## Australian National Subacute and Non-Acute Patient Classification Version 5.0

Grouper Application Version 5.0.1 User Guide



May 2024

## Australian National Subacute and Non-Acute Patient Classification – Grouper Application Version 5.0.1 User Guide — May 2024

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## Acronyms and Abbreviations

Acronym / Abbreviation	Description
ABF	Activity based funding
ABF APC DRS	Activity Based Funding Admitted Patient Care – Data Request Specification
ABF PCC DRS	Activity Based Funding Palliative Phase of Care – Data Request Specification
AIHW	Australian Institute of Health and Welfare
AN-SNAP	Australian National Subacute and Non-Acute Patient Classification
APC	Admitted Patient Care data collection
AROC	Australasian Rehabilitation Outcomes Centre
ASNAHC NBEDS	Admitted Subacute and Non-Acute Hospital Care National Best Endeavours Data Set
CLI	Command Line Interface
DRS	Data request specification
FIM™	Functional Independence Measure <sup>1</sup>
FRIC	Frailty Related Index of Comorbidities
GEM	Geriatric evaluation and management care type
GUI	Graphical User Interface
HoNOS	Health of the Nation Outcome Scale
IHACPA	Independent Health and Aged Care Pricing Authority
LoS	Length of stay
METEOR	Australian Institute of Health and Welfare's Metadata Online Data Registry
RUG-ADL	Resource Utilisation Groups – Activities of Daily Living

<sup>&</sup>lt;sup>1</sup> FIM<sup>™</sup> is a trademark of the Uniform Data System for Medical Rehabilitation, a division of UB Foundation Activities Incorporated. The Australasian Rehabilitation Outcomes Centre (AROC) holds the territory license for the use of the FIM<sup>™</sup> instrument in Australia.

## 1. Introduction

## 1.1 Background

Under the National Health Reform Agreement 2011, the Independent Health and Aged Care Pricing Authority (IHACPA) is responsible for determining the activity based funding (ABF) system for public hospital subacute and non-acute care services. The classification system used for admitted subacute and non-acute care ABF in Australia is the Australian National Subacute and Non-Acute Patient Classification (AN-SNAP).

AN-SNAP is used for subacute and non-acute care funding as well as clinical management and other purposes such as benchmarking, epidemiological studies, safety and quality monitoring, and research to understand practice and cost variation.

The most recent version, AN-SNAP Version 5.0 (V5.0), was released in December 2021. IHACPA developed AN-SNAP V5.0 as part of its regular reviews of all ABF classifications to ensure that they reflect contemporary clinical practice and terminology; and provide the best possible statistical explanation of care costs.

AN-SNAP classifies episodes of care across four subacute care types: rehabilitation, palliative care, geriatric evaluation and management (GEM) and psychogeriatric care; and one non-acute care type: maintenance. In AN-SNAP V5.0 there are a total of 97 end-classes: 83 admitted overnight; six admitted same-day; and eight ungroupable error classes that are used to class episodes with missing information or invalid data.

Further information about AN-SNAP V5.0 is available on the IHACPA website.

## 1.2 Purpose

The AN-SNAP V5.0 grouper software application (the SNAP5Grouper) version 5.0.1 groups records of admitted subacute and non-acute care into an AN-SNAP V5.0 class (or error class if there is missing information preventing grouping to a valid class).

The SNAP5Grouper uses variables defined according to the Australian Institute of Health and Welfare's (AIHW) Metadata Online Data Registry (METEOR)<sup>2</sup> metadata standards; and specified in the Admitted patient care national minimum data set (APC NMDS)<sup>3</sup> and Admitted subacute and non-acute hospital care national best endeavours data set (ASNAHC NBEDS).<sup>4</sup>

The SNAP5Grouper application is available as a Graphical User Interface (GUI) or Command Line Interface (CLI) executable. The application provides the following functions:

<sup>3</sup> METEOR 775630

<sup>&</sup>lt;sup>2</sup> The Australian Institute of Health and Welfare's (AIHW) Metadata Online Data Registry (METEOR) is Australia's repository for national metadata standards for health statistics and information. Wherever possible, AN-SNAP V5.0 terms are defined using METEOR standards. METEOR references are correct as at the time of publication. Readers should always consider any superseded related metadata relationships when cross-referencing with METEOR identifiers.

<sup>&</sup>lt;sup>4</sup> METEOR 775780

- Groups a Comma Separated Values (CSV) data file interactively
- Views results through a user interface
- Outputs results as a CSV file containing the AN-SNAP V5.0 class appended to each row.

## **1.2.1 Supporting information**

This User Guide is intended to complement the <u>Australian National Subacute and Non-Acute Patient</u> <u>Classification Version 5.0 – Classification Manual (AN-SNAP V5.0 Classification Manual)</u>.

Further details about the development of AN-SNAP V5.0 are also available in the <u>Development of</u> <u>the Australian National Subacute and Non-Acute Patient Classification Version 5.0 – Final report</u> (AN-SNAP V5.0 Final Report).

## 1.3 Scope

The SNAP5Grouper only groups records of admitted patient care. AN-SNAP is not used by IHACPA for pricing non-admitted care; this is out of scope for the SNAP5Grouper.

## **1.4 Application requirements**

The SNAP5Grouper application has no specific requirements. The GUI and CLI executables are packed for Microsoft Windows. If the software is needed to be used on other operating systems, the python source code is available on request.

## 1.5 Input data preparation

The SNAP5Grouper application requires a single data file to be provided in the CSV format. **Table 1** details the variables and the order of the variables required in the CSV.

## Table 1. SNAP5Grouper required variables for the Comma Separated Values (CSV) file

Column order	Field	Column order	Field	Column order	Field	Column order	Field	Column order	Field
1	stateid	31	x12ddx25	61	x12ddx55	91	x12ddx85	121	fim_score14
2	care	32	x12ddx26	62	x12ddx56	92	x12ddx86	122	fim_score15
3	bir_date	33	x12ddx27	63	x12ddx57	93	x12ddx87	123	fim_score16
4	adm_date	34	x12ddx28	64	x12ddx58	94	x12ddx88	124	fim_score17
5	sep_date	35	x12ddx29	65	x12ddx59	95	x12ddx89	125	fim_score18
6	leavedays	36	x12ddx30	66	x12ddx60	96	x12ddx90	126	honos65_score1
7	X12ddx1	37	x12ddx31	67	x12ddx61	97	x12ddx91	127	honos65_score2
8	x12ddx2	38	x12ddx32	68	x12ddx62	98	x12ddx92	128	honos65_score3
9	x12ddx3	39	x12ddx33	69	x12ddx63	99	x12ddx93	129	honos65_score4
10	x12ddx4	40	x12ddx34	70	x12ddx64	100	x12ddx94	130	honos65_score5
11	x12ddx5	41	x12ddx35	71	x12ddx65	101	x12ddx95	131	honos65_score6
12	x12ddx6	42	x12ddx36	72	x12ddx66	102	x12ddx96	132	honos65_score7
13	x12ddx7	43	x12ddx37	73	x12ddx67	103	x12ddx97	133	honos65_score8
14	x12ddx8	44	x12ddx38	74	x12ddx68	104	x12ddx98	134	honos65_score9
15	x12ddx9	45	x12ddx39	75	x12ddx69	105	x12ddx99	135	honos65_score10
16	x12ddx10	46	x12ddx40	76	x12ddx70	106	x12ddx100	136	honos65_score11
17	x12ddx11	47	x12ddx41	77	x12ddx71	107	impairmenttype	137	honos65_score12
18	x12ddx12	48	x12ddx42	78	x12ddx72	108	fim_score1	138	rugadl_total
19	x12ddx13	49	x12ddx43	79	x12ddx73	109	fim_score2	139	Phaseid
20	x12ddx14	50	x12ddx44	80	x12ddx74	110	fim_score3	140	Phase_StartDate
21	x12ddx15	51	x12ddx45	81	x12ddx75	111	fim_score4	141	Phase_EndDate
22	x12ddx16	52	x12ddx46	82	x12ddx76	112	fim_score5	142	PhaseType
23	x12ddx17	53	x12ddx47	83	x12ddx77	113	fim_score6		
24	x12ddx18	54	x12ddx48	84	x12ddx78	114	fim_score7		
25	x12ddx19	55	x12ddx49	85	x12ddx79	115	fim_score8		
26	x12ddx20	56	x12ddx50	86	x12ddx80	116	fim_score9		
27	x12ddx21	57	x12ddx51	87	x12ddx81	117	fim_score10		
28	x12ddx22	58	x12ddx52	88	x12ddx82	118	fim_score11		
29	x12ddx23	59	x12ddx53	89	x12ddx83	119	fim_score12		
30	x12ddx24	60	x12ddx54	90	x12ddx84	120	fim_score13		

## 2. SNAP5Grouper requirements

## 2.1 General requirements

## 2.1.1 Date Format

The following fields are date fields:

- bir\_date
- adm\_date
- sep\_date
- Phase\_StartDate
- Phase\_EndDate

The required format for these date fields is dd/mm/yyyy. For example the date January 31st, 2021 would be formatted as: 31/01/2021.

## 2.2 Field requirements

## 2.2.1 Episode Number (stateid)

## METEOR Identifier: 679557

Expected Format for valid field: String with up to 80 alphanumeric characters.

A logical combination of alphanumeric characters that uniquely identifies a record.

The field *stateid* is the stable and unique identifier of a patient episode of care. The grouper expects this field to be a string. This value is used in identifying the first in episode Palliative Care phase.

Variable used in sorting and linking episodes, used in grouping palliative care episodes.

## 2.2.2 Hospital Service – care type (care)

## METEOR Identifier: 711010

Expected Format for valid field: Whole number – up to two numeric characters.

The overall nature of a clinical service provided to an admitted patient during an episode of care (admitted care), as represented by a code.

The field *care* is formatted as a whole integer number. If the grouper does not match a permissible care type value an error class will be returned for that row.

Permissible values are as set out in Table 2.

### Table 2. SNAP5Grouper care type (care) permissible values

Value	Description
2	Rehabilitation Care
3	Palliative Care
4	Geriatric evaluation and management (GEM)
5	Psychogeriatric Care
6	Maintenance Care

## 2.2.3 Person Date of Birth – (bir\_date)

## METEOR Identifier: 287007

Expected Format for valid class: DD/MM/YYYY – 10 alphanumeric characters.

The date of birth of the person, expressed as DD/MM/YYYY.

The field *bir\_date* is a date field in format of dd/mm/yyyy. For example, the following date entry will be considered as valid: 20/05/2021.

The field is used in calculating the individual's age. Age is derived from the start of patient care (*adm\_date*) – Individual's Date of Birth.

If *bir\_date* is greater than *adm\_date* or *sep\_date* the episode will return an error class. An error class will also be returned if bir\_date is less than 01/01/1901. If any of the date time formats are incorrect, an error class will be returned for that episode (CSV row).

## 2.2.4 Episode of admitted patient care – admission date (adm\_date)

## METEOR Identifier: 695137

Expected Format for valid class: DD/MM/YYYY – 10 alphanumeric characters.

The date on which an admitted patient commences an episode of care, expressed as DD/MM/YYYY.

The field *adm\_date* is a date field in the format of DD/MM/YYYY. For example, the following date entry will be considered as valid: 20/05/2025.

The field is used in calculating the length of stay: *sep\_date - adm\_date - LeaveDays*.

## 2.2.5 Episode of admitted patient care – separation date (sep\_date)

## METEOR Identifier: 270025

Expected Format for valid class: DD/MM/YYYY – 10 alphanumeric characters.

The date on which an admitted patient completes an episode of care, expressed as DD/MM/YYYY.

The field *sep\_date* is a date field in the format of DD/MM/YYYY. For example, the following date entry will be considered as valid: 20/05/2025.

The field is used in calculating the length of stay: *sep\_date - adm\_date - LeaveDays*.

## 2.2.6 Episode of admitted patient care – number of leave days (LeaveDays)

## METEOR Identifier: 270251

### Expected Format for valid class: Whole number >= 0

Sum of the length of leave (date returned from leave minus date went on leave) for all periods within the hospital stay.

The field *LeaveDays* is a whole number field greater or equal to 0. The variables should be consistent across the episode.

The field is used in calculating the length of stay: *sep\_date - adm\_date - LeaveDays*.

## 2.2.7 Episode of care – principal diagnosis, Primary and Additional – (x12ddx1 – x12ddx100)

## METEOR Identifier: 746665

Expected Format for valid class: String of 8 alphanumeric characters.

The diagnosis established after study to be chiefly responsible for occasioning an episode of admitted patient care as represented by a code.

The Diagnosis code field is expected to be a string and is used in calculating the Frailty Related Index of Comorbidities (FRIC) which is used to group episodes of GEM and some non-acute care episodes.

The SNAP5Grouper also provides a Dementia or Delirium present flag (although this is not used as a binary variable in the classification). The flag will be true if any of the following diagnosis codes are present: F00.00, F00.01, F00.10, F00.11, F00.20, F00.21, F00.90, F00.91, F01.00, F01.01, F01.10, F01.11, F01.20, F01.21, F01.30, F01.31, F01.80, F01.81, F01.90, F01.91, F02.00, F02.01, F02.10, F02.11, F02.20, F02.21, F02.30, F02.31, F02.40, F02.41, F02.80, F02.81, F03.00, F03.01, F05.0, F05.1, F05.8, F05.9.

Data reported must be aligned with either the ICD-10-AM Eleventh or Twelfth Edition, this will be dependent on the edition that is utilised locally.

## 2.2.8 Episode of admitted patient care – primary impairment type – (Impairmenttype)

## METEOR Identifier: 781319

Expected Format for valid class: String with up to 7 numeric characters.

The impairment which is the primary reason for the admission to an episode of care, as represented by a code.

The *Impairmenttype* code is expected to be a string that matches the Australasian Rehabilitation Outcomes Centre (AROC) Impairment codes used to classify rehabilitation episodes into like clinical groups.<sup>5</sup>

<sup>&</sup>lt;sup>5</sup> See the Australasian Rehabilitation Outcomes Centre Impairment Coding Guidelines and Australasian Rehabilitation Outcomes Centre Paediatric Impairment Coding Guidelines.

## 2.2.9 Person – level of functional independence, Functional Independence Measure score – (Fim\_Score1 - Fim\_Score18)

## METEOR Identifier: 717982

Expected Format for valid class: Whole number between 1 and 7 – 1 numeric character.

A person's level of functional independence to carry out activities of daily living safely and autonomously, as represented by a Functional Independence Measure score-based code.

*Fim\_score 1* through to *Fim\_score13* are used to calculate the Functional Independence Motor Score. *Fim\_score14* through to *Fim\_score18* are also used to calculate the Functional Independence Cognition Score.

The grouper expects the values of each FIM item to be between 1 and 7 as set out in **Table 3**.

Table 3. SNAP5Grouper Functional Independence Measure score (*Fim\_Score1 - Fim\_Score18*) permissible values

Value	Description
1	Total assistance with helper
2	Maximal assistance with helper
3	Moderate assistance with helper
4	Minimal assistance with helper
5	Supervision or setup with helper
6	Modified independence with no helper
7	Complete independence with no helper

## 2.2.10 Person – level of psychiatric symptom severity, Health of the Nation Outcome Scale 65+ score – (Honos65\_score1 -Honos65\_score12)

## METEOR Identifier: 748292

Expected Format for Valid class: Whole number between 0 and 4 – 1 numeric character

An assessment of the severity of a person's psychiatric symptoms, as represented by a Health of the Nation Outcome Scale (HoNOS) 65+ score-based code.

*Honos65\_score1* through to *Honos65\_score12* are used to calculate the HoNOS 65+ Total Score field.

The grouper expects the values of each HoNOS 65+ score item to be between 0 and 4 as set out in **Table 4**.

Table 4. SNAP5Grouper Health of the Nation Outcome Scale 65+ score – (*Honos65\_score1 – Honos65\_score12*) permissible values

Value	Description
0	No problem within the period stated
1	Minor problem requiring no action
2	Mild problem but definitely present
3	Moderately severe problem
4	Severe to very severe problem

## 2.2.11 Person – level of functional independence, Resource Utilisation Groups– Activities of Daily Living total score – (Rugadl\_total)

## METEOR Identifier: 764211

Expected Format for Valid class: Whole number between 4 and 18 – up to 2 numeric characters.

A person's level of functional independence to carry out activities of daily living safely and autonomously, as represented by a total Resource Utilisation Groups – Activities of Daily Living score-based code.

## 2.2.12 Phase ID – (PhaseID)

## **METEOR Identifier: N/A**

Expected Format for valid class: String of up to 15 alphanumeric characters.

PhaseID is the stable and unique identification of a patient palliative phase of care.

A new *PhaseID* is created when the phase changes. These are linked via the *stateID*. The grouper expects this field to be a string.

## 2.2.13 Episode of admitted patient care – palliative care phase start date – (Phase\_StartDate)

## METEOR Identifier: 681043

Expected Format for valid class: DD/MM/YYYY – 10 alphanumeric characters.

The date on which an admitted patient commences a palliative care phase, expressed as DD/MM/YYYY.

The field *Phase\_StartDate* is a date field in the format of DD/MM/YYYY.

In addition to being used for classifying an episode to a valid AN-SNAP class it is also used in deriving if a phase ID is the First Phase in Episode, which is used for grouping some overnight adult palliative care phases.

## 2.2.14 Episode of admitted patient care – palliative care phase end date – (Phase\_EndDate)

## METEOR Identifier: 681040

Expected Format for valid class: DD/MM/YYYY – 10 alphanumeric characters.

The field *Phase\_EndDate* is a date field in the format of DD/MM/YYYY.

In addition to being used for classifying an episode to a valid AN-SNAP class it is also used in deriving if a phase ID is the First Phase in Episode, which is used for grouping some overnight adult palliative care phases.

## 2.2.15 Episode of admitted patient care – palliative care phase (PhaseType)

## METEOR Identifier: 681029

Expected Format for valid class: Whole number between 1 and 4 – 1 numeric character.

The patient's stage of illness or situation within the episode of care in terms of the recognised palliative care phase, as represented by a code.

The field *PhaseType* is a whole number field in the format of an integer between 1 and 4.

In addition to being used for classifying a valid code, it is also used in deriving if a phase ID is the First Phase in Episode which is used for grouping some adult palliative care phases.

The grouper expects the values of the *PhaseType* item to be a whole number between 1 and 4 as set out in **Table 5**.

## Table 5. SNAP5Grouper palliative care phase (*PhaseType*) permissible values

Value	Description
1	Stable
2	Unstable
3	Deteriorating
4	Terminal

## 2.3 Variables required by care type

## 2.3.1 Rehabilitation – Care type 2

- Bir\_date
- Adm\_date
- Sep\_date
- Leavedays
- Impairmenttype
- FIM\_score1 FIM\_Score18

## 2.3.2 Palliative – Care type 3

- Bir\_date
- Adm\_date
- Sep\_date
- Leavedays
- StateID
- PhaseType
- Phase\_StartDate
- Phase\_EndDate
- PhaseID
- RUGADL\_Total

## 2.3.3 Geriatric evaluation and management – Care type 4

- Bir\_date
- Adm\_date
- Sep\_date
- Leavedays
- FIM\_Score1 FIM\_Score18
- Diagnosis codes: X12ddx1 x12ddx100

## 2.3.4 Psychogeriatric – Care type 5

- Bir\_date
- Adm\_date
- Sep\_date
- Leavedays
- Honos65\_score1 Honos65\_score12

## 2.3.5 Non-acute (Maintenance) – Care type 6

- Bir\_date
- Adm\_date
- Sep\_date
- Leavedays
- Diagnosis codes: X12ddx1 x12ddx100

## 3. SNAP5Grouper outputs

The SNAP5Grouper outputs valid classes and error classes according to the Australian National Subacute and Non-Acute Patient Classification Version 5.0 (AN-SNAP V5.0) structure summarised in **Figure 1**.



## Figure 1. AN-SNAP V5 Classification Structure – Summary

## 3.1 Valid classes

The SNAP5Grouper has 89 valid end classes for admitted care:

- 83 overnight classes across the five care types
- six same-day classes one for each of adult rehabilitation, paediatric rehabilitation, adult palliative care, paediatric palliative care, GEM, and psychogeriatric care.

A complete table of all the AN-SNAP V5.0 classification admitted end classes including the grouping variables and thresholds is available in the <u>Classification Manual</u>.

## 3.2 Error classes

The SNAP5Grouper has eight ungroupable error classes:

- four adult care type ungroupable error classes
- two paediatric ungroupable error classes (paediatric rehabilitation and paediatric palliative care)
- one ungroupable error class for non-acute care
- one ungroupable error class applicable when a care type (or episode type) cannot be established.

### Table 6. SNAP5Grouper error classes

Error class	Reason
599A	Admitted Adult Rehabilitation – Ungroupable
599B	Admitted Adult Palliative Care – Ungroupable
599C	Admitted GEM – Ungroupable
599D	Admitted Psychogeriatric – Ungroupable
599E	Admitted Non-Acute – Ungroupable
599F	Admitted Paediatric Rehabilitation – Ungroupable
599G	Admitted Paediatric Palliative Care – Ungroupable
5999	Error with Care Type or Episode Type

## **3.3 Additional outputs**

## 3.3.1 Headers row

The SNAP5Grouper will operate regardless of whether a headers row is included in the CSV file. If a headers row exists, the SNAP5Grouper will not attempt to group it. If no headers row is provided, the SNAP5Grouper will generate a headers row in the output file.

## 3.3.2 Weighted FIM motor score column

The SNAP5Grouper will generate an additional output column for weighted FIM<sup>™</sup> motor scores. A weighted FIM<sup>™</sup> Motor score is calculated by multiplying each FIM<sup>™</sup> item score by the corresponding weight for the impairment group of the record for Rehabilitation care episodes.

## 3.3.3 Dementia or Delirium flag column

The SNAP5Grouper also produces an additional output column with a Dementia or Delirium flag. This information was used for grouping in the AN-SNAP V4.0 classification but is superseded by the FRIC in the AN-SNAP V5.0 classification. The flag has been retained as a grouper output as a stakeholder request.

## 3.3.4 Error message column

The SNAP5Grouper will generate an additional output column with error messages of all error classes and information detailing why a row was grouped to an error class.

# 4. Processing a file from the SNAP5Grouper user interface

The application is run by double clicking the AN-SNAPV5.0\_GrouperV5.0.1\_GUI.exe file. This will load the main application window shown in **Figure 2**, which will guide you through the rest of the process.

## 4.1 Main window

The main window includes the following three buttons:

- Select Input File, which is used to select the CSV data file to be grouped;
- Select Output Directory, which is used to select the folder for the grouper output file; and
- **Submit**, which runs the grouper.

*Note: the input file requires the data to be prepared as specified in the <u>Input Data Preparation</u> <i>section.* 

### Figure 2. SNAP5Grouper main window

Help	Select input file *Required in .csv format	Select output file	
	Subr	mit	

The main window also includes a table that displays a sample of the episodes being processed while the grouper is running; and displays the location of the output file when the grouper is complete. This table previews a subset of the CSV, displaying the following rows:

Stateid, care, bir\_date, adm\_date, sep\_date, leavedays, x12ddx1, x12ddx2, x12ddx3, x12ddx4, x12ddx5, impairmenttype, Phaseid, Phase\_startDate, Phase\_EndDate, PhaseType.

## 4.2 Steps to run the grouper

The steps to run the grouper are outlined below.

## Step 1: Select the Input File

To select a data file to be grouped, Click the Select Input File button, and select the CSV data file from the Open window, as shown in **Figure 3**, and click Open.

## Figure 3. Selecting data to be grouped

? Help	$\frown$				X		
	(印)		(口)				
	Select input	<b>file</b> ormat	Select output file				
		S	ubmit				
	🧳 Open						×
	← → ↑ ↑ his PC > Docu	iments > Doo	~	C Search Docum	Rec	0	
	3D Objects	^	Name	Date modified	Type	Size	•
	Desktop     Documents     Custom Office Templates		Test_data.csv	17/04/2024 11:12	Microsoft Excel C	. 89,331 KB	
	Documents My SAS Files						
	R Downloads	- 1					
IIIAGFA	Music  Pictures  Videor						
	File name: ML test	data.csv					~
		Junior			Open	Cancel	

On completion of this step, the filename and path of the file populates the text field to the right of the Select Input File button. This will alow the running of the grouper on the selected file.

## Step 2: Selecting output folder

By default, the grouper outputs to the same folder of the input file. To output a different folder, select the Select Output folder button as shown in **Figure 4**.

### 🚱 Help (F) <u>ل</u> Select input file Select output file equired in .csv format Test\_data.csv 5 leavedays 139 140 Phase\_StartDate Phase\_EndDate x12ddx1 x12ddx2 x12ddx4 adm\_date sep\_date x12ddx3 x12ddx5 Phaseid PhaseType 06/12/ 10/08 20/11 18/12 29/11 29/11 29/11 29/11 29/11 29/11 29/11 29/11 29/11 29/11 29/11 29/11 29/11 29/11 Select Fo ↑ → This PC → Documents → Documents y ひ Search Docum م nize 👻 New fo 800 -0 07 DRG Grouper Date modified Туре Size Name Version 5 00 DCL Model Run03 02 Output 06 Different threshold 5 16 Surgical Complication This PC 3D Objects Desktop Documents Folder: Select Folder Cancel

## Figure 4. Selecting output folder

## Step 3: Running the grouper

To run the grouper, select the Submit button as shown in Figure 5.

## Figure 6. Submitting the grouper

		A Help													
		<b>₩</b> Help		Select input file			Select output file				2				
						rest_data.csv		2./ Osels/mol	iammad.iaii/Documer	its/Documents					
							Su	bmit							
0	1	2	3	4	5	6	7	8	9	10	106	138	139	140	141
stateid	care	bir_date	adm_date	sep_date	leavedays	x12ddx1	x12ddx2	x12ddx3	x12ddx4	x12ddx5	impairmenttype	Phaseid	Phase_StartDate	Phase_EndDate	PhaseType
000000000000000000000000000000000000000	2	06/12/1953	18/12/2021	13/10/2022	0	M500	F319	F3290	R268	R296	99.9999				
000000000000000000000000000000000000000	2	10/08/1945	18/12/2021	14/09/2022	0	F0191	F3290	R418	F29	E1142	99.9999				
000000000000000000000000000000000000000	4	20/11/1946	02/07/2022	28/07/2022	0	F319	F259	F29	\$023	Y0909					
000000000000000000000000000000000000000	4	18/12/1942	16/07/2022	21/09/2022	0	\$7203	W19	Y9210	U739	F0301					
000000000000000000000000000000000000000	2	04/06/2005	04/05/2023	20/06/2023	5	M2450	G931	M357	G4030	F431	2.13				
000000000000000000000000000000000000000	2	29/11/2011	01/07/2022	01/07/2022	0	G819	H534	R268	R478	H907	99.9999				
000000000000000000000000000000000000000	2	29/11/2011	04/07/2022	04/07/2022	0	G819	H534	R268	R478	H907	99.9999				
000000000000000000000000000000000000000	2	29/11/2011	05/07/2022	05/07/2022	0	G819	H534	R268	R478	H907	99.9999				
000000000000000000000000000000000000000	2	29/11/2011	06/07/2022	06/07/2022	0	G819	H534	R268	R478	H907	99.9999				
000000000000000000000000000000000000000	2	29/11/2011	07/07/2022	07/07/2022	0	G819	H534	R268	R478	H907	99.9999				
000000000000000000000000000000000000000	2	18/04/2021	12/08/2022	21/10/2022	1	G931	R13	G253	Z509	A850	2.12				
0000000000000000	2	29/11/2011	19/07/2022	19/07/2022	0	G819	H534	R268	R478	H907	99.9999				
000000000000000000000000000000000000000	2	29/11/2011	20/07/2022	20/07/2022	0	G819	H534	R268	R478	H907	99.9999				
000000000000000000000000000000000000000	2	29/11/2011	21/07/2022	21/07/2022	0	6819	H534	R268	R4/8	H907	99,9999				
000000000000000000000000000000000000000	2	29/11/2011	22/07/2022	22/07/2022	0	GS19	H534	R208	K478	Han	33'3333				
000000000000000000000000000000000000000	4	20/11/2010	21/07/2022	25/07/2022		6910	6610	2309	D.470	H007	00.0000				
000000000000000000000000000000000000000	2	29/11/2011	25/07/2022	25/07/2022	0	6819	11534	R200	R4/6	1907	99,9999				
000000000000000000000000000000000000000	2	29/11/2011	27/07/2022	27/07/2022	0	6819	H534	R268	R478	H907	00 0000				

## Step 4: Output of the Grouper

The SNAPV5Grouper will create 2 output files:

- 1- **Formatted.csv**: this output file will include the input data alongside the AN-SNAP V5.0 class, Weighted FIM<sup>™</sup> motor score, and the error message.
- 2- **Error\_log.csv**: this output file will list all error classes and information about why a row was grouped to an error class.

## Figure 7. Grouper finished processing

			🕜 Help													
			-				$\square$									
							([t])	)		(LJ)						
							Select inpu	ut file	Sele	ect output file						
							*Required in .cs	v format								
							Test_data.csv		Z:/Users/moh	ammad.lafi/Docume	nts/Documents					
								Sul	bmit							
	0	1	2	3	4	5	6	7	8	9	10	106	138	139	140	141
	stateid	care	bir date	adm date	sep date	leavedays	x12ddx1	x12ddx2	x12ddx3	x12ddx4	x12ddx5	impairmenttype	Phaseid	Phase StartDate	Phase EndDate	PhaseType
00000	0000000000	2	06/12/1953	18/12/2021	13/10/2022	0	M500	F319	F3290	R268	R296	99.9999				
00000	000000000000000000000000000000000000000	2	10/08/1945	18/12/2021	14/09/2022	0	F0191	F3290	R418	F29	E1142	99.9999				
00000	000000000000000000000000000000000000000	4	20/11/1946	02/07/2022	28/07/2022	0	F319	F259	F29	S023	Y0909					
00000	000000000000000000000000000000000000000	4	18/12/1942	16/07/2022	21/09/2022	0	\$7203	W19	¥9210	U739	F0301					
00000	000000000000000000000000000000000000000	2	04/06/2005	04/05/2023	20/06/2023	5	M2450	G931	M357	G4030	F431	2.13				
00000	000000000000000000000000000000000000000	2	29/11/2011	01/07/2022	01/07/2022	0	G819	H534	R268	R478	H907	99.9999				
00000	000000000000000000000000000000000000000	2	29/11/2011	04/07/2022	04/07/2022	0	G819	H534	R268	R478	H907	99.9999				
00000	000000000000000000000000000000000000000	2	29/11/2011	05/07/2022	05/07/2022	0	G819	H534	R268	R478	H907	99.9999				
00000	000000000000000000000000000000000000000	2	29/11/2011	06/07/2022	06/07/2022	0	G819	H534	R268	R478	H907	99.9999				
00000	000000000000000000000000000000000000000	2	29/11/2011	07/07/2022	07/07/2022	0	G819	H534	R268	R478	H907	99.9999				
00000	000000000000000000000000000000000000000	2	18/04/2021	12/08/2022	21/10/2022	1	G931	R13	G253	Z509	A850	2.12				
00000	000000000000000000000000000000000000000	2	29/11/2011	19/07/2022	19/07/2022	0	G819	H534	R268	R478	H907	99.9999				
00000	000000000000000000000000000000000000000	2	29/11/2011	20/07/2022	20/07/2022	0	Finished			×	H907	99.9999				
00000	000000000000000000000000000000000000000	2	29/11/2011	21/07/2022	21/07/2022	0					H907	99.9999				
00000	000000000000000000000000000000000000000	2	29/11/2011	22/07/2022	22/07/2022	0	Finish Files	ned processing CSV.			H907	99.9999				
00000	000000000000000000000000000000000000000	2	02/11/2016	27/07/2022	03/08/2022	0	Pile Si	aved: 2:/Users/mona	mmad.lati/Docume	nts/Documents		3.4				
00000	00000000000	2	29/11/2011	25/07/2022	25/07/2022	0					H907	99,9999				
00000	000000000000000000000000000000000000000	2	29/11/2011	20/07/2022	20/07/2022	0				OK	H907	99,9999				
00000	000000000000000000000000000000000000000	2	29/11/2011	27/07/2022	27/07/2022	0					H907	99.9999				

## Figure 7. Output files



## 5. Processing a file from the SNAP5Grouper command line interface

The Command Line Interface (CLI) version of the grouper is run by executing the

AN-SNAPV5.0\_GrouperV5.0.1\_CLI.exe. The CLI version of the application uses the same logic as the Application version and has the same input CSV requirements. The arguments accepted by the CLI program are listed in **Table 7**.

## Table 7. SNAP5Grouper command line arguments

Command argument	Required	Expected additional parameters	Description
-h	No		Displays information about the CLI, expected arguments and how to use the grouper.
-i input	Yes	File path to input file	Required parameter of the file path that the grouper will process.
-o output	Yes	Folder path to output directory	Required parameter of the directory where the grouper will output the processed file.
-d	No		Debug flag, prints a few columns from the first 20 rows found in the CSV.
-е	No		Error flag, creates a CSV output of all error classes and information about why a row was grouped to an error class.
-n	No	Filename	Optional parameter to name the CSV output file.

The following command will run the grouper:

AN-SNAPV5.0\_GrouperV5.0.1\_CLI.exe -i \Documents\input.csv -o \Documents\

Below are some examples of using additional commands:

AN-SNAPV5.0\_GrouperV5.0.1\_CLI.exe -i \Documents\input.csv -o \Documents\ -d AN-SNAPV5.0\_GrouperV5.0.1\_CLI.exe -i \Documents\input.csv -o \Documents\ -e AN-SNAPV5.0\_GrouperV5.0.1\_CLI.exe -i \Documents\input.csv -o \Documents\ -e -n new\_file AN-SNAPV5.0\_GrouperV5.0.1\_CLI.exe -i \Documents\input.csv -o \Documents\ -d -e



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