Australian Emergency Care Classification (AECC) Version 1.0

Grouper Application Version 1.4
User Guide

June 2023

IHACPA

AECC Version 1.0 – Grouper Application Version 1.4 User Guide – June 2023

Table of Contents

Background

The Australian Emergency Care Classification (AECC) Version 1.0 (V1.0) has been designed to categorise all emergency department (ED) episodes reported to the Non-admitted patient emergency department care national minimum data set (NAPEDC NMDS). It also includes error end classes, which are used to identify episodes with missing information or invalid data.

The Independent Health and Aged Care Pricing Authority (IHACPA) has updated the AECC V1.0 Grouper to accept the Emergency Care International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM) Principal Diagnosis Short List (EPD Short List) Twelfth Edition codes. For the Twelfth Edition of the EPD Short List, five codes have been inactivated and twelve codes have been activated to a total of 1181 codes.

This version of the AECC V1.0 grouper is Version 1.4 (V1.4).

Purpose

The AECC V1.0 grouper application (AECC V1.0 grouper) uses variables defined by data elements in the NAPEDC NMDS and groups them into either an AECC V1.0 end class or an error end class. The grouper provides the following functions:

- the ability to group a Comma Delimited data file interactively
- view results through a user interface
- output results.

Application requirements

The AECC V1.0 grouper V1.4 application is executable in most standard operating systems.

Input data preparation

The AECC V1.0 grouper V1.4 requires a single data file to be provided in Comma Separated Values (CSV) format. In addition, some of the variables may require preparation.

Age

Age is derived from the patient's date of birth and the clinical care commencement date.

Age should be reported in years.

Emergency Care ICD-10-AM Principal Diagnosis Short List

The EPD Short List[1] is the classification used as the standard for the national reporting of emergency care principal diagnoses. Where emergency care principal diagnoses are collected using other classifications such as ICD-10-AM Twelfth Edition or the Systematized Nomenclature of Medicine – Clinical Terms Australian Extension (SNOMED CT-AU) Emergency Department Reference Set (EDRS) codes, users must ensure the appropriate mapping files are used to convert alternative classifications and terminologies into EPD Short List Twelfth Edition codes before grouping.

Clinical care commencement date

Clinical care commencement date should be reported using the DDMMYYYY format.

Input variables

The input file must contain the eight data items in the following sequence for the AECC V1.0 grouper to work correctly:

- episode number (Epino)
- triage category
- episode end status
- type of visit
- age
- transport mode (arrival)
- principal diagnosis
- service date

Episode number

A unique episode number (Epino) for each episode is required to link the AECC V1.0 grouping result with the complete ED episode.

Triage category

The valid values for the “Triage Category” field are:

Value	Description
1	Resuscitation: immediate (within seconds)
2	Emergency: within 10 minutes

[1] https://www.ihacpa.gov.au/health-care/classification/emergency-care/epd-short-list

Value	Description
3	Urgent: within 30 minutes
4	Semi-urgent: within 60 minutes
5	Non-urgent: within 120 minutes

Episode end status

The valid values for the “Episode End Status” field are:

Value	Description
1	Transferred for admitted patient care in this hospital (either short stay unit, hospital-in-the-home or other admitted patient care unit)
2	Emergency department stay completed - departed without being transferred to a short stay unit, hospital-in-the-home or other admitted patient care unit in this hospital or referred to another hospital
3	Non-admitted patient emergency department service episode completed - referred to another hospital for admission
4	Did not wait to be attended by a health care professional
5	Left at own risk after being attended by a health care professional but before the non-admitted patient emergency department service episode was completed
6	Died in emergency department
7	Dead on arrival
8	Registered, advised of another health care service, and left the emergency department without being attended by a health care professional

Type of visit

The valid values for the “Type Of Visit” field are:

Value	Description
1	Emergency presentation
2	Return visit, planned
3	Pre-arranged admission
5	Dead on arrival

Age

The valid values for the “Age” field are:

Value	Description
0 - 118	Age is unlikely to be over 118

Transport mode (arrival)

The valid values for the “Transport Mode” field are:

Value	Description
1	Ambulance, air ambulance or helicopter rescue service
2	Police/correctional services vehicle
8	Other

Principal diagnosis

The valid values for the “ED Principal Diagnosis” field are:

Value	Description
Codes in the EPD Short List Twelfth Edition	

Service date

The valid values for the “Service Date” field are:

Value	Description
Should be in the DDMMYYYY format	

Running the grouper

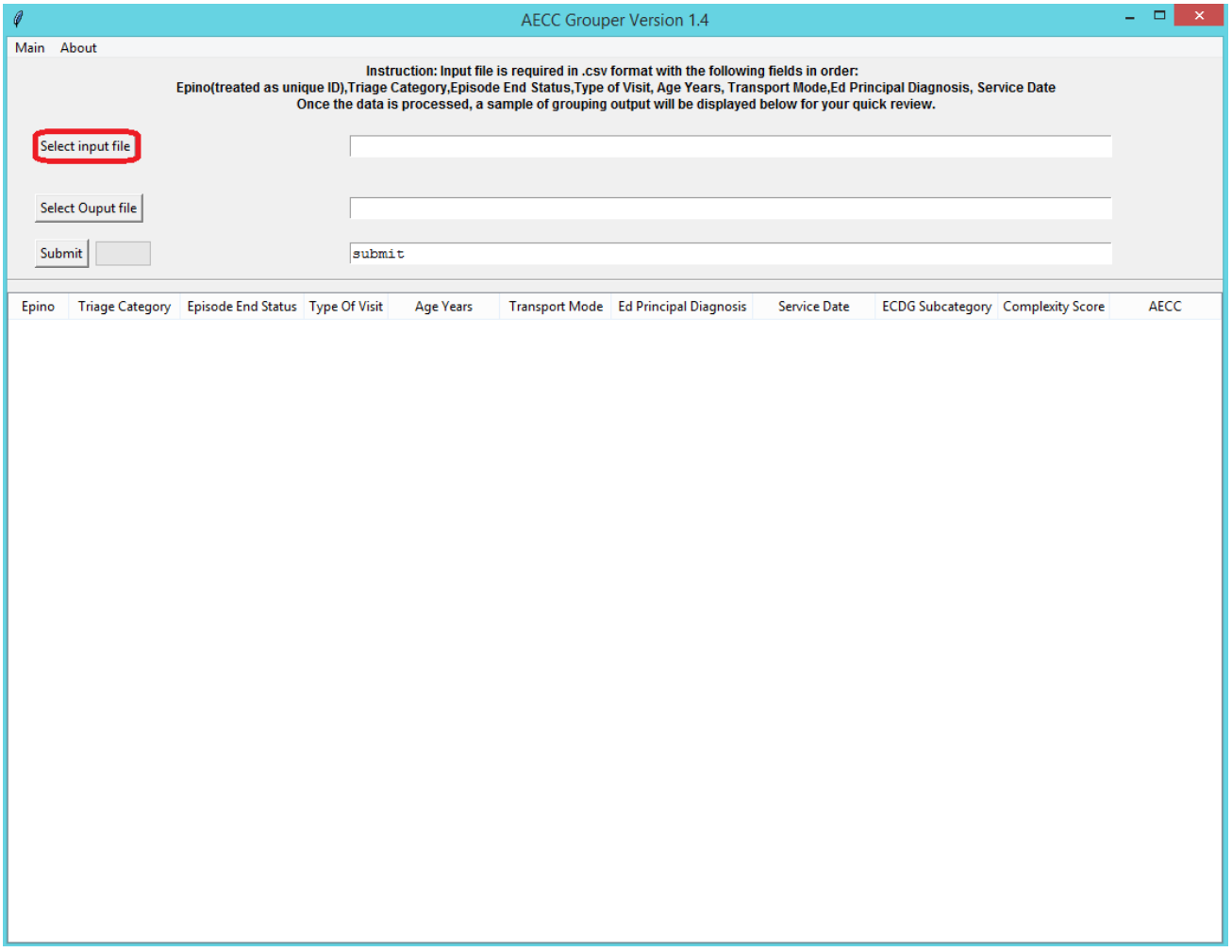
The grouper is run by double clicking the AECCV14.exe file. This will load the main application window shown in Figure 1, which will guide you through the rest of the process.

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 File, which is used to select the folder for the grouper output file and
- Submit, which runs the AECC V1.0 grouper V1.4.

Note: the input file requires data preparation outlined in the Input Data Preparation section.

Figure 1. AECC Grouper Main Window



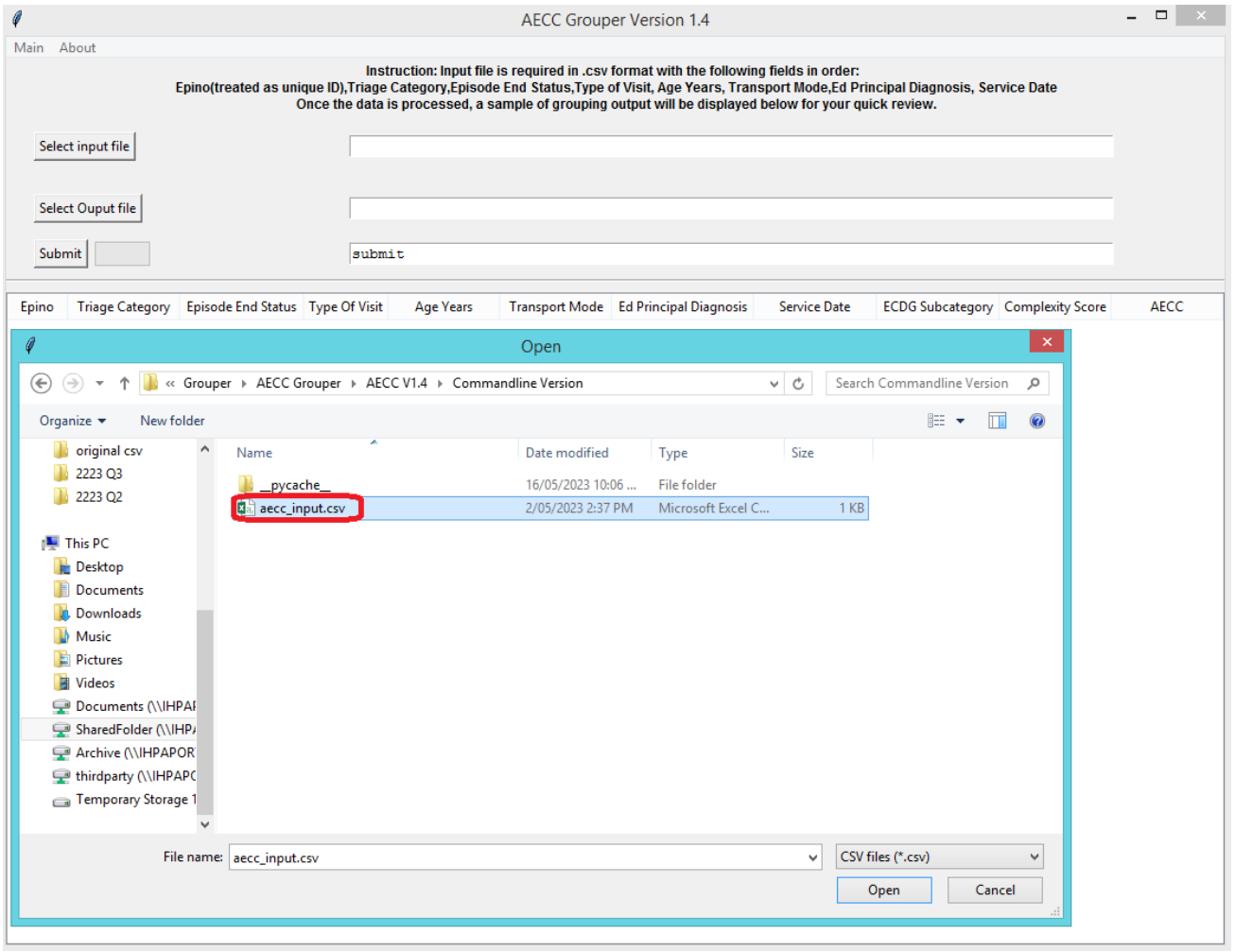
The main window also includes a table which displays a sample of the episodes being processed while the grouper is running and displays the location of the output file when the grouper is complete.

The steps to run the AECC V1.0 grouper V1.4 are outlined below.

Step 1: Select the Input File

To select a data file to be grouped, Click the *Select Input File* button (circled in red below), and select the .CSV data file from the Open window, as shown in Figure 2, and click Open.

Figure 2. Selecting Data to be grouped

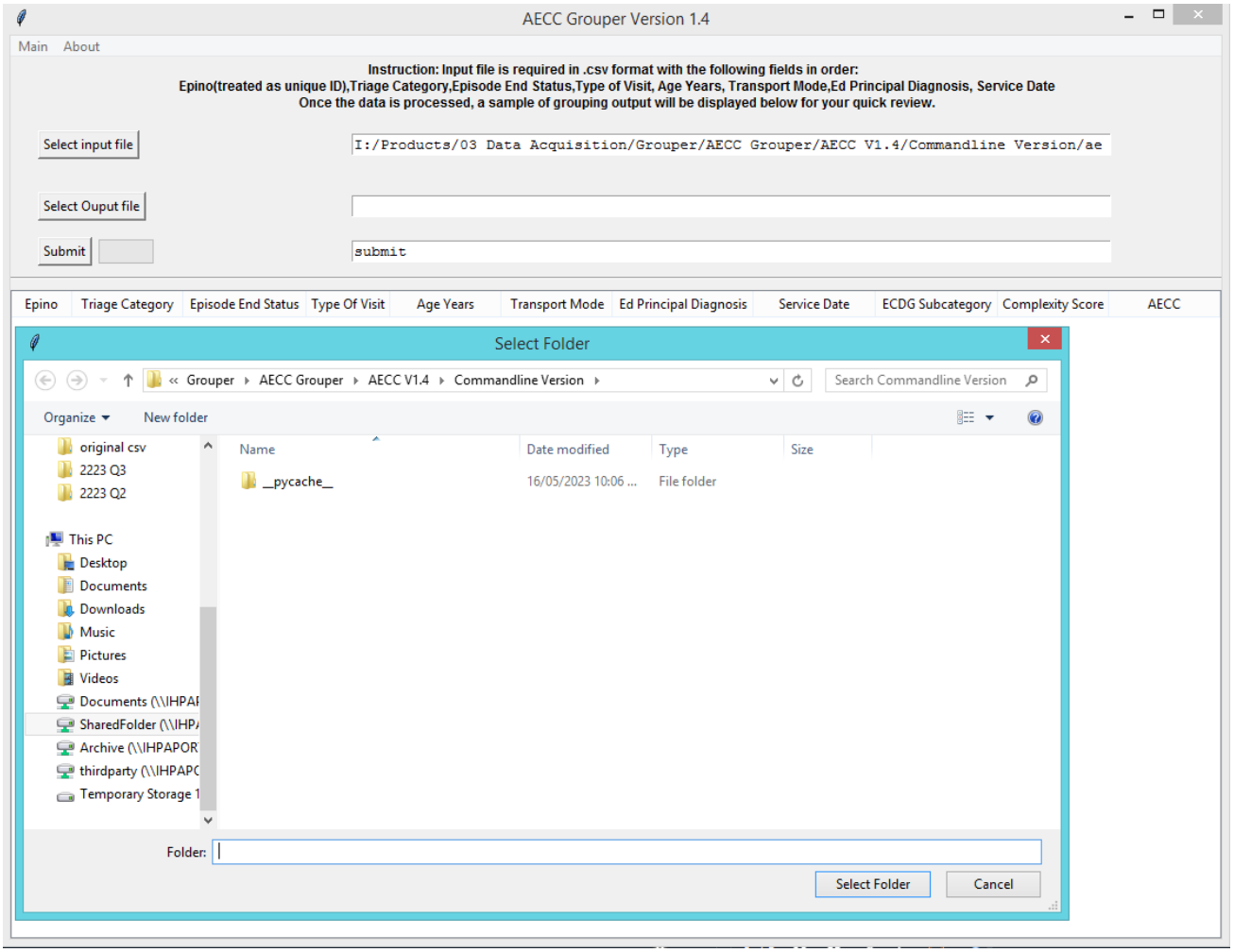


On completion of this step, the filename and path of the file populates the text field to the right of the *Select Input File* button. This will allow the running of the grouper on the selected file.

Step 2: Select Output file

By default, the AECC V1.0 grouper V1.4 outputs to the same folder of the input file. To output a different folder, select the *Select Output file* button as shown in Figure 3.

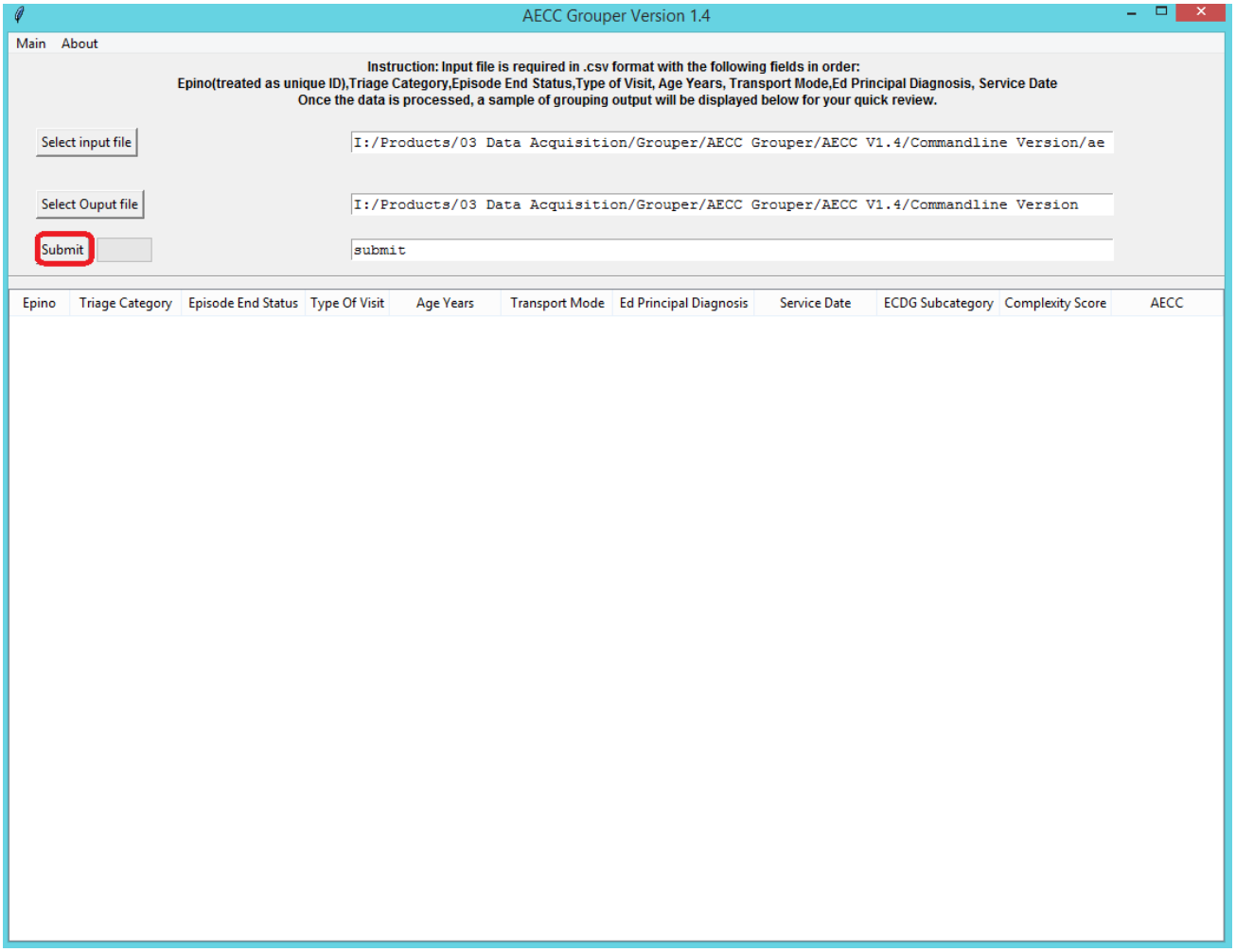
Figure 3. Selecting output folder



Step 3: Running AECC V1.0 grouper V1.4

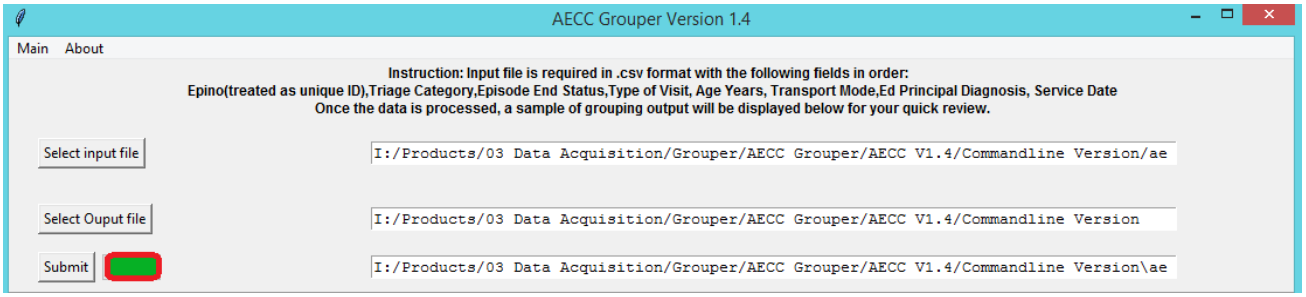
To run the AECC V1.0 grouper V1.4, select the *Submit* button as shown in Figure 4.

Figure 4. Submitting Data to be grouped



During the running time, a status bar demonstrates the progress of grouping in green, as shown in Figure 5.

Figure 5. Status bar for showing grouping progress



Step 4: Output of the Grouper

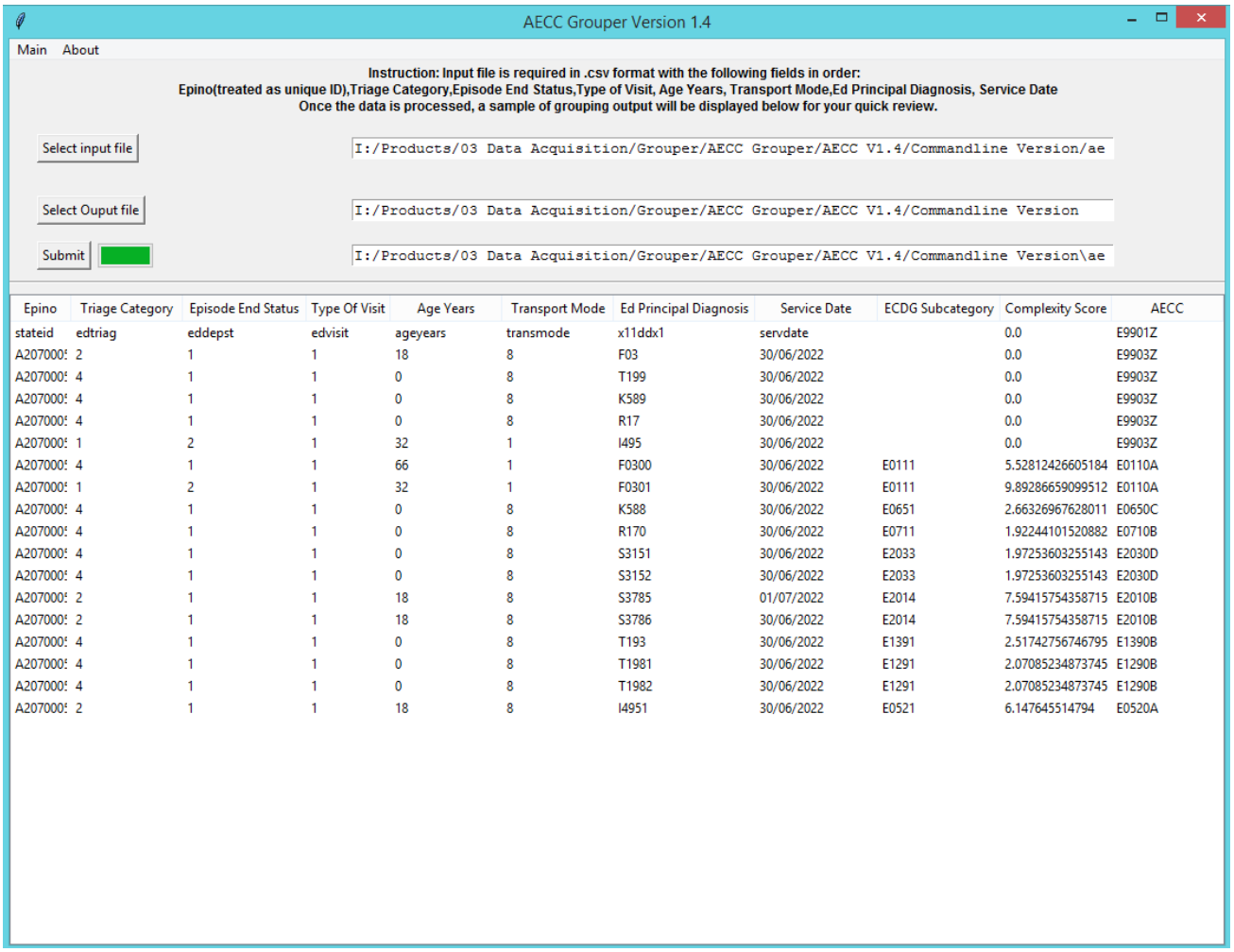
The final output of the grouper will merge the results of the AECC output data with the original data that was provided. Additional columns will be appended to the input data file:

- ECDG Subcategory
- Complexity Score

- AECC end class

An example of this output can be seen by scrolling to the right on the table as shown in Figure 6 below.

Figure 6. Grouper output preview



Epino	Triage Category	Episode End Status	Type Of Visit	Age Years	Transport Mode	Ed Principal Diagnosis	Service Date	ECDG Subcategory	Complexity Score	AECC
stateid	edtriag	eddepst	edvisit	ageyears	transmode	x11ddx1	servdate		0.0	E9901Z
A207000:	2	1	1	18	8	F03	30/06/2022		0.0	E9903Z
A207000:	4	1	1	0	8	T199	30/06/2022		0.0	E9903Z
A207000:	4	1	1	0	8	K589	30/06/2022		0.0	E9903Z
A207000:	4	1	1	0	8	R17	30/06/2022		0.0	E9903Z
A207000:	1	2	1	32	1	I495	30/06/2022		0.0	E9903Z
A207000:	4	1	1	66	1	F0300	30/06/2022	E0111	5.52812426605184	E0110A
A207000:	1	2	1	32	1	F0301	30/06/2022	E0111	9.89286659099512	E0110A
A207000:	4	1	1	0	8	K588	30/06/2022	E0651	2.66326967628011	E0650C
A207000:	4	1	1	0	8	R170	30/06/2022	E0711	1.92244101520882	E0710B
A207000:	4	1	1	0	8	S3151	30/06/2022	E2033	1.97253603255143	E2030D
A207000:	4	1	1	0	8	S3152	30/06/2022	E2033	1.97253603255143	E2030D
A207000:	2	1	1	18	8	S3785	01/07/2022	E2014	7.59415754358715	E2010B
A207000:	2	1	1	18	8	S3786	30/06/2022	E2014	7.59415754358715	E2010B
A207000:	4	1	1	0	8	T193	30/06/2022	E1391	2.51742756746795	E1390B
A207000:	4	1	1	0	8	T1981	30/06/2022	E1291	2.07085234873745	E1290B
A207000:	4	1	1	0	8	T1982	30/06/2022	E1291	2.07085234873745	E1290B
A207000:	2	1	1	18	8	I4951	30/06/2022	E0521	6.147645514794	E0520A

On completion of this step, a new file with the name <input file name>+" _Grouped.csv" will be created in the same folder as the input file.

Glossary

Term	Definition
Australian Emergency Care Classification (AECC)	Classification system developed for Australia primarily for activity based funding of emergency care.
Error class	Classes which are reserved for missing or invalid information for an emergency care episode. The AECC has four error classes.
Emergency Care Categories (ECC)	High level grouping of ECDGs, mainly used for navigating the ECDGs.
Emergency Care Diagnosis Groups (ECDG)	Groupings of EPD Short List diagnoses reflecting care pathways or models of care in emergency departments.
Emergency Care Diagnosis Groups (ECDG) subcategory	Clinically meaningful clusters of short list diagnoses within ECDGs. The ECDG subcategories are used in the complexity splits, where more complex diagnoses within an ECDG contribute to the overall complexity score of the episode.
Emergency Care ICD-10-AM Principal Diagnosis Short List (EPD Short List)	List of codes and medical terms based on ICD-10-AM aiming to provide a nationally consistent approach to principal diagnosis reporting for emergency care.. A 'principal diagnosis' is reported for emergency department attendances within the Non-Admitted Patient Emergency Department Care National Minimum Data Set (NAPEDC NMDS). It is defined as the diagnosis established at the end of the patient's attendance in an emergency department to be mainly responsible for occasioning the attendance following consideration of clinical assessment, as represented by a code. Comorbidities and causes of injuries are not intended to be captured as the principal diagnosis and can be captured as secondary data items in other emergency department collections.
International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM)	The International Statistical Classification of Diseases and Related Health Problems (ICD) is the foundation of health statistics, developed by the World Health Organization. The Tenth Revision, Australian modification (ICD-10-AM) is an alphanumeric classification and contains codes used to classify diseases, injuries, and related health problems within Australia.
Pre- ECDG	An ECDG that is allocated based on patient status or contact with a health professional.
Schematic	A diagram defining the method in which ECDGs are allocated, using flow charts and tables.
Systematized Nomenclature of Medicine – Clinical Terms Australian Extension (SNOMED CT-AU) Emergency Department Reference Set (EDRS)	SNOMED CT-AU is a systematically organised computer-processable collection of medical terminology which provides codes, terms, synonyms, and definitions used in clinical documentation and reporting, maintained in Australia by the Australian Digital Health Agency (ADHA). The EDRS is a reference set of purpose-built terminology developed by the ADHA,

Independent Health and Aged Care Pricing Authority

Eora Nation, Level 12, 1 Oxford Street
Sydney NSW 2000

Phone 02 8215 1100
Email enquiries.ihacpa@ihacpa.gov.au
Twitter @IHACPA

www.ihacpa.gov.au