
MMTA - Infectious Disease, Neoplasms, and Blood-Forming Diseases	High	44+

Clinical group	Functional impairment level	Total points
MMTA - Respiratory	Low	0-29
MMTA - Respiratory	Medium	30-44
MMTA - Respiratory	High	45+
MMTA - Other	Low	0-28
MMTA - Other	Medium	29-41
MMTA - Other	High	42+

## Comorbidity adjustments

To further provide an appropriate case-mix adjustment, the Home Health Grouper Software (HHGS) assigns a comorbidity adjustment when a patient has one or more defined comorbid conditions present. A comorbidity refers to the presence of more than one diagnosis or condition occurring to an individual at the same time. An adjustment is needed because the presence of a comorbid condition likely increases the resource needs to treat the patient.

Comorbidity diagnoses are assigned in the HHGS to comorbidity subgroups which are defined by CMS as statistically and clinically significant for case-mix adjustments. The comorbidity subgroups identified in the following sections are used to determine either a low comorbidity adjustment or high comorbidity adjustment. The low comorbidity adjustment is applicable when at least one valid secondary diagnosis is a comorbidity diagnosis assigned to a subgroup that is applicable for a low comorbidity adjustment. The high comorbidity adjustment is applied when there are two or more valid comorbidity diagnoses present that are associated with higher resource use when reported together rather than reported individually. Comorbidity subgroups that are associated with higher resource in the HHGS are considered comorbidity subgroup interactions. If two or more reported comorbidity diagnoses are assigned to comorbidity subgroups that are interactions, a high comorbidity adjustment is applicable.

Only one comorbidity adjustment is applied per claim, even if two or more comorbidity adjustments are applicable. If conditions for both a high and low adjustment are present, the high comorbidity adjustment takes precedence. The comorbidity adjustment of low or high is not applied when the comorbidity diagnosis and the principal diagnosis are within the same sub-classification in the ICD-10-CM chapter definitions because the conditions are closely related and do not require additional resource use. Additionally, an invalid diagnosis code reported as a secondary diagnosis is ignored if conditions are present for either a low or high comorbidity adjustment; no return code or error condition applies.

If there are no conditions present for comorbidity due to all secondary diagnosis codes reported not being assigned to a comorbidity subgroup for either a low comorbidity adjustment or a high comorbidity interaction, the HIPPS position value is 1, indicating that no Comorbidity adjustment applies.

**Low comorbidity adjustment subgroups**

The HHGS applies a low comorbidity adjustment if a home health claim contains a secondary diagnosis assigned to one of the subgroups listed in the following table.

Note: The following table lists only comorbidity adjustment subgroups eligible for low comorbidity adjustment. For a comprehensive list of all comorbidity subgroups, see the "Comorbidity Groups" table that accompanies the software.

**Table 7. Low comorbidity adjustment subgroups**

<b>Comorbidity subgroup</b>	<b>Subgroup description</b>
Cerebral_4	Sequelae of Cerebrovascular Diseases, Includes Cerebral Atherosclerosis and Stroke Sequelae
Circulatory_10	Varicose Veins and Lymphedema
Circulatory_2	Hemolytic, Aplastic, and Other Anemias
Circulatory_7	Atherosclerosis, includes Peripheral Vascular Disease, Aortic Aneurysms and Hypotension
Circulatory_9	Other Venous Embolism and Thrombosis
Endocrine_4	Other Combined Immunodeficiencies and Malnutrition, includes graft-versus-host-disease
Heart_10	Dysrhythmias, includes Atrial fibrillation and Atrial flutter
Heart_11	Heart Failure
Neoplasms_1	Malignant neoplasms of Lip, Oral cavity and Pharynx, includes Head and Neck Cancers
Neoplasms_17	Secondary Neoplasms of Respiratory and GI Systems
Neoplasms_18	Secondary neoplasms of urinary and reproductive systems, skin, brain, and bone
Neoplasms_2	Malignant neoplasms of Digestive Organs, includes Gastrointestinal Cancers
Neurological_10	Diabetes with neuropathy
Neurological_11	Disease of the Macula and Blindness/Low Vision
Neurological_12	Nondiabetic neuropathy
Neurological_4	Alzheimer's disease and related dementias
Neurological_5	Spinal Muscular Atrophy, Systemic atrophy and Motor Neuron Disease
Neurological_7	Paraplegia, Hemiplegia and Quadriplegia
Respiratory_10	2019 Novel Coronavirus

<b>Comorbidity subgroup</b>	<b>Subgroup description</b>
Skin_1	Cutaneous Abscess, Cellulitis, and Lymphangitis
Skin_3	Diseases of arteries, arterioles, and capillaries with ulceration and non-pressure, chronic ulcers
Skin_4	Stages Two through Four and Unstageable pressure ulcers by site

### *High comorbidity adjustment interaction subgroups*

In determining if a high comorbidity adjustment is applicable, the HHGS evaluates if there are at least two secondary diagnoses assigned to comorbidity subgroups that are identified as interactions. If an interaction of subgroups is present and meets the requirements for assignment, then a high comorbidity adjustment is applied.

Note: The following table lists the comorbidity interactions that are eligible for a high comorbidity adjustment. For descriptions of the comorbidity groups, consult the Comorbidity\_Groups table that accompanies the software.

**Table 8. High comorbidity adjustment interaction subgroups**

<b>Interaction</b>	<b>Comorbidity subgroup</b>	<b>Comorbidity subgroup</b>
1	Behavioral_2	Circulatory_10
2	Behavioral_2	Neurological_5
3	Behavioral_2	Neurological_7
4	Behavioral_4	Neurological_5
5	Behavioral_4	Skin_3
6	Behavioral_4	Skin_4
7	Behavioral_5	Circulatory_10
8	Behavioral_5	Neurological_5
9	Behavioral_5	Neurological_7
10	Cerebral_4	Circulatory_2
11	Cerebral_4	Circulatory_7
12	Cerebral_4	Neurological_10
13	Cerebral_4	Neurological_11
14	Cerebral_4	Respiratory_2
15	Cerebral_4	Respiratory_9

<b>Interaction</b>	<b>Comorbidity subgroup</b>	<b>Comorbidity subgroup</b>
16	Cerebral_4	Skin_3
17	Cerebral_4	Skin_4
18	Circulatory_1	Neurological_7
19	Circulatory_1	Skin_1
20	Circulatory_1	Skin_3
21	Circulatory_2	Neurological_5
22	Circulatory_2	Neurological_7
23	Circulatory_2	Skin_3
24	Circulatory_2	Skin_4
25	Circulatory_4	Neurological_7
26	Circulatory_4	Skin_3
27	Circulatory_4	Skin_4
28	Circulatory_7	Skin_3
29	Circulatory_9	Endocrine_4
30	Circulatory_9	Neurological_10
31	Circulatory_9	Renal_3
32	Circulatory_10	Circulatory_2
33	Circulatory_10	Endocrine_3
34	Circulatory_10	Endocrine_5
35	Circulatory_10	Heart_8
36	Circulatory_10	Musculoskeletal_3
37	Circulatory_10	Neurological_10
38	Circulatory_10	Renal_1
39	Circulatory_10	Renal_3
40	Circulatory_10	Respiratory_9
41	Circulatory_10	Skin_3
42	Endocrine_1	Neurological_5
43	Endocrine_1	Neurological_7
44	Endocrine_1	Skin_3
45	Endocrine_1	Skin_4
46	Endocrine_3	Neurological_5

<b>Interaction</b>	<b>Comorbidity subgroup</b>	<b>Comorbidity subgroup</b>
47	Endocrine_3	Skin_3
48	Endocrine_3	Skin_4
49	Endocrine_4	Neurological_7
50	Endocrine_4	Skin_3
51	Endocrine_4	Skin_4
52	Endocrine_5	Neurological_7
53	Endocrine_5	Skin_3
54	Endocrine_5	Skin_4
55	Heart_8	Skin_3
56	Heart_8	Skin_4
57	Heart_9	Skin_3
58	Heart_9	Skin_4
59	Heart_10	Neoplasms_18
60	Heart_10	Neurological_5
61	Heart_10	Neurological_7
62	Heart_10	Skin_3
63	Heart_10	Skin_4
64	Heart_11	Neurological_7
65	Heart_11	Skin_1
66	Heart_11	Skin_3
67	Heart_11	Skin_4
68	Heart_12	Neurological_5
69	Heart_12	Skin_3
70	Infectious_1	Neurological_5
71	Infectious_1	Neurological_7
72	Infectious_1	Skin_3
73	Infectious_1	Skin_4
74	Musculoskeletal_2	Skin_3
75	Musculoskeletal_3	Skin_3
76	Musculoskeletal_4	Skin_3
77	Neurological_4	Neurological_5

Interaction	Comorbidity subgroup	Comorbidity subgroup
78	Neurological_4	Skin_3
79	Neurological_4	Skin_4
80	Neurological_5	Neurological_7
81	Neurological_5	Renal_1
82	Neurological_5	Respiratory_5
83	Neurological_5	Skin_3
84	Neurological_5	Skin_4
85	Neurological_7	Neurological_8
86	Neurological_7	Renal_3
87	Neurological_7	Respiratory_5
88	Neurological_7	Skin_4
89	Neurological_8	Skin_3
90	Neurological_8	Skin_4
91	Neurological_10	Neurological_5
92	Neurological_10	Skin_3
93	Neurological_10	Skin_4
94	Neurological_11	Skin_3
95	Neurological_12	Neurological_7
96	Neurological_12	Skin_3
97	Neurological_12	Skin_4
98	Renal_1	Skin_3
99	Renal_3	Skin_4
100	Respiratory_5	Skin_4
101	Skin_1	Skin_3
102	Skin_3	Skin_4

## Placeholder

The fifth position of the HIPPS code is represented only as a placeholder for future use.

# Chapter 3: Installing and testing the software for the batch platform

The following procedure explains how to install and test the batch module of the Home Health Grouper Software (HHGS).

## ***Before you begin***

Make sure you have Java® 8 or higher installed on your computer.

## ***To install and test the software***

1. Unzip the Home Health Grouper Software pack to your computer.
2. At the location where you unzipped the files, browse into the 'HomeHealthGrouperSoftware\bin' folder.
3. Run the 'runGrouperTest.bat' file.

By default, the generated results file includes only the output portion of the record.

4. Browse into the 'HomeHealthGrouperSoftware\test' folder.
5. Review the grouping results in the 'TestDataV<VVSYY>\_OUT.txt' file.  
'VVSYY' in the filename represents the HHGS version.

To see an example of how to call the grouper programmatically, please refer to Appendix D.



# Chapter 4: Data processing

The following sections describe the layouts for the input and output data processing.

## Program input

The data elements in the following table are entered in the Home Health Grouper Software (HHGS) for claim processing. All diagnoses are left-justified in the first seven characters of an eight-character field with the POA indicator occupying the eighth character. Unused characters in the diagnosis field must be blank.

**Table 9. Input format**

Field Name	Pos	Len	Occ	Source	Values	Description
Claim ID	1	24	1	UB-04	Alphanumeric	Patient Claim ID
From Date	25	8	1	UB-04	Date: YYYYMMDD	Claim From Date
Period Timing	33	1	1	UB-04	1 - Early 2 - Late	Defined as Early if the claim From and Admission dates match or if Medicare systems determine period is early; otherwise late
Referral Source	34	2	1	UB-04	Alphanumeric	Occurrence code 61 or 62 determines Institutional referral source otherwise any other value defaults to Community referral source
Principal Diagnosis	36	8	1	UB-04	8 characters (includes POA 8th char)	ICD-10-CM principal diagnosis; POA is included as input but does not impact grouping results
Secondary Diagnosis	44	8	24	UB-04	8 characters (includes POA 8th char)	ICD-10-CM secondary diagnosis; POA is included as input but does not impact grouping results
<i>Filler - Item 1</i>	236	8	5	N/A	N/A	<i>For future diagnosis use</i>
M1033-HOSP-RISK-HSTRY-FALLS	276	1	1	OASIS	0 - No 1 - Yes	Risk for hospitalization – falls
M1033-HOSP-RISK-WEIGHT-LOSS	277	1	1	OASIS	0 - No 1 - Yes	Risk for hospitalization – weight loss
M1033-HOSP-RISK-MLTPL-HOSPZTN	278	1	1	OASIS	0 - No 1 - Yes	Risk for hospitalization – multiple hospitalizations

Field Name	Pos	Len	Occ	Source	Values	Description
M1033-HOSP-RISK-MLTPL-ED-VISIT	279	1	1	OASIS	0 - No 1 - Yes	Risk for hospitalization – multiple emergency department visits
M1033-HOSP-RISK-MNTL-BHV-DCLN	280	1	1	OASIS	0 - No 1 - Yes	Risk for hospitalization – mental behavior decline
M1033-HOSP-RISK-COMPLIANCE	281	1	1	OASIS	0 - No 1 - Yes	Risk for hospitalization – compliance
M1033-HOSP-RISK-5PLUS-MDCTN	282	1	1	OASIS	0 - No 1 - Yes	Risk for hospitalization – currently taking five or more medications
M1033-HOSP-RISK-CRNT-EXHSTN	283	1	1	OASIS	0 - No 1 - Yes	Risk for hospitalization – exhaustion
M1033-HOSP-RISK-OTHR-RISK	284	1	1	OASIS	0 - No 1 - Yes	Risk for hospitalization – other risks
M1033-HOSP-RISK-NONE-ABOVE	285	1	1	OASIS	0 - No 1 - Yes	Risk for hospitalization – none of the above. If the input value is 1 then all other M1033 input values must be 0.
M1800-CRNT-GROOMING	286	2	1	OASIS	00, 01, 02, 03	Grooming
M1810-CRNT-DRESS-UPPER	288	2	1	OASIS	00, 01, 02, 03	Dress upper body
M1820-CRNT-DRESS-LOWER	290	2	1	OASIS	00, 01, 02, 03	Dress lower body
M1830-CRNT-BATHG	292	2	1	OASIS	00, 01, 02, 03, 04, 05, 06	Bathing
M1840-CRNT-TOILTG	294	2	1	OASIS	00, 01, 02, 03, 04	Toileting
M1850-CRNT-TRNSFRNG	296	2	1	OASIS	00, 01, 02, 03, 04, 05	Transferring
M1860-CRNT-AMBLTN	298	2	1	OASIS	00, 01, 02, 03, 04, 05, 06	Ambulation
<i>FILLER</i>	<i>300-349</i>	<i>50</i>	<i>1</i>	<i>N/A</i>	<i>N/A</i>	<i>For future use</i>
Through Date	350	8	1	UB-04	Date: YYYYMMDD	Claim Through Date
<i>FILLER</i>	<i>358-599</i>	<i>242</i>	<i>1</i>	<i>N/A</i>	<i>N/A</i>	<i>For future use</i>
<i>FILLER</i>	<i>600</i>	<i>1</i>	<i>1</i>	<i>N/A</i>	<i>Y = Internal interface debug</i>	<i>For internal use only</i>

## Program output

The data elements shown in the following table are returned from the Home Health Grouper Software (HHGS).

**Table 10. Output format**

Field ID	Field name	Pos	Len	Occ	Values	Description
26	Version Used	601	7	1	Ex. January 2020 version is 01.0.20. XX. = Grouper version number X. = Sequential release number XX = Year	Version defining the grouper used to produce the HIPPS code based on From Date passed as input
27	HIPPS Code	608	5	1	1st position = Period Timing and Referral Source (1 - 4) 2nd position = Clinical Group (A-L) 3rd position = Functional Impairment Level (A, B or C) 4th position = Comorbidity Present (1, 2, 3) 5th position = Placeholder (1)	Five-digit alphanumeric code defining grouping results
28	<i>Validity Flag</i>	<i>613</i>	<i>2</i>	<i>1</i>	00-99	Provides additional information and guidance with the output of a return code.
29	Grouper Return Code	615	2	1	00-99	Identifies claim related errors or technical (fatal) errors in processing that terminate grouping (ungroupable)
30	<i>FILLER - Item 3</i>	<i>617</i>	<i>84</i>	<i>1</i>		<i>For future use</i>

## Return codes

The HHGS provides return codes in the program output to identify an error in claims processing or system-related errors, which are fatal to the program. Return code values 00-14 are claim-specific errors, which are likely returned if an invalid value or blank value is submitted. Return codes 01, 03, and 05 do not generate a HIPPS code (blank HIPPS), to indicate the home health claim should be returned to the provider for correction. Return code 50 is for

system-related errors and indicates there is a problem with environment setup or corruption in reading a table or file. If a system-related error has occurred, it is likely that the HHGS software needs to be reinstalled.

If a return code other than 00 is returned, no HIPPS code is provided on output because an error has occurred in determining one or more values in the HIPPS code.

**Table 11. Return codes**

<b>Return code</b>	<b>Description</b>
00	Grouping successful
01	From or Through Date Error
02	Invalid Period Timing
03	Other principal diagnosis code error
05	Principal diagnosis not assigned to a clinical group
07	Invalid or inconsistent value for FUNCTIONAL IMPAIRMENT HOSPITALIZATION RISK field
08	Invalid value for FUNCTIONAL IMPAIRMENT GROOMING field
09	Invalid value for FUNCTIONAL IMPAIRMENT DRESS UPPER field
10	Invalid value for FUNCTIONAL IMPAIRMENT DRESS LOWER field
11	Invalid value for FUNCTIONAL IMPAIRMENT BATHING field
12	Invalid value for FUNCTIONAL IMPAIRMENT TOILETING field
13	Invalid value for FUNCTIONAL IMPAIRMENT TRANSFERRING field
14	Invalid value for FUNCTIONAL IMPAIRMENT AMBULATION field
50	Fatal error - Component corrupted or not set up or other internal error

## Validity flags

Effective April 1, 2023, the HHGS provides validity flags in the program output to provide further detailed information for certain errors in claims processing. Validity flag values 01-04 and 06-07 are principal diagnosis related errors which are generated in the instance of Return code 03. Effective October 1, 2023, validity flag values 08-14 are From or Through date errors which are generated in the instance of Return code 01.

Certain validity flags are informational only and do not impact claims processing. In the instance that information only validity flags are returned on output, the claim is still processed successfully and return with RC=00, as long as there no other claim processing or system- related errors are present.

**Table 12. Validity flags**

<b>Validity Flag</b>	<b>Corresponding Return Code</b>	<b>Reason for validity flag generation</b>
00	00	Validity flag not set
01	03	Unacceptable principal diagnosis, code is not reportable as principal diagnosis.
02	03	Manifestation code is not reportable as principal diagnosis.
03	03	Unspecified diagnosis code not acceptable as principal diagnosis since there is a more specific code available that would further accurately identify the condition.
04	03	External cause of injury code not reportable as principal diagnosis.
05	00	The principal diagnosis is identified as a Code first code, according to ICD-10-CM Official Coding guidelines, and there is a secondary condition present that may need to be sequenced first. <i>Note: This is informational only to ensure proper sequencing; RC 00 is returned for successful grouping, and the HIPPS code is still produced.</i>
06	03	Principal diagnosis code is not valid for claim dates.
07	03	No principal diagnosis code reported for claim dates.
08	01	From date was not reported (or field was left blank)
09	01	From Date is invalid
10	01	From Date is out of date range for HH grouper
11	01	Through date was not reported (or field was left blank)
12	01	Through date is invalid
13	01	Through date precedes the reported From date
14	01	The Through date reported exceeds the HH Period of care threshold of 30 days
15	00	Home Health period of care shorter than 30 days <i>Note: This is informational only to ensure proper sequencing; RC 00 is returned for successful grouping, and the HIPPS code is still produced.</i>



# Chapter 5: Installing and testing the interactive module for the PC platform

The following procedure explains how to install and run the interactive module of the Home Health Grouper Software (HHGS).

## ***Before you begin***

Make sure you have Java® 8 installed on your computer. This version of HHGS will work only with Java 8.

## ***To install and test the software***

1. Unzip the Home Health Grouper Software pack to your computer.
2. At the location where you unzipped the files, browse into the 'HomeHealthGrouperSoftware\interactive' folder.
3. Double click on 'HomeHealthGUI.jar'.  
If a double click doesn't work use the 'runGrouperGUI.bat' file.

## ***To uninstall the software***

1. Browse into the 'HomeHealthGrouperSoftware\interactive' folder.
2. Delete the HomeHealthGUI.jar file.

## Viewing the content tables

After you install the software, you can view copies of all the content reference tables, in tab-delimited format, in the following folder:

HomeHealthGrouperSoftware\tables



# Chapter 6: Data entry for the PC platform

This chapter describes how to interactively enter data into the Home Health Grouper Software. Keyboard shortcuts for accessing fields and tabs are included where appropriate.

## ***To access the interactive interface***

1. Go to the location where you unzipped the files when you installed the software.
2. Browse into the 'HomeHealthGrouperSoftware\interactive' folder.
3. Double click on 'HomeHealthGUI.jar'.  
If a double-click on that file doesn't work, double-click on the "runGrouperGUI.bat" file.
4. Enter claim data on the Home Health Grouper window.  
The data entry window is shown in the "Data entry fields" (page [38](#)).

# Data entry fields

The fields on the Claim Input tab are described in the following tables. You can access these fields using the Tab key to advance from field to field. The order of the fields in the following tables represents the tab order as you advance from one field to the next.

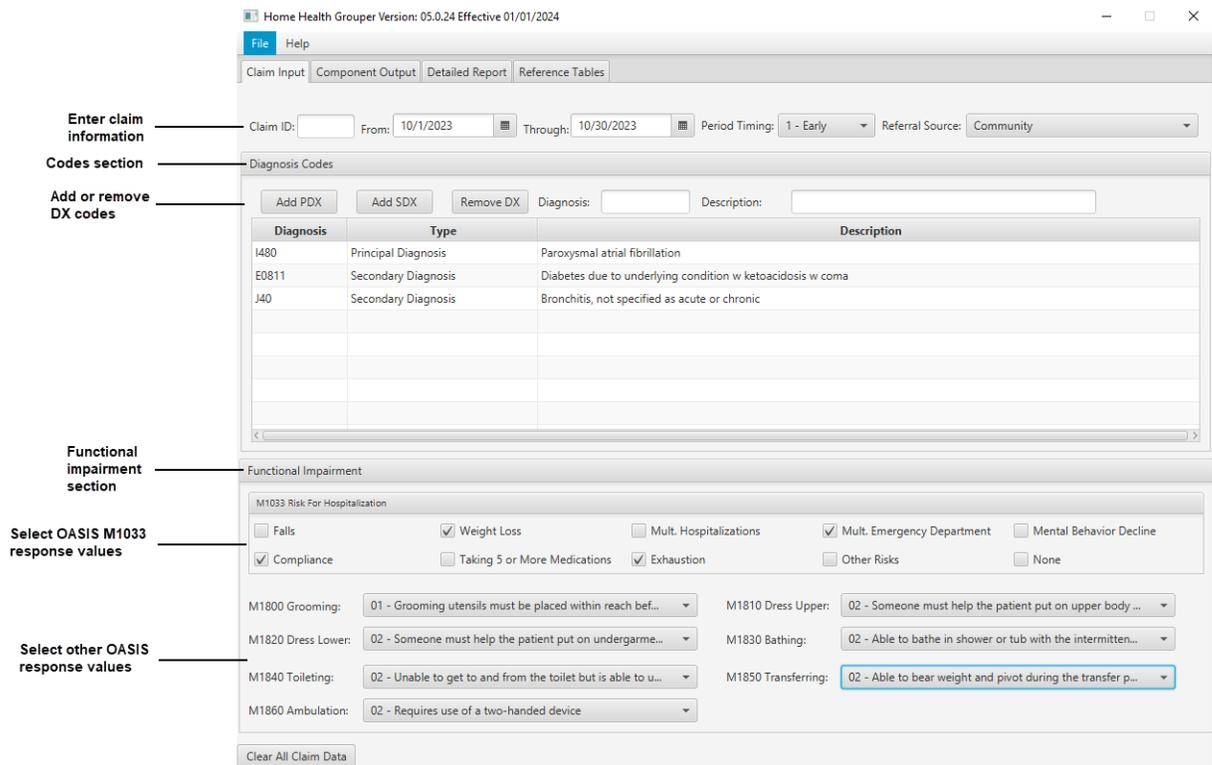


Figure 1: Claim input tab for data entry

**Table 13. Claim detail and diagnosis code fields**

Field name	Values	Description
Claim ID	Alphanumeric	Claim ID for the claim to be printed on the report.
From Date	MM/DD/YYYY	Required. Claim From Date.
Through Date	MM/DD/YYYY	Required. Claim Through Date.
Period Timing	1 - Early 2 - Late	Defined as Early if the claim From and Admission dates match or if Medicare systems determine period is early; otherwise late.

Field name	Values	Description
Referral Source	Community 61 - Acute Hospital - Institutional 62 - SNF or other - Institutional	Occurrence code 61 or 62 determines Institutional referral source otherwise any other value or condition indicates it is a Community referral source.
Diagnosis	ICD-10-CM diagnosis code	Field used to enter diagnosis codes. No character padding is needed. POA is included as the 8th character. <ul style="list-style-type: none"> <li>▪ Use the Add PDX or Add SDX button to add a diagnosis to the claim.</li> <li>▪ Use the Remove DX button to remove the selected code.</li> </ul>

**Table 14. OASIS M1033 Risk for hospitalization response value fields**

Field name	Values	Description
Falls	No – Unchecked Yes – Checked	M1033 - History of falls (two or more falls - or any fall with an injury - in the past 12 months)
Weight Loss	No – Unchecked Yes – Checked	M1033 - Unintentional weight loss of a total of 10 pounds or more in the past 12 months
Mult. Hospitalizations	No – Unchecked Yes – Checked	M1033 - Multiple hospitalizations (two or more) in the past six months
Mult. Emergency Department	No – Unchecked Yes – Checked	M1033 - Multiple emergency department visits (two or more) in the past six months
Mental Behavior Decline	No – Unchecked Yes – Checked	M1033 - Decline in mental, emotional, or behavioral status in the past three months
Compliance	No – Unchecked Yes – Checked	M1033 - Reported or observed history of difficulty complying with any medical instructions (for example, medications, diet, exercise) in the past three months
Taking 5 or More Medications	No – Unchecked Yes – Checked	M1033 - Currently taking five or more medications
Exhaustion	No – Unchecked Yes – Checked	M1033 - Currently reports exhaustion
Other Risks	No – Unchecked Yes – Checked	M1033 - Other risk(s) not listed
None	No – Unchecked Yes – Checked	M1033 - None of the above. Will uncheck any other checked fields

**Table 15. Additional OASIS response value fields**

Field name	Values
M1800 Grooming	<p>00 - Able to groom self-unaided, with or without the use of assistive devices or adapted methods.</p> <p>01 - Grooming utensils must be placed within reach before able to complete grooming activities.</p> <p>02 - Someone must assist the patient to groom self.</p> <p>03 - Patient depends entirely upon someone else for grooming needs.</p>
M1810 Dress Upper	<p>00 - Able to get clothes out of closets and drawers, put them on and remove them from the upper body without assistance.</p> <p>01 - Able to dress upper body without assistance if clothing is laid out or handed to the patient.</p> <p>02 - Someone must help the patient put on upper body clothing.</p> <p>03 - Patient depends entirely upon another person to dress the upper body.</p>
M1810 Dress Lower	<p>00 - Able to obtain, put on, and remove clothing and shoes without assistance.</p> <p>01 - Able to dress lower body without assistance if clothing and shoes are laid out or handed to the patient.</p> <p>02 - Someone must help the patient put on undergarments, slacks, socks or nylons, and shoes.</p> <p>03 - Patient depends entirely upon another person to dress lower body.</p>
M1830 Bathing	<p>00 - Able to bathe self in shower or tub independently, including getting in and out of tub/shower.</p> <p>01 - With the use of devices, is able to bathe self in shower or tub independently, including getting in and out of the tub/shower.</p> <p>02 - Able to bathe in shower or tub with the intermittent assistance of another person: (a) for intermittent supervision or encouragement or reminders, OR (b) to get in and out of the shower or tub, OR (c) for washing difficult-to-reach areas.</p> <p>03 - Able to participate in bathing self in shower or tub but requires presence of another person throughout the bath for assistance or supervision.</p> <p>04 - Unable to use the shower or tub, but able to bathe self independently with or without the use of devices at the sink, in chair, or on commode.</p> <p>05 - Unable to use the shower or tub, but able to participate in bathing self in bed, at the sink, in bedside chair, or on commode, with the assistance or supervision of another person.</p> <p>06 - Unable to participate effectively in bathing and is bathed totally by another person.</p>

Field name	Values
M1840 Toileting	<p>00 - Able to get to and from the toilet and transfer independently with or without a device.</p> <p>01 - When reminded, assisted, or supervised by another person, able to get to and from the toilet and transfer.</p> <p>02 - Unable to get to and from the toilet but is able to use a bedside commode (with or without assistance).</p> <p>03 - Unable to get to and from the toilet or bedside commode, but is able to use a bedpan/urinal independently.</p> <p>04 - Is totally dependent in toileting.</p>
M1850 Transferring	<p>00 - Able to independently transfer.</p> <p>01 - Able to transfer with minimal human assistance or with use of an assistive device.</p> <p>02 - Able to bear weight and pivot during the transfer process but unable to transfer self.</p> <p>03 - Unable to transfer self and is unable to bear weight or pivot when transferred by another person.</p> <p>04 - Bedfast, unable to transfer but is able to turn and position self in bed.</p> <p>05 - Bedfast, unable to transfer and is unable to turn and position self.</p>
M1860 Ambulation	<p>00 - Able to independently walk on even and uneven surfaces and negotiate stairs with or without railings (specifically, needs no human assistance or assistive device).</p> <p>01 - With the use of a one-handed device (for example, cane, single crutch, hemi-walker), able to independently walk on even and uneven surfaces and negotiate stairs with or without railings.</p> <p>02 - Requires use of a two-handed device (for example, walker or crutches) to walk alone on a level surface and/or requires human supervision or assistance to negotiate stairs or steps or uneven surfaces.</p> <p>03 - Able to walk only with the supervision or assistance of another person at all times.</p> <p>04 - Chairfast, unable to ambulate but is able to wheel self independently.</p> <p>05 - Chairfast, unable to ambulate and is unable to wheel self.</p> <p>06 - Bedfast, unable to ambulate or be up in a chair.</p>

## Menu items

The menu item available from the main software window is described in the following table.

**Table 16. Menu items**

Menu	Item	Function	Keyboard shortcut
File	Close	Launches a confirmation window to close the tool.	Ctrl+C

## Command buttons and tabs

The command buttons and tabs in the software are described in the following table. Refer to the Function column to locate the task you want to perform. To switch to another tab, press Ctrl+Tab or use the keyboard shortcut listed below.

**Table 17. Command buttons and tabs**

Name	Type	Function	Keyboard shortcut
Claim Input	Tab	Switch the view to the claim input view.	Alt+I
Add PDX	Button	Adds the currently entered diagnosis to the diagnosis table as the principal diagnosis.	Alt+A
Add SDX	Button	Adds the currently entered diagnosis to the diagnosis table as a secondary diagnosis.	Alt+S
Remove DX	Button	Removes the selected diagnosis in the diagnosis table from the claim.	Alt+R
Clear All Claim Data	Button	Clears the claim data from the claim input view.	Alt+C
Component Output	Tab	Displays the output from the component for the current claim.	Alt+O (not available while this tab is disabled)

Name	Type	Function	Keyboard shortcut
Save Report	Button	Saves the report displayed on the Component Output or Detailed Report tabs.	Alt+C (saves appropriate report based on selected tab)
Detailed Report	Tab	Displays the output from the component for the current claim including detailed processing messages.	Alt+D (not available while this tab is disabled)

## Error messages

The system automatically performs data entry checks and displays an error message when an error is detected. The following error messages can occur during data entry.

**Table 18. Error messages**

Error message	Occurs when
Date entry error	The From Date or Through Date is not within range of the component



# Chapter 7: Program output for the PC platform

This chapter describes the output from the Home Health Grouper Software (HHGS). Keyboard shortcuts for accessing fields and tabs are included where appropriate. Reports are created and saved individually, and the software does not append them. If you want a file of multiple reports, you can copy several output reports, one at a time as you generate them, and paste them, one at a time, into a text file.

## Viewing an output report

To view the output report for a claim

1. Complete your data entry on the Claim Input tab.
2. Select the Component Output or Detailed Report tab.

The output report displays.

A sample Component Output report is shown below. This report shows the Health Insurance Prospective Payment System (HIPPS) code assignment as well as the inputs used to calculate the HIPPS code.

```

----- HomeHealth Grouper -----
----- HIPPS Code (Output) -----
-HIPPS Code : 1HA11
----- Grouper Return (Output) -----
-Return Code : Grouping successful (00)
----- Validity Flag (Output) -----
-Validity Flag : Validity Flag not used (00)
----- Claim Input -----
-Claim ID :
-From Date : 20200801
-Period Timing : 1
-Referral Source : None
----- Primary Code (Input) -----
-Principal Diagnosis : I10 : Essential (primary) hypertension
----- Secondary Codes (Input) -----
-Secondary Diagnosis : None entered
----- Functional Impairment Fields (Input) -----
-M1033 Falls : 0
-M1033 WeightLoss : 0
-M1033 MultipleHospitalizations : 0
-M1033 MultipleEdVisits : 0
-M1033 MentalBehaviorDecline : 0
-M1033 Compliance : 0
-M1033 FiveOrMoreMedications : 0
-M1033 Exhaustion : 1
-M1033 OtherRisks : 1
-M1033 NoneOfAbove : 0
-M1800 Grooming : 00
-M1810 DressUpperBody : 00
-M1820 DressLowerBody : 00
-M1830 Bathing : 00
-M1840 Toileting : 00
-M1850 Transferring : 00
-M1860 Ambulation : 03
----- Version Information (Output) -----
-Component Version Used : 01.0.20
    
```

Figure 2: Component Output sample

A sample Detailed Report is shown below. This report shows the HIPPS code assignment as well as logging information and additional details about how the value for each HIPPS code position was calculated.

```

----- HomeHealth Grouper -----
----- HIPPS Code (Output) -----
-HIPPS Code : 1HA11
----- Grouper Return (Output) -----
-Return Code : Grouping successful (00)
-Grouping Return Code :
  -INFO : ReturnCode(id=0, description=Grouping successful)
----- Validity Flag (Output) -----
-Validity Flag : Validity Flag not used (00)
----- Claim Input (HIPPS 1) -----
-Claim ID :
-From Date : 20200801
-Period Timing : 1
-Referral Source : None
  -Grouping Details on HIPPS 1 :
    -INFO : Period Timing = 1 (Period Timing: Early)
    -INFO : Referral Source = None (no description) (Out of range)
    -INFO : HIPPS Position 1 = 1
----- Principal Diagnosis (HIPPS 2) -----
-Principal Diagnosis : I10 : Essential (primary) hypertension
-Grouping Details on HIPPS 2 :
  -INFO : PDX = I10 (Essential (primary) hypertension)
  -INFO : PDX Clinical Group = ClinicalGroup{id=0, value=H, name=MMTA_CARDIAC, description=MMTA - Cardiac and Circulatory,
lowPoints=35, highPoints=52}
  -INFO : PDX Subchapter = I10-I16 (Hypertensive diseases)
  -INFO : HIPPS Position 2 = H
----- Functional Fields (HIPPS 3) -----
-M1033 Falls : 0
-M1033 WeightLoss : 0
-M1033 MultipleHospitalizations : 0
-M1033 MultipleEdVisits : 0
-M1033 MentalBehaviorDecline : 0
-M1033 Compliance : 0
-M1033 FiveOrMoreMedications : 0
-M1033 Exhaustion : 1
-M1033 OtherRisks : 1
-M1033 NoneOfAbove : 0
-M1800 Grooming : 00
-M1810 DressUpperBody : 00
-M1820 DressLowerBody : 00
-M1830 Bathing : 00
-M1840 Toileting : 00
-M1850 Transferring : 00
-M1860 Ambulation : 03
-Grouping Details on HIPPS 3 :

```

Figure 3: Detailed Report sample

## Output report fields

For a list of the fields included in the output report, see Program output on page [31](#).

## Saving an output report

### *To save an output report*

1. Select the Component Output or Detailed Report tab.
2. Click the Save Report button.
3. Browse to the location where you want to save the report.
4. Click Save.

# Appendix A: HHGS overview of logic

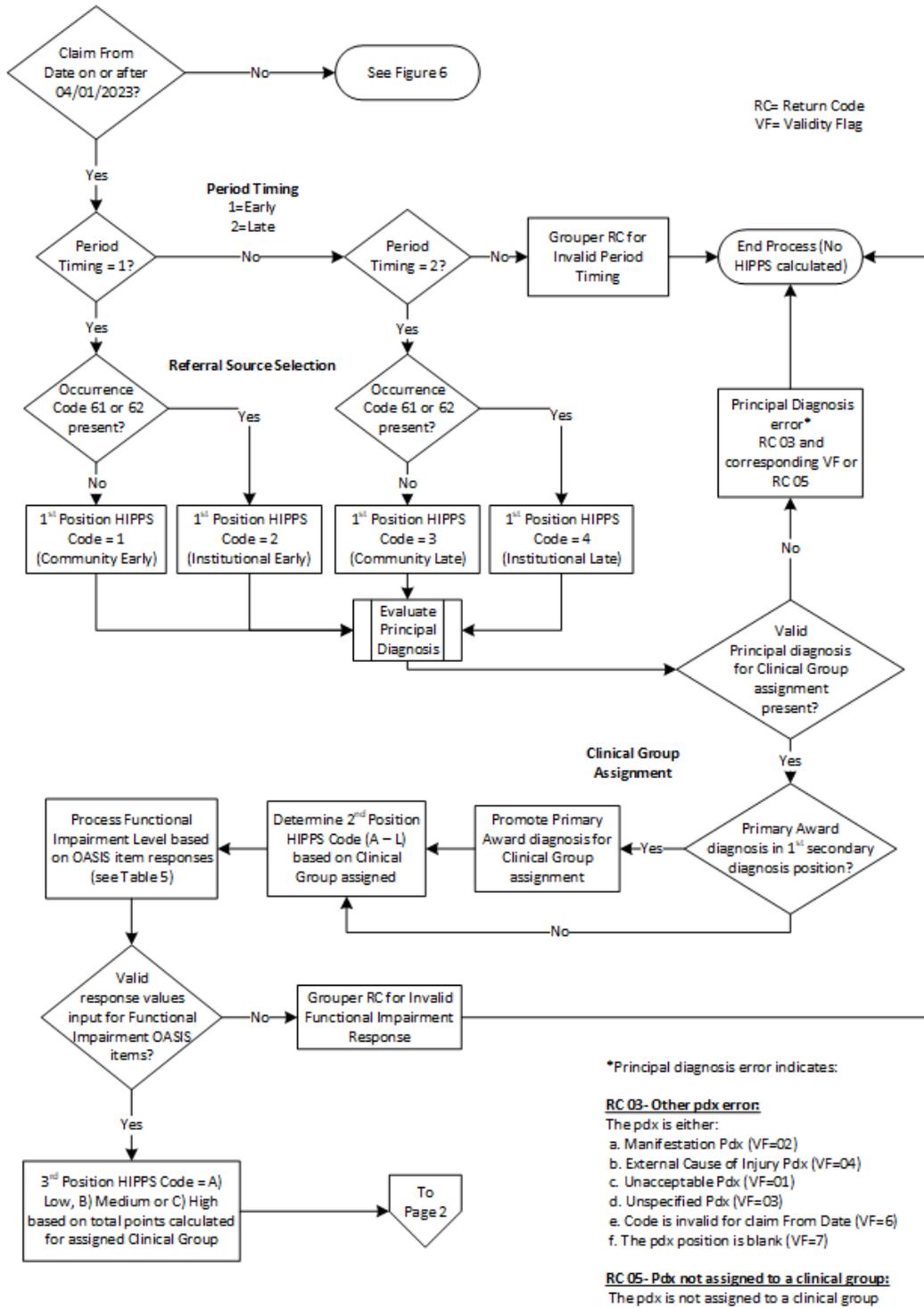


Figure 4: HHGS overview of logic (effective 04/01/2023)

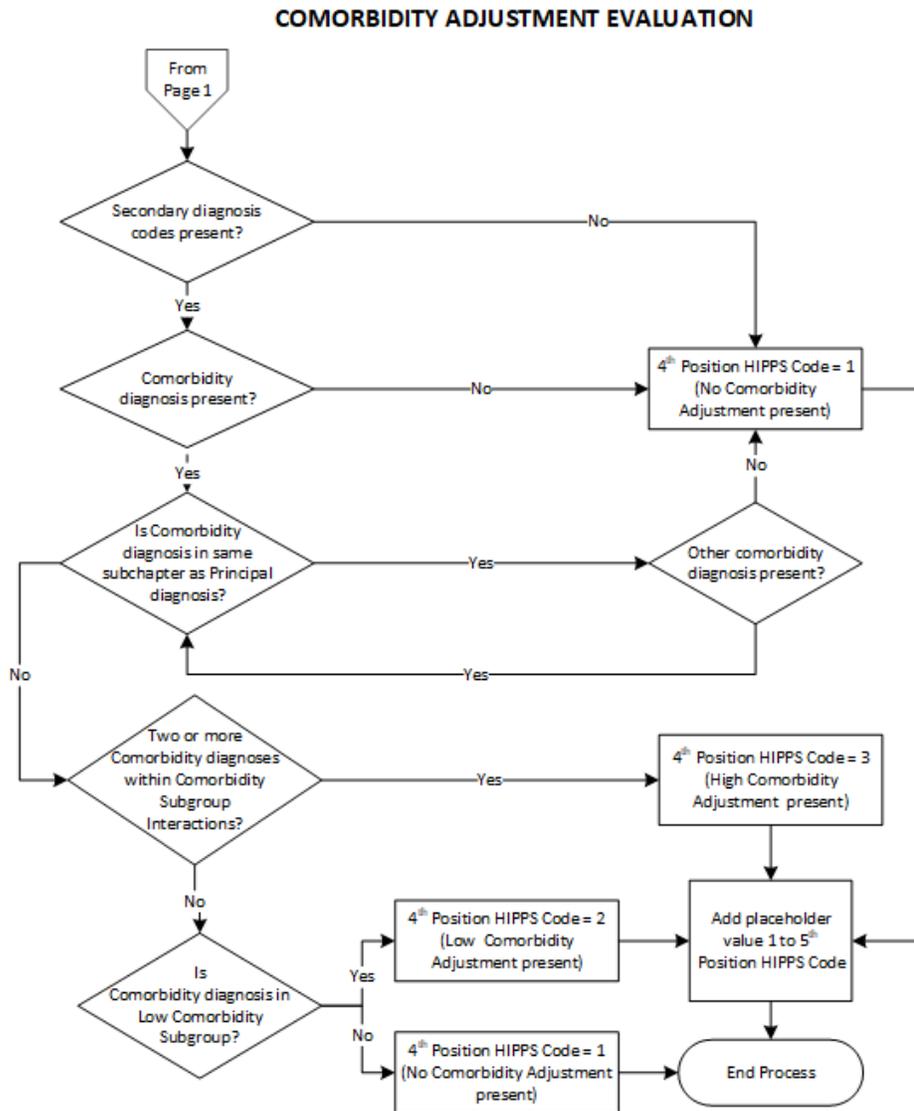


Figure 5: HHGS overview of logic (effective 04/01/2023)

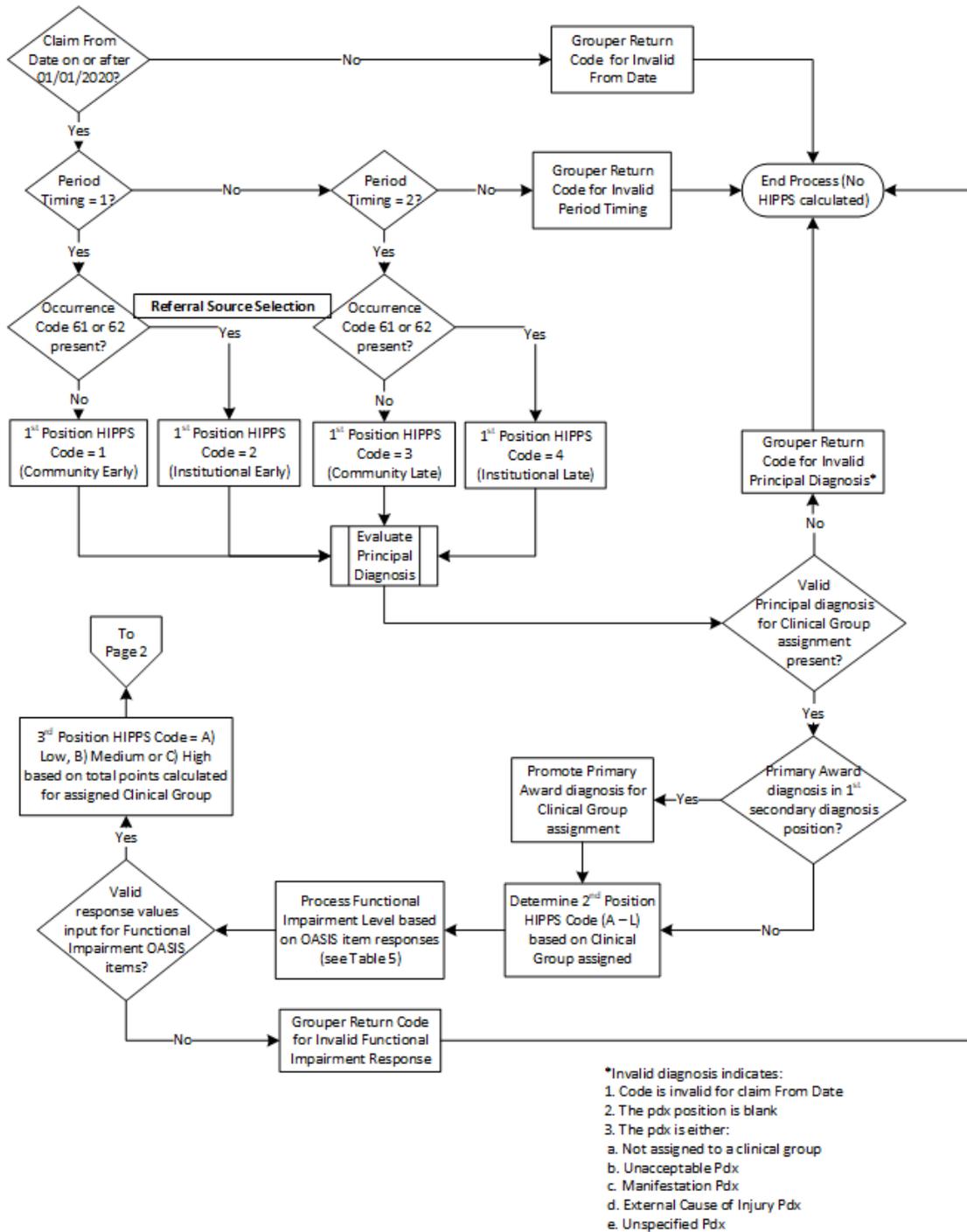


Figure 6: HHGS overview of logic (effective 01/01/2020 through 03/31/2023)

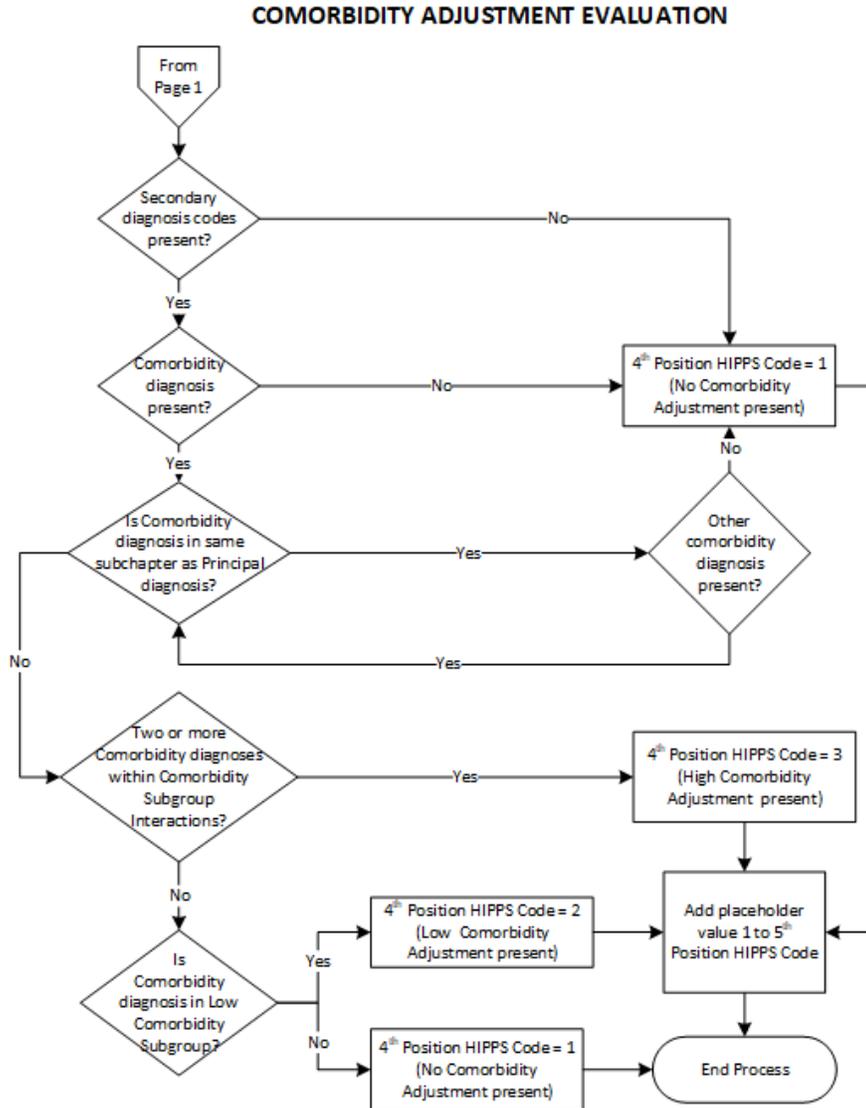


Figure 7: HHGS overview of logic (effective 01/01/2020 through 03/31/2023)

# Appendix B: Clinical group assignment

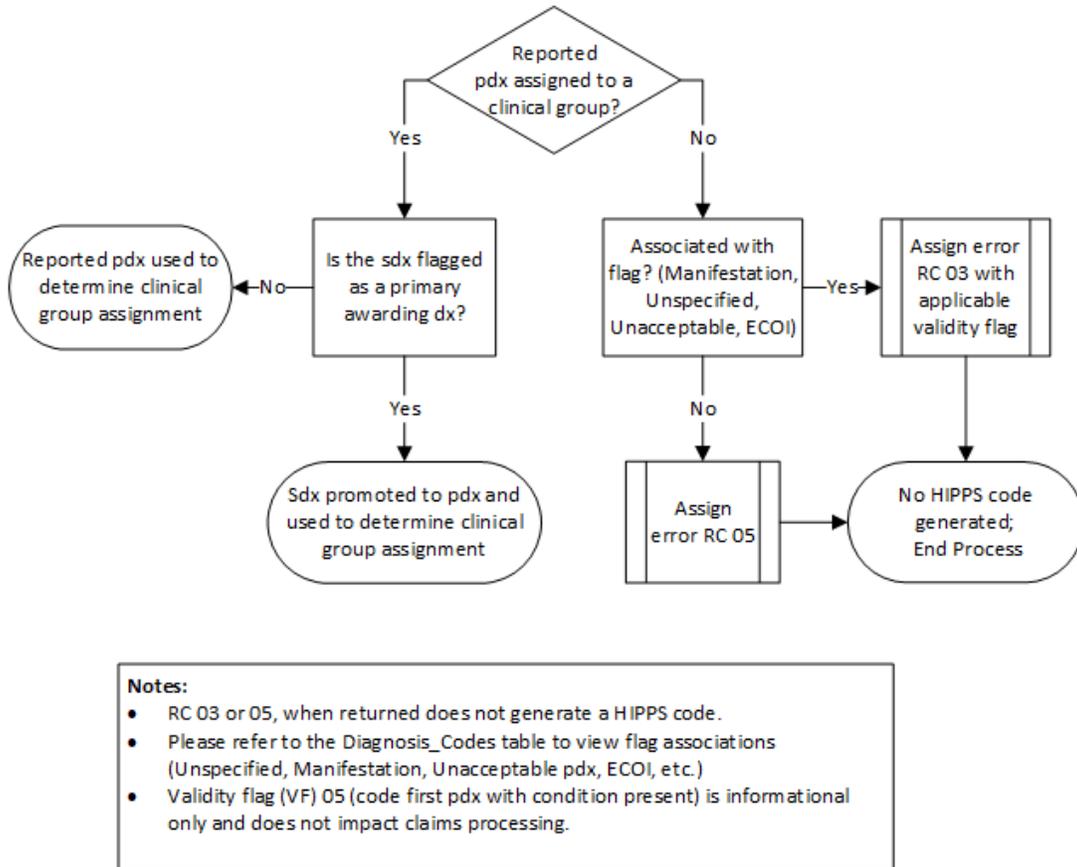


Figure 8: Clinical Group assignment overview (effective 04/01/2023)

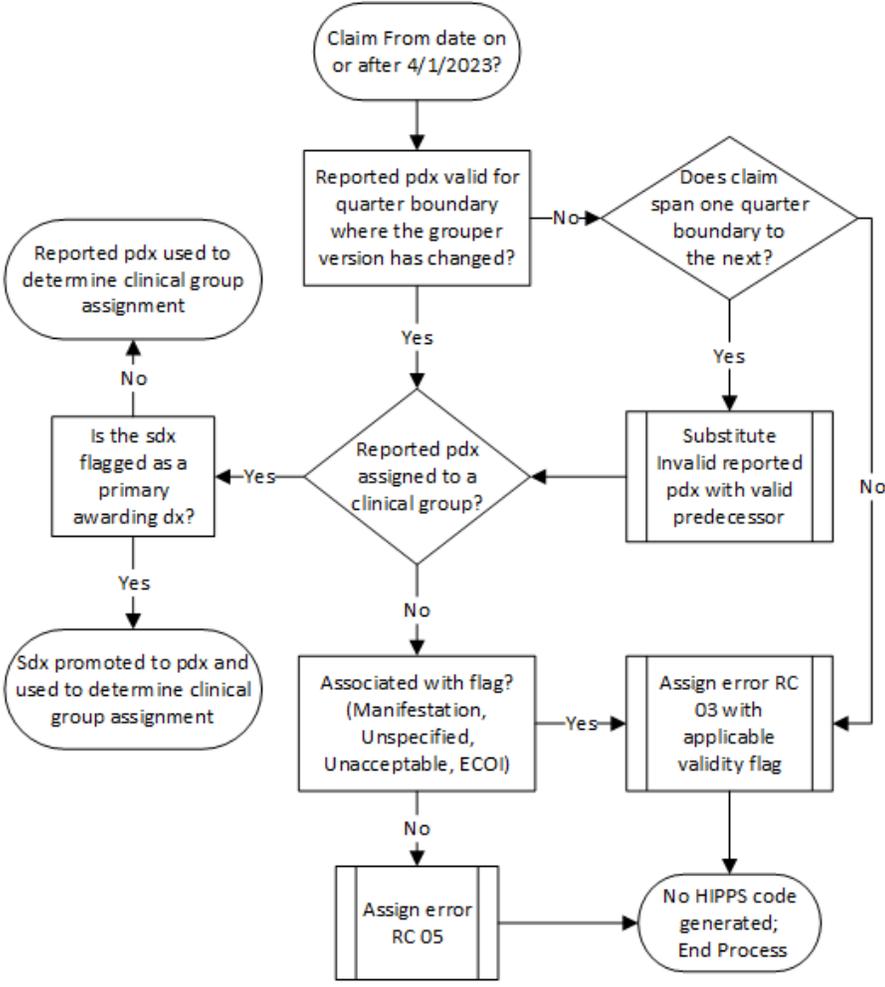


Figure 9: Clinical Group assignment with Claim Span overview (effective 04/01/2023)

# Appendix C: Date Validation & Claim Span logic

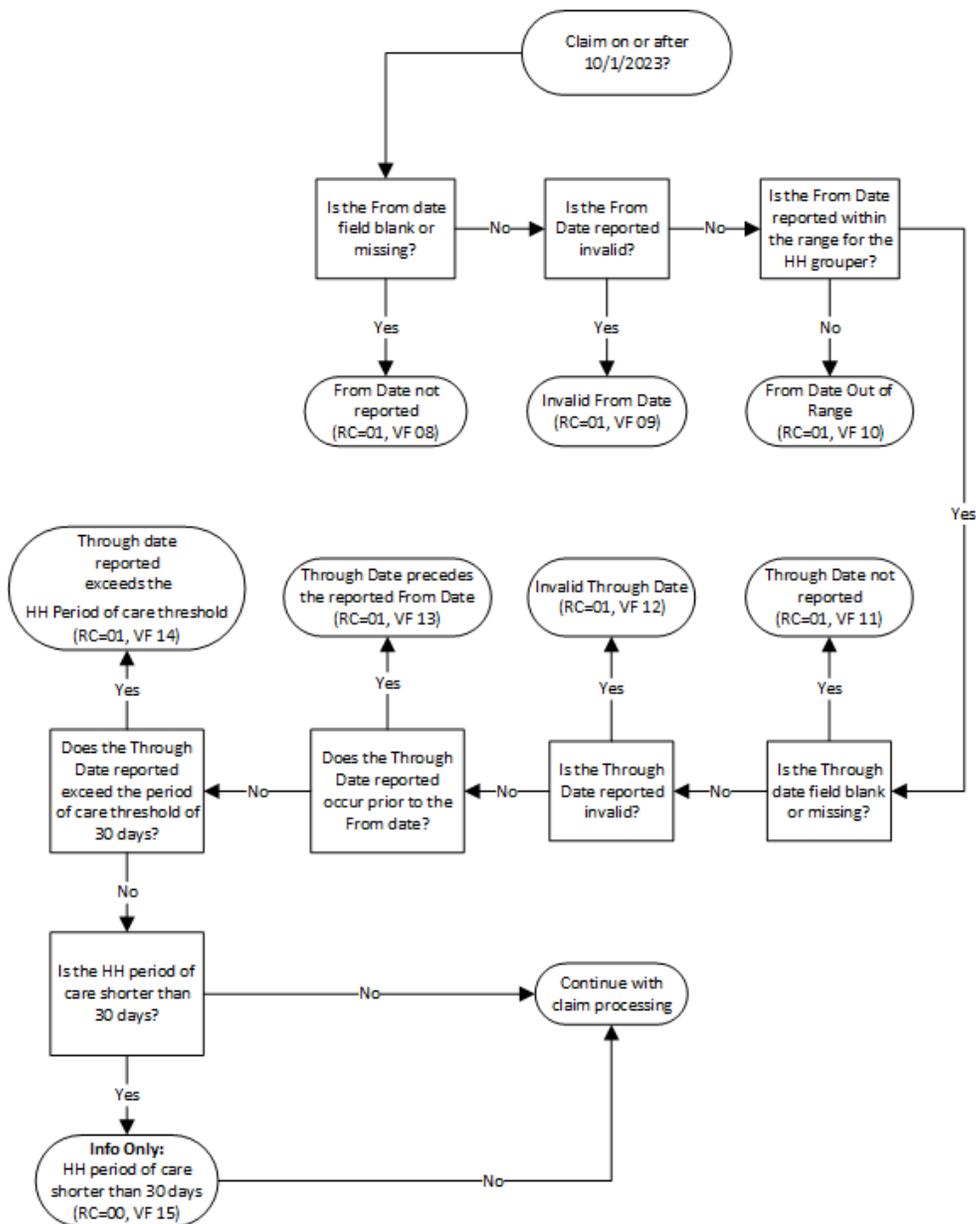


Figure 10: Date Validation logic (effective 10/01/2023)

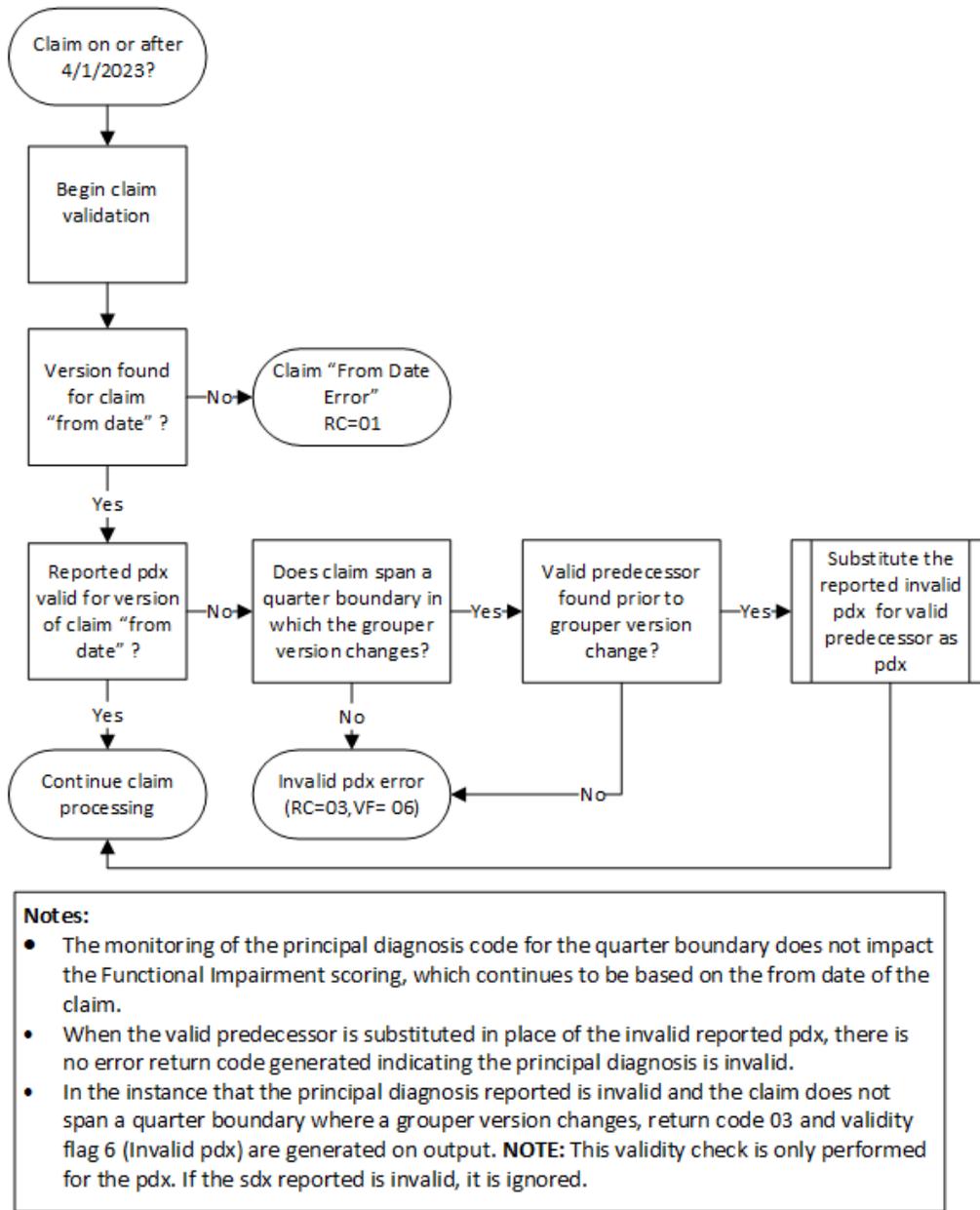


Figure 11: Claim Span logic (effective 04/01/2023 - 09/30/2023)

# Appendix D: Grouper Call Example

## Fixed Format

The grouper's call group() will accept a properly formatted string and return the output string (please see the grouper documentation).

Claim Input Example:

```
1. String claimInput = "Test claim          202311011  I10          "
2.      + "
3.      + "
4.      + "
5.      + "          000000000100000000000000
6.      + "          20231130
7.      + "
8.      + "
9.      + "
10.     + "      ";
11.
12. String result = HHGrouper.group(claimInput);
13. System.out.println("Claim Input: '" + claimInput + "'");
14. System.out.println("Claim Output: '" + result + "'");
```

Claim Output Example:

```
1. Claim Input: 'Test claim          202311011  I10
          000000000100000000000000
          20231130
          '
2. Claim Output: '04.2.231HA110000'
```