

Australian Emergency Care Classification (AECC) Version 1.1

**Grouper Application Version 1.6
User Guide**

June 2025

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AECC Version 1.1 – Grouper Application Version 1.6 User Guide – June 2025

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Background

The Independent Health and Aged Care Pricing Authority (IHACPA) developed the Australian Emergency Care Classification (AECC) as the national classification for emergency departments (ED) for activity-based funding, clinical management and other purposes. The AECC Version 1.0 (V1.0) was approved by the IHACPA's board, the Pricing Authority, in July 2019 and was used to first price emergency department presentations from 1 July 2021.

The AECC Version 1.1 (V1.1) is a modest refinement of AECC Version 1.0 (V1.0) with improved statistical performance in predicting emergency presentation costs. The classification structure and variables remain the same with 6 variables being utilised to determine an end class: visit type, episode end status, principal diagnosis, transport mode (arrival), age and triage category.

The AECC V1.1 incorporated the recalculation of thresholds and values used to calculate the complexity score in the classification complexity model, based on the most recently available activity and cost data. The AECC V1.1 was finalised in July 2024.

The version of the AECC V1.1 grouper application described in this document is Version 1.6 (V1.6). This AECC V1.1 grouper application V1.6 is an update to support the Emergency Care International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM) Thirteenth Edition Principal Diagnosis Short List [EPD Short List (ICD-10-AM Thirteenth Edition)]. The EPD Short List (ICD-10-AM Thirteenth Edition), includes 26 new codes and one deactivated code to a total of 1,206 codes.

New codes

- O23.9 *Genitourinary tract infection, gestational*
- O24.99 *Diabetes mellitus and hyperglycaemia, gestational*
- R10.21 *Pelvic and perineal pain, male*
- R10.22 *Pelvic and perineal pain, female*
- R41.89 *Symptoms involving cognition and awareness, other*
- R45.82 *Homicidal ideation (except with underlying mental or behavioural disorder)*
- T08.1 *Fracture of spine, unspecified level*
- T14.08 *Superficial injury, unspecified body region*
- T14.1 *Open wound, unspecified body region*
- T14.21 *Fracture, unspecified body region*
- T14.4 *Nerve injury, unspecified body region*
- T14.5 *Blood vessel injury, unspecified body region*
- T14.6 *Injury of muscles and tendon, unspecified body region*
- T14.7 *Crushing injury and traumatic amputation, unspecified body region*
- T30.1 *Burn, body region unspecified, superficial (erythema, first degree)*
- T30.3 *Burn, unspecified thickness or body region*

T86.88 *Organ and tissue transplant failure and rejection*
T87.69 *Complication, postprocedural, reattachment and amputation*
Z00.8 *Medical examination without complaint or reported diagnosis*
Z01.9 *Diagnostic investigation without complaint or reported diagnosis*
Z02.9 *Medical certificate*
Z04.3 *Medico-legal examination and observation following accident*
Z39.2 *Follow-up postpartum care, examination*
Z46.9 *Drug delivery or implanted device management*
Z59.9 *Homelessness, problems related to housing and economic circumstances*
Z76.5 *No illness found*

Deactivated code

R41.8 *Symptoms involving cognition and awareness, other*

Purpose

The AECC V1.1 grouper application V1.6 (AECC V1.1 grouper) uses variables defined by data elements in the Non-admitted patient emergency department care national minimum data set (NAPEDC NMDS) and groups them into either an AECC V1.1 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 as a Comma Separated Values (CSV) file containing the AECC grouper V1.6 class appended to each row.

Application requirements

The AECC V1.1 grouper has no specific requirements.

Input data preparation

The AECC V1.1 grouper 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 should be derived from the patient's date of birth and the clinical care commencement date (service date).

Age should be reported in years.

Emergency Care ICD-10-AM Principal Diagnosis Short List

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) is the classification used for the national reporting of emergency care principal diagnoses. AECC V1.1 requires EPD Short List codes to group episodes into an AECC V1.1 end class. Where emergency care principal diagnoses are collected using ICD-10-AM Thirteenth 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 (ICD-10-AM Thirteenth Edition) codes before grouping.

Clinical care commencement date

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

Input variables

The input file should be prepared without header row. The file must contain the 8 data items in the following sequence for the AECC V1.1 grouper to work correctly:

Data items
1. Episode number
2. Triage category
3. Episode end status
4. Type of visit
5. Age
6. Transport mode (arrival)
7. EPD Short List (ICD-10-AM Thirteenth Edition) code
8. Clinical care commencement date

The valid values for each input variable are outlined below. Records containing missing or invalid field values will still be processed; however, they may be assigned to an error end class as follows:

- E9901Z – records with invalid type of visit
- E9902Z – records with missing ED principal diagnosis code from the EPD Short List
- E9903Z – records with invalid ED principal diagnosis code from the EPD Short List
- E9904Z – other error (example with invalid episode end status).

Episode number (METEOR identifier: 799007)

A unique episode number (Epino) for each episode is required to link the AECC V1.1 grouping result with the complete ED episode.

Triage category (METEOR identifier: 799815)

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 (METEOR identifier: 796802)

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 (METEOR identifier: 799764)

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 - 124	Patient’s age (in years) at the time of presentation, age is unlikely to be over 124

Transport mode (arrival) (METEOR identifier: 746114)

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

EPD Short List (ICD-10-AM Thirteenth Edition) (METEOR identifier: 793394)

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

Value	Description
Codes in the EPD Short List (ICD-10-AM Thirteenth Edition)	

Clinical care commencement date (METEOR identifier: 799773)

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

Value	Description
	The date on which non-admitted patient emergency department clinical care commences, expressed as DDMMYYYY

Running the grouper

The grouper is run by double clicking the aeccv16.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 V1.1 grouper.

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

Figure 1. AECC Grouper Main Window

AECC Grouper Version 1.6

Main About

Instruction: Input file is required in .csv format with the following fields in order:
Epino(treated as unique ID),Triage Category,Episode End Status,Type of Visit, Age Years, Transport Mode,Ed Principal Diagnosis, Service Date
Once the data is processed, a sample of grouping output will be displayed below for your quick review.

Select input file

Select Output file

Submit submit

Epino	Triage	Episode End Status	Type Of Visit To Ed	Age Years	Transport Mode	Ed Principal Diagnosis	Service Date	ECDG Subcategory	Complexity Score	AECC
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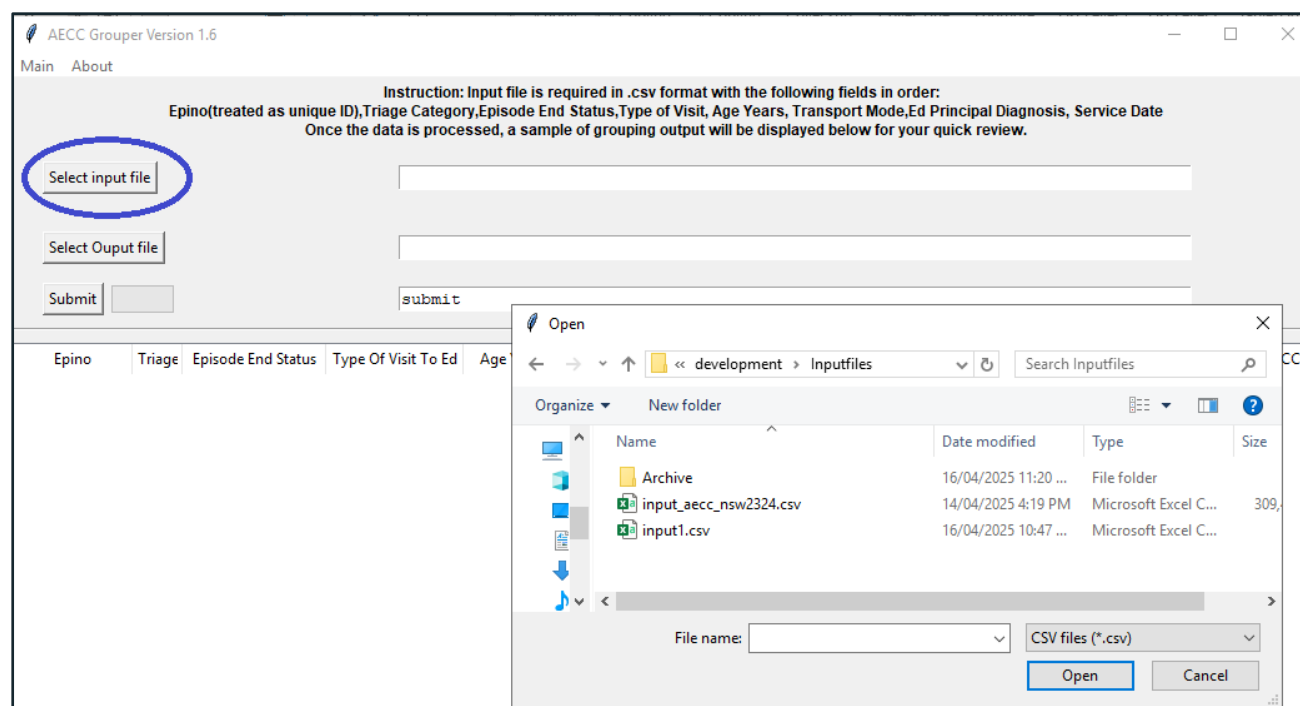
The main window also includes a table which displays a sample of the episodes being processed while the grouper is running and displays the location of the output file when the grouper is complete.

The steps to run the AECC V1.1 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 blue 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

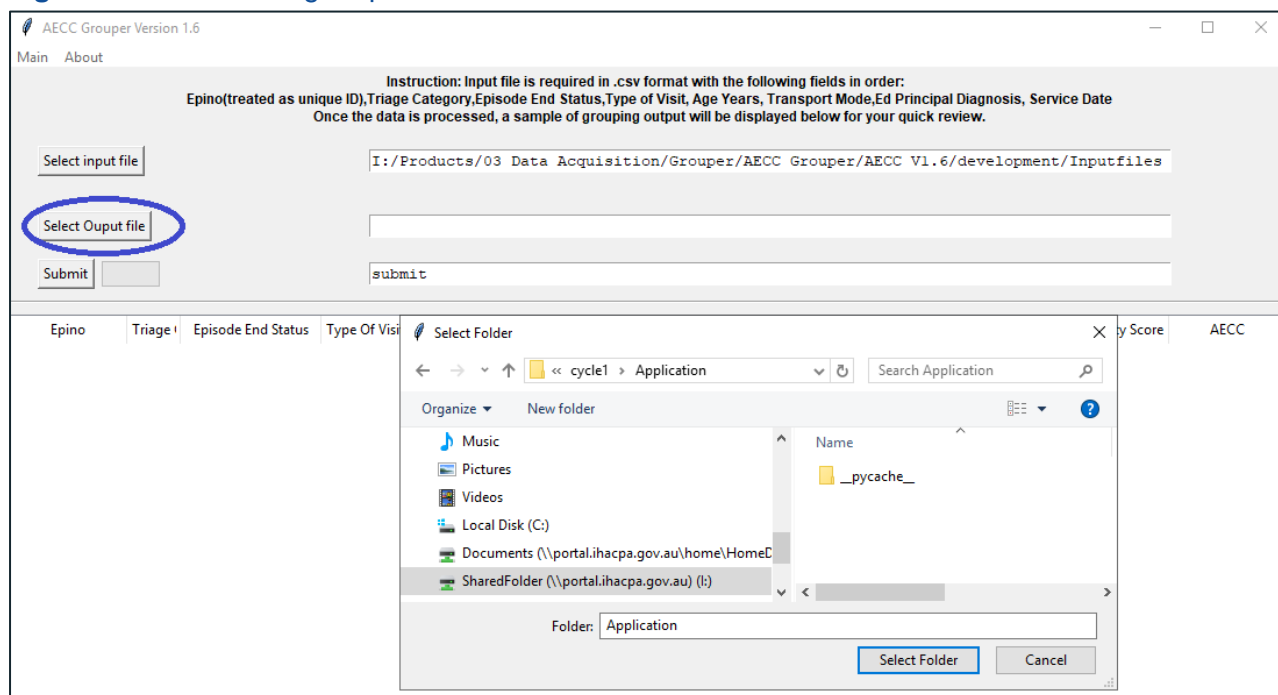


On completion of this step, the file name and path of the file populates the text field to the right of the *Select Input File* button. This will allow the running of the grouper on the selected file.

Step 2: Select Output file

Select an output folder by using *Select Output file* button as shown in Figure 3. If no specific directory is stated, the output file is saved in the directory where the grouper application is located.

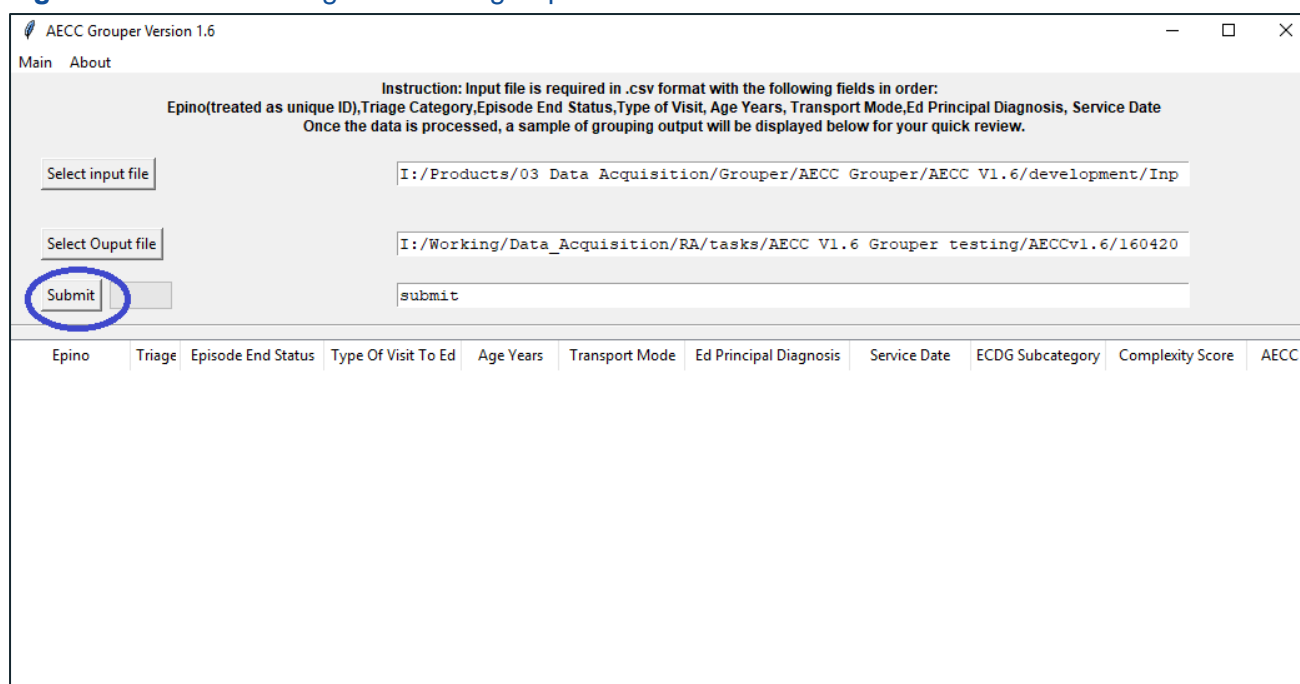
Figure 3. Selecting output folder



Step 3: Running the AECC V1.1 grouper

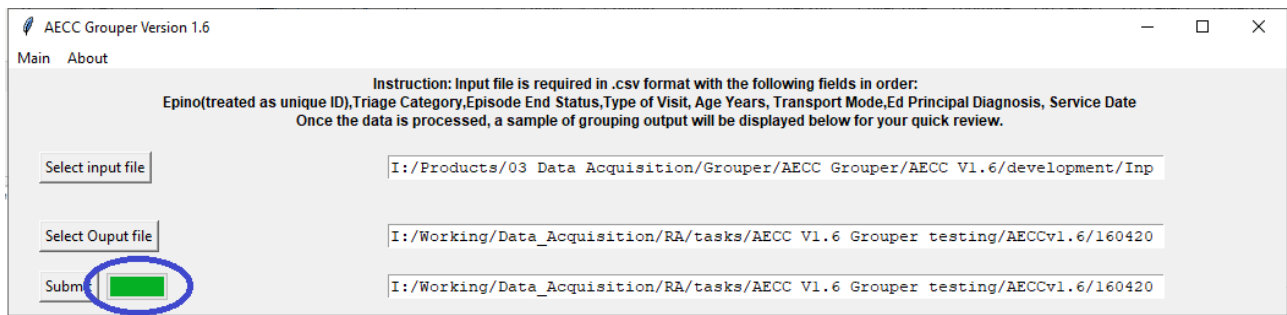
To run the AECC V1.1 grouper, select the *Submit* button as shown in Figure 4.

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 (ECDG16sub)
- Complexity Score (CSRAW16)
- AECC end class (AECC16)

On completion of this step, a new file with the name <input file name>+_grouped.csv” will be created in the output folder.

Figure 6. Grouper output preview

The screenshot shows the AECC Grouper Version 1.6 application window with the output preview table displayed. The table has 11 columns: Epino, Triage Category, Episode End Status, Type Of Visit To Ed, Age Years, Transport Mode, Ed Principal Diagnosis, Service Date, ECDG Subcategory, Complexity Score, and AECC. The table contains 15 rows of data.

Epino	Triage Category	Episode End Status	Type Of Visit To Ed	Age Years	Transport Mode	Ed Principal Diagnosis	Service Date	ECDG Subcategory	Complexity Score	AECC
1	4	8	1	25	8	R69	.		0.0	E0001Z
2	4	5	1	14	8	Z532	12-Feb-24		0.0	E9903Z
3	4	4	1	0	8	R69	.		0.0	E0001Z
4	2	2	1	21	2	F09	18-Dec-23	E0111	4.1040952674910685	E0110B
5	3	1	1	82	1	F051	21-May-24	E0121	6.984609073778755	E0120A
6	1	1	1	52	1	R418	29-Mar-24		0.0	E9903Z
7	4	2	1	27	8	G439	24-Sep-23	E0171	1.7684414424560386	E0170B
8	4	1	1	85	1	H819	31-Aug-23	E0311	3.1611571572865613	E0310A
9	5	2	1	15	8	H619	9-Jul-23	E0319	0.5281399754036071	E0310C
10	2	3	1	21	8	O2499	22-Jan-24	E1429	4.357336060548162	E1420A
11	2	1	1	91	1	R4189	17-Jan-24	E0121	8.888384077708329	E0120A
12	3	3	1	68	8	T081	18-Jul-23	E2049	3.986738679215489	E2040A
13	3	2	1	43	8	T147	26-Jun-24	E2049	2.3571330302955187	E2040B
14	2	2	1	75	1	R4582	2-Sep-23	E1999	4.890006063439501	E1990A
15	3	1	1	91	1	T8769	8-Jun-24	E2089	3.8813945807921884	E2080A

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 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.
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 National Clinical Terminology Service (NCTS), a subgroup of the Australian Digital Health Agency (ADHA). The EDRS is a reference set of purpose-built terminology developed by the ADHA and updated by the NCTS.



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

www.ihacpa.gov.au