Australian Emergency Care Classification (AECC)

Grouper Application Version 1.3 User Guide

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IHPA

Australian Emergency Care Classification – Grouper Application Version 1.3 – User Guide

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Background

The Australian Emergency Care Classification (AECC) 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.

IHPA has updated the AECC Grouper to include thirty eight new short list codes and removed one from the shortlist reference file. It also fixed an issue related to sub intercept of Emergency Care Diagnosis Group (ECDG) sub code "E0111" in D1 reference data. This version is named Version 1.3.

Purpose

The AECC grouper application (the AECC grouper) uses variables defined by the data specifications in the NAPEDC NMDS and groups them into either an AECC 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 grouper application has no specific requirement.

Input data preparation

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

Age

Age should be derived from the patient's date of birth and the clinical care commencement date and time.

Age should be reported in years.

ED Principal Diagnosis

The ED Short List[1] is the classification used as the standard for the national reporting of ED principal diagnosis. The AECC requires ED Short List codes to group episodes into an AECC end class. Where ED principal diagnosis is collected using the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM) or the Systematized Nomenclature of Medicine – Clinical Terms (SNOMED CT) codes, jurisdictions must ensure the appropriate mapping files are used to convert alternative classifications/terminologies into ED Short List codes.

Clinical commencement date/time

Clinical commencement date and time should be combined to the same variable.

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[1] https://www.ihpa.gov.au/what-we-do/classifications/emergency-care/emergency-department-icd-10-am-principal-diagnosis-short-list

Clinical commencement date and time should be reported using the DDMMYYYY HH:MM format.

Input variables

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

- Episode number (Epino)
- Triage category
- Episode end status
- Type of visit
- Age
- Transport mode (arrival)
- ED Principal Diagnosis
- Service Datetime

Episode Number

A unique episode number (Epino) for each episode is required to link the AECC 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
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	Admitted to this hospital (including to units or beds within the emergency department)
2	Non-admitted patient emergency department service episode completed – departed without being admitted or referred to another hospital

Value	Description
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 services episode was completed
6	Died in emergency department as a non-admitted patient
7	Dead on arrival, not treated in emergency department
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	Returned 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 (arrival)" field are:

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

ED Principal Diagnosis

The valid values for the "ED Principal Diagnosis" field are:

Value	Description
Codes in the ED Short List	

Clinical commencement date/time

The valid values for the "Clinical commencement date/time" field are:

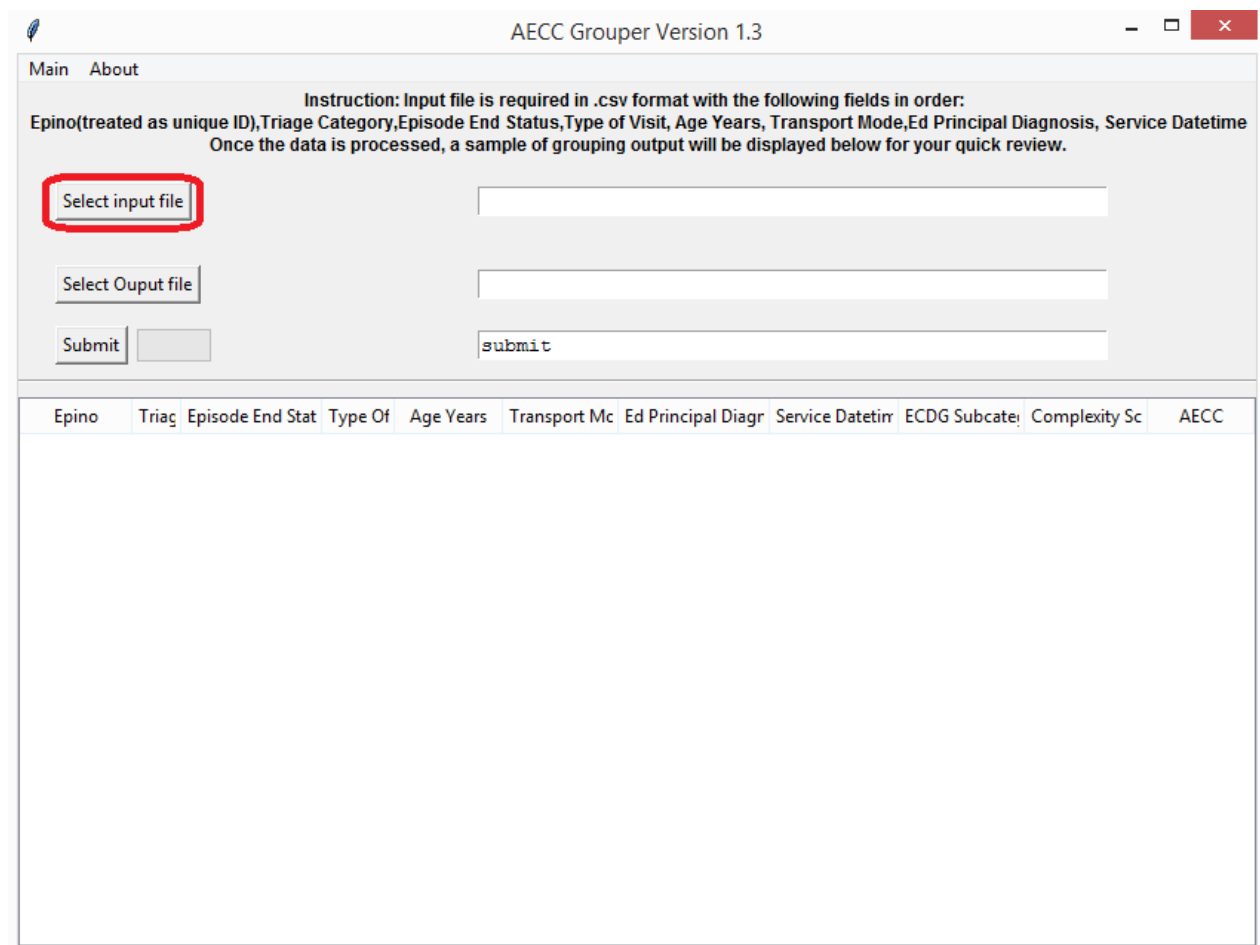| Value	Description
Should be in the DDMMYYYY HHMM format	

Running the grouper

The application is run by double clicking the AECCV13.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 grouper.

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.
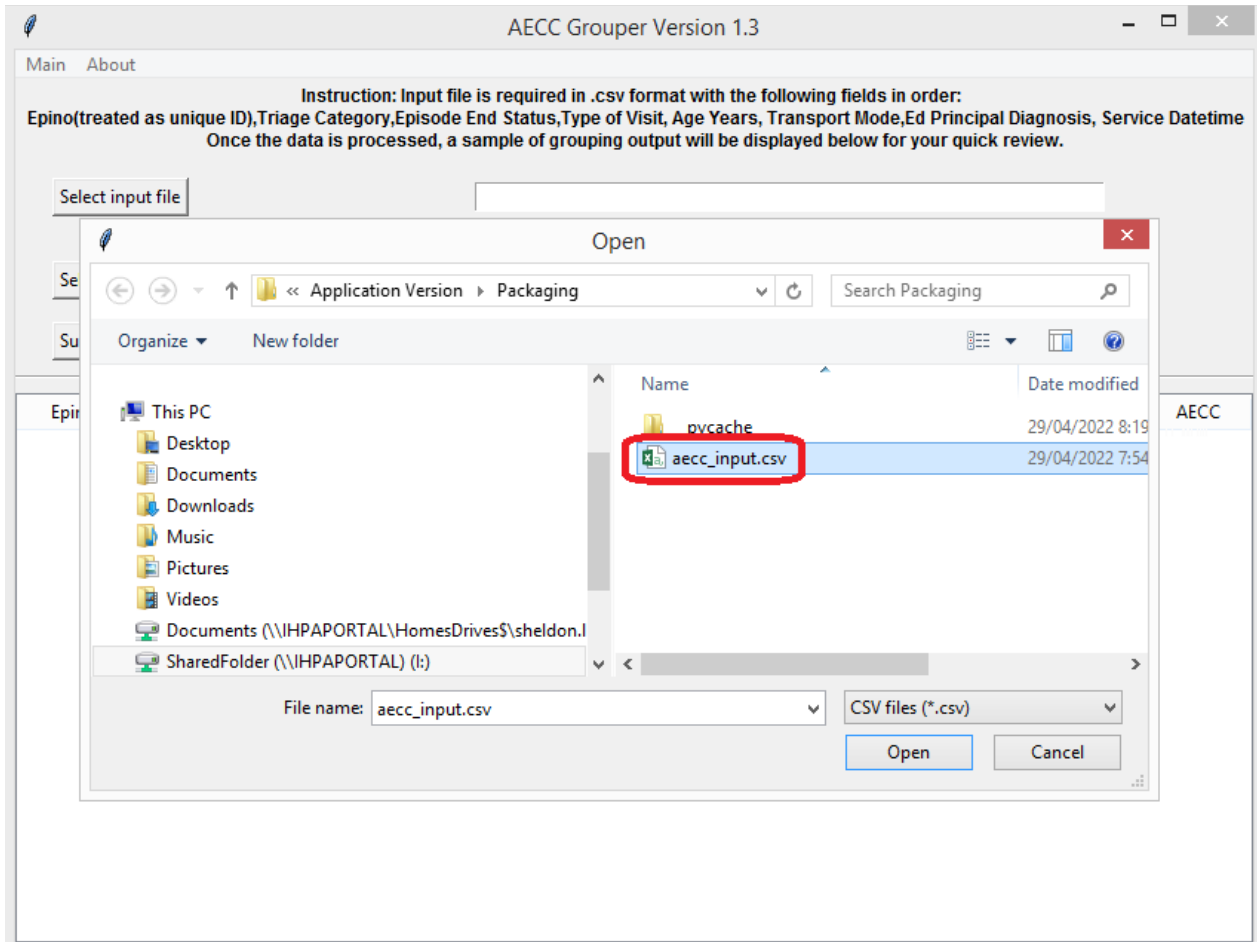
The steps to run the grouper are outlined below.

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.

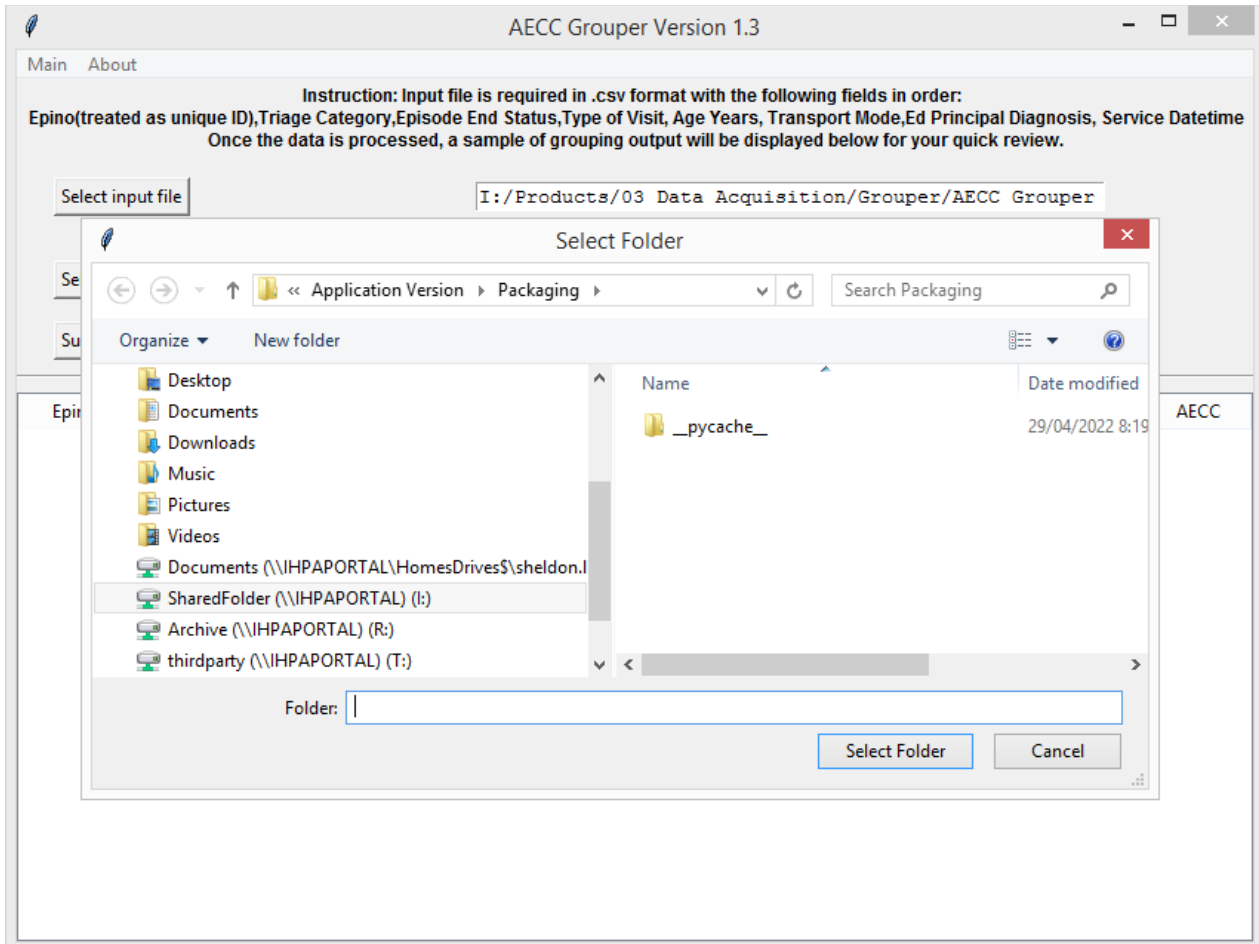**Figure 2.**   Selecting Data to be grouped

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 grouper 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.
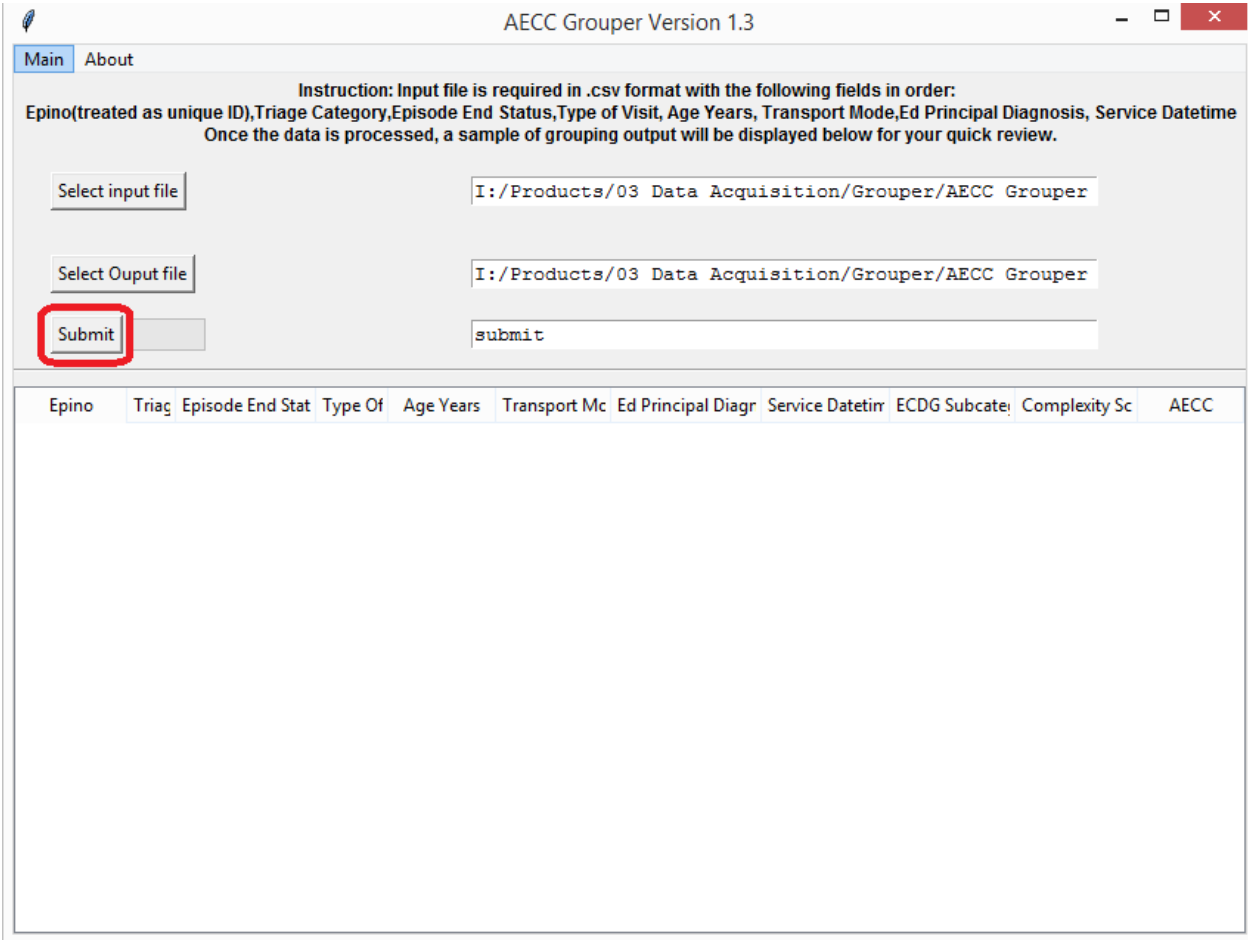
Figure 3.   Selecting output folder
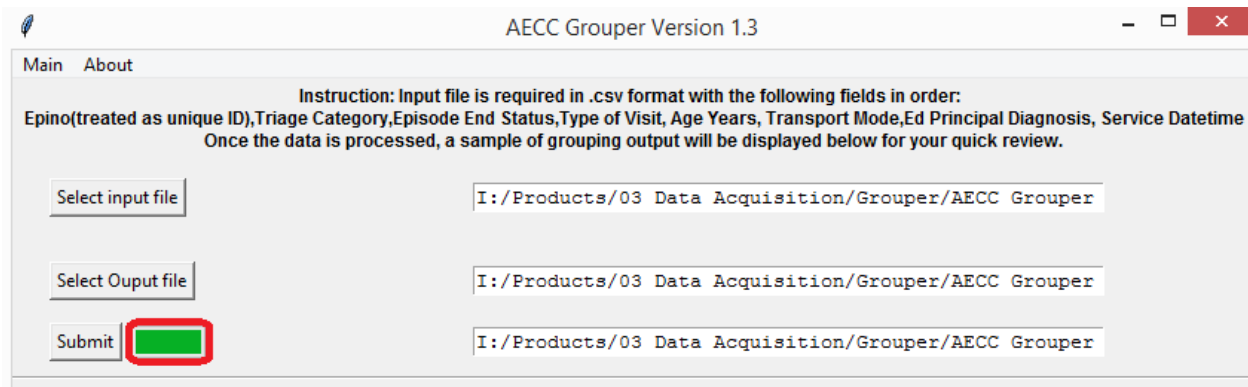

Step 3: Running the grouper

To run the grouper, 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.

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 end classes.
Emergency care categories (ECC)	High level grouping of ECDGs, mainly used for navigating the ECDGs.
Emergency care diagnosis groups (ECDG)	Groupings of short list diagnoses reflecting care pathways or models of care in emergency departments.
Emergency care diagnosis (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 department (ED) principal diagnosis short list	List of codes and medical terms based on ICD-10-AM aiming to provide a nationally consistent approach to principal diagnosis reporting in emergency departments. 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 on the basis of 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 (SNOMED CT)	SNOMED CT is a systematically organized computer-processable collection of medical terminology which provides codes, terms, synonyms and definitions used in clinical documentation and reporting.