National Non-admitted Patients Collection (NNPAC)

**File Specification for File Version V05.0**

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**Table of contents**

[1. Front Matter 5](#_Toc319670897)

[1.1. Reproduction of material 5](#_Toc319670898)

[1.2. Disclaimer 5](#_Toc319670899)

[1.3. Publications 5](#_Toc319670900)

[2. Introduction 6](#_Toc319670901)

[2.1. Purpose 6](#_Toc319670902)

[2.2. Intended Audience 6](#_Toc319670903)

[2.3. Related Documents 6](#_Toc319670904)

[2.4. National Health Information Principles 6](#_Toc319670905)

[2.5. Importance of Accurate Information 6](#_Toc319670906)

[2.6. Compliance with Standards 7](#_Toc319670907)

[2.7. Connection to National Systems 7](#_Toc319670908)

[2.8. Authority for Collection of Health Information 7](#_Toc319670909)

[2.9. Changes from Previous Versions of the Specification 8](#_Toc319670910)

[2.9.1 Changes to the specification from document version 4.0 to 5.0: 8](#_Toc319670911)

[2.9.2 Changes to the specification from document version 3.0 to 4.0: 8](#_Toc319670912)

[2.9.3 Changes to the specification from document version 2.2 to 3.0: 8](#_Toc319670913)

[2.9.4 Changes to the specification from document version 2.1 to 2.2: 8](#_Toc319670914)

[2.9.5 Changes to the specification from document version 2.0 to 2.1: 8](#_Toc319670915)

[2.9.6 Changes to the specification from document version 1.2 to 2.0: 9](#_Toc319670916)

[2.9.7 Changes to the specification from document version 1.1 to v1.2: 9](#_Toc319670917)

[3. Overview of the NNPAC National Collection 10](#_Toc319670918)

[3.1. Scope 10](#_Toc319670919)

[3.2. Start Date 10](#_Toc319670920)

[3.3. Guide for Use 10](#_Toc319670921)

[3.4. Collection Methods 10](#_Toc319670922)

[3.5. Frequency of Updates 10](#_Toc319670923)

[3.6. Security of Updates 10](#_Toc319670924)

[3.7. Privacy Issues 10](#_Toc319670925)

[3.8. National Reports and Publications 11](#_Toc319670926)

[3.9. Data Provision 11](#_Toc319670927)

[4. Batch Processing 12](#_Toc319670928)

[4.1. Batch Process Overview 12](#_Toc319670929)

[4.2. Batch Process Details 12](#_Toc319670930)

[5. Key Relationships 14](#_Toc319670931)

[5.1. Overview 14](#_Toc319670932)

[6. NNPAC National Collection Data Model 15](#_Toc319670933)

[6.1. Data Model 15](#_Toc319670934)

[7. Extract File Requirements 16](#_Toc319670935)

[7.1. Overview 16](#_Toc319670936)

[7.1.1 File Naming 16](#_Toc319670937)

[7.1.2 Identification 16](#_Toc319670938)

[7.1.3 Record Types and Layouts 16](#_Toc319670939)

[8. Extract File Layouts 18](#_Toc319670940)

[8.1. Overview 18](#_Toc319670941)

[8.1.1 Header Record 18](#_Toc319670942)

[8.1.2 Event Record 18](#_Toc319670943)

[9. Acknowledgement File 24](#_Toc319670944)

[9.1. Overview 24](#_Toc319670945)

[9.2. Acknowledgement Record 24](#_Toc319670946)

[10. Error File 25](#_Toc319670947)

[10.1. Overview 25](#_Toc319670948)

[10.2. Error Record 25](#_Toc319670949)

[10.3. Error Messages 26](#_Toc319670950)

[10.3.1 Error Messages – Pre-load batch validations 26](#_Toc319670951)

[10.3.2 Error Messages – Data warehouse batch validations 27](#_Toc319670952)

[10.3.3 Error Messages - Event record validation 28](#_Toc319670953)

[11. Purchase Unit Data Quality Update 33](#_Toc319670954)

[11.1. Overview 33](#_Toc319670955)

[11.2. Purchase Unit Data Quality Record 33](#_Toc319670956)

[12. Business Rules 34](#_Toc319670957)

[12.1. Overview 34](#_Toc319670958)

[12.2. Errors, Warnings and Cautions 34](#_Toc319670959)

[12.3. Purchase unit and specialty cross-validation 34](#_Toc319670960)

[12.4. Purchase Unit Date Validation 34](#_Toc319670961)

[12.5. Duplicate Events Validation 34](#_Toc319670962)

[12.6. Checks Between Related Fields 35](#_Toc319670963)

[12.7. Cautions 35](#_Toc319670964)

[12.8. Funding Agency 36](#_Toc319670965)

[Guidelines for Coding Events 37](#_Toc319670966)

[12.9. Overview 37](#_Toc319670967)

[12.10. Events that occur outside a hospital 37](#_Toc319670968)

[12.11. ED Timestamps 38](#_Toc319670969)

[12.12. Community Referred Diagnostic Event 39](#_Toc319670970)

[12.13. Deaths 40](#_Toc319670971)

# Front Matter

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# Introduction

## Purpose

This Ministry of Health File Specification describes the file format used to send information to the Ministry for inclusion in the National Non-admitted Patient Collection (NNPAC). This includes the file layout and, to a lesser extent, the business rules used for validating the data items within the file.

## Intended Audience

There are two audiences for this document:

* Software developers designing, implementing and altering provider systems to ensure they export information in a format suitable for loading into the national collection.
* Business analysts verifying that all required data elements are present and specified correctly.

## Related Documents

This document should be read in conjunction with:

* NNPAC Data Dictionary
* NNPAC Error Messages

## National Health Information Principles

The guiding principles for national health information are the need to:

* Protect patient confidentiality and privacy
* Collect data once, as close to the source as possible, and use it as many times as required to meet different information requirements, in keeping with the purpose for which it was collected
* Validate data at source.
* Maintain standard data definitions, classifications and coding systems
* Store national health data that includes only that data which is used, valued and validated at the local level
* Provide connectivity between health information systems to promote communication and integrity

## Importance of Accurate Information

Accurate information is vital to both the provision of services and the efficient operation of the health and disability support sector.

In 1996, the Ministry of Health updated its strategic framework with Health Information Strategy for the Year 2000. Since then the world of Information Technology has leapt ahead with the exponential growth of the World Wide Web, networked organisations and universal acceptance of electronic communication.

The Information Management and Technology Plan (renamed WAVE -Working to Add Value to E-information) for 2001, provides the framework for the development and maintenance of health information to meet national requirements.

The plan aims to ensure that an accurate, timely and consistent set of health data is available nationally, while protecting data confidentiality and avoiding undue compliance and collection costs for the sector.

## Compliance with Standards

All health and disability service providers, agencies and organisations, as defined in the Health Information Privacy Code 1994, accessing or providing national data, are required to adhere to and comply with national information standards, definitions and guidelines.

Maintaining the integrity and security of the databases and the transmission or exchange of data between health and disability service organisations is essential. This is a shared obligation of all health and disability service agencies.

National data definitions, terms (such as 'ethnicity'), and health information standards are developed and reviewed in consultation with health sector representatives.

## Connection to National Systems

Given the Government's investment in the national health information systems, and because of the requirement for nationally consistent data, health and disability service providers are required to use the national systems, standards and protocols where reasonable. For this reason health and disability agencies and service providers are encouraged to connect directly to the national systems.

Direct access provides:

* Secure communication protocols which meet the privacy requirements,
* Improved timeliness of data reporting for monitoring purposes, and
* Reduced costs for processing and transmitting data supplied to the national systems.

## Authority for Collection of Health Information

The Ministry of Health may collect health information where this is necessary to carry to lawful purposes connected with its functions and activities. These purposes, functions and activities may be set out in legislation, such as the Health Act 1956, or may be derived from lawful instructions from the Minister. The collection, storage and use of health information is also governed by the Privacy Act 1993 and the Health Information Privacy Code 1994.

## Changes from Previous Versions of the Specification

### **Changes to the specification from document version 5.2 to 5.3**

* Add Activity Setting as another name for Location
* Add 5 additional codes to Location/Activity Settting for Telehealth
* Corrected the definitions of Agency Code and Funding Agency Code
* Corrected the definitions for Agency Code and Funding Agency Code

### **Changes to the specification from document version 5.1 to 5.2**

* Corrected error code 5061 to Error Type E

### **Changes to the specification from document version 5.0 to 5.1**

* Updated to reflect the new purchaser code 33, MoH Screening Pilot.

### **Changes** to the specification **from document version 4.0 to 5.0:**

* New file version ‘V05.0’ implemented for input file
* **Addition of Funding Agency field**
* **Amendment to business rules on duplicates**
* Addition of new error messages

### **Changes** to the specification **from document version 3.0 to 4.0:**

* New file version ‘V04.0’ implemented for input file
* Only the current file version (4.0) and the version before (3.0) will be accepted from 01 July 2011.
* Removal of input field datetime of event end
* Error message text field size increased from 70 characters to 256 characters (varchar)
* Revisions

### **Changes** to the specification **from document version 2.2 to 3.0:**

* New file version ‘V03.0’ implemented for input file
* Removal of file version number from the file name of the load file, the acknowledgement file and the error file
* Amendment to NNPAC purchase units to retire old ones and add new ones.
* Event type field is now mandatory
* New input fields – datetime of presentation, datetime of service, datetime of first contact, datetime of event end, datetime of departure, triage level, event end type, NMDS unique identifier
* Removal of input fields date of service, time of service and event end date. These are now datetime fields – see point above.
* Addition of codes for community referred event types
* Reformatting of error message text
* Addition of a new section that provides guidelines for coding of fields.

### **Changes** to the specification **from document version 2.1 to 2.2:**

The Volume field in the Event Record has incorrectly been described as a data type of Integer. The system has always allowed a data type of Number in the extract file for Volume. This version corrects the documentation.

The input file version number remains at V02.0.

### **Changes** to the specification **from document version 2.0 to 2.1:**

These apply to all files sent on or after July 1, 2009.

Additional purchase units are introduced and changes are made to the mandatory status of some existing purchase unit codes required for submission to NNPAC.

The input file version number remains at V02.0.

### **Changes** to the specification **from document version 1.2 to 2.0:**

These apply to all files sent on or after July 1, 2008.

A summary of the processing / editing changes is:

**File naming**

* To include version (see 7.1 Overview)

**Record layouts**

* Header to include date sent and file version (see 7 Extract File Layouts Header Record)
* Event to include optional event end date for ED records (see 7 Extract File Layouts Event Record)

**Duplicate input records**

* If multiple events with the same id are submitted in a batch, they are all rejected (see 11.5 Duplicate events Validation)

**Load processing and editing**

* See Business Rules, section 11.6.

### **Changes** to the specification **from document version 1.1 to v1.2:**

The change is:

Start and End date validation introduced for Purchase Unit, Health Specialty and Purchaser Codes based on Date of Service.

# Overview of the NNPAC National Collection

## Scope

The NNPAC collection stores data about non-admitted secondary care events, such as outpatient and emergency department visits. Admitted events are held in the NMDS collection. Non-attendances are also in scope and inclusion is mandatory for clinics run by doctors. A non-attendance is where the appointment was not cancelled but the patient either never arrived or left before being seen by the doctor.

A later stage NNPAC will include some diagnostic and procedure details. This document will allude to those but does not define them in detail.

## Start Date

July 1, 2006

## Guide for Use

Any historical data to be included in the system will have to be provided in the format specified in this document.

## Collection Methods

The data will be extracted by DHBs and other providers and transferred using FTP, in the format defined by this document.

## Frequency of Updates

The provider will send data at least once per month.

Events will be sent within 20 days of the end of the month that they occurred in. As one provider may have multiple source systems, multiple files can be accepted at one time. Each source system will have a unique identifier.

## Security of Updates

The data in the Ministry of Health data warehouse (including NNPAC) is protected with database passwords, Business Object passwords and Virtual Private Database rules and is only available through the secure Health Intranet.

## Privacy Issues

All NHI numbers in the NNPAC are encrypted and no names or addresses recorded.

The providers have a requirement to have access to the unencrypted NHI for all persons living in their area or treated at their facilities.

## National Reports and Publications

NNPAC data is available on request from data-enquiries@moh.govt.nz.

For Business Objects access to the NAP warehouse please go to http://busobjxi.moh.health.nz/

## Data Provision

Access is restricted to Ministry of Health and DHB and SSO representatives who apply for access. There is no requirement for access by PHOs. SSO representatives need to demonstrate an agency relationship with a DHB to be able to access that DHB’s information. All data is available to any user of the system.

# Batch Processing

## Batch Process Overview



## Batch Process Details

1. The provider produces a file from their extract system(s) and sends that by FTP to the Ministry FTP server. Zipped files will transmit faster.
2. Ministry of Health Operations copy the file to the data warehouse and start the load process.
3. The pre-process checks the number of records in the file. A header record contains the number of records in the file including the header. It also has an extract system identifier and batch number. Providers must submit files in sequential order for each extract system. If the file fails this check it is rejected and no further processing takes place.
4. If a record has the same identification as another event in a batch, then all events with that key are rejected. This includes DELETE entries.
5. Valid files then proceed to record validation. See the file layout for validation details. As accepted data is loaded, the process dimensionalises the data. This means looking up the key for dimensions such as Health Care User, Provider Type, and Purchase Unit etc.
6. Each record is written to a return file and marked as accepted or rejected. See the return file definition for details. Rejected records are also written to an error file for processing by the provider.
7. Accepted records are applied to the database. If the record is a delete type, then the record is physically deleted from the database. Otherwise, if the record has the same key as an existing record, it is updated else it is added. Records are processed in the order that they are received. The key is the client system identifier plus the pms unique identifier.

# Key Relationships

## Overview

There is one fact table containing one row for each non-admitted patient event.

There are sixteen dimension tables used to analyse the facts.

The dim\_nap\_codes table holds codes with small cardinalities as a matrix of all possible combinations. This is done to reduce the number of dimensions.

# NNPAC National Collection Data Model

## Data Model



# Extract File Requirements

## Overview

### File Naming

Each input file will be named as: NNPAC\_extract system id\_batch number

eg NNPAC\_abcdef\_34

### Identification

The extract system id is the unique id for each extract system as registered with the Ministry of Health by the provider. To register an extract system id contact Data Management Services by e-mailing operations@moh.govt.nz. A provider may have more that one extract system. An extract system is defined as the system that produces the extract file.

The client system id is the unique id for each client system as registered with the Ministry of Health by the provider. A provider may have more than one client system. A client system is defined as the system that created the event record and its unique identifier. A client system will be registered at the Ministry with a matching extract system. The load process will validate that the client system identifier and extract system identifier combination in the load file is registered with the Ministry as a valid combination.

The source system may be the same as the client system or different, as in the case where the data is extracted from a data warehouse rather than a PMS.

The batch number is the sequential number for the file starting from 1. No gaps in the sequence are allowed as the files need to be processed strictly in order.

The key for events is extract system identifier, client system identifier, and PMS unique identifier.

Providers are responsible for supplying the PMS unique identifier consistently – if they do not then new records may be added in error. The same value for a PMS unique identifier can be supplied from multiple systems as long as the combination of extract system identifier, client system id and PMS unique identifier is unique.

### Record Types and Layouts

* There are two record layouts – Header and Event.
* There is one header record per file.
* There is any number of event records.
* Headers have a record type of ‘HEADER’.
* Adds or updates have a record type of ‘EVENT’.
* For an update, the whole record must be reported each time, even if only one field has changed.
* Deletes have a record type of ‘DELETE’. They are the same format as an EVENT record.
* If a non-delete record has the same key as an existing record, the existing record is updated else a new record is added.
* At a later stage diagnosis/procedure records can also be submitted in a separate record type but using the same key as the event. This is not defined here.

# Extract File Layouts

## Overview

There are two record types – headers and events. All fields are bar ‘|’ delimited. Bars must not appear in any field. Text fields should not be in quotes. Commas are allowed in text fields but not carriage returns or other formatting. No leading or trailing spaces are permitted unless otherwise stated. All codes are in upper case unless otherwise stated.

### Header Record

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Field** | **Type** | **Format** | **Reqd.[[1]](#footnote-1)** | **Notes** |
| record type | char 6 | A (6) | M | ‘HEADER’ |
| extract system identifier | char 10 | A (10) | M | Validated against the extract\_system table. New extract system identifiers need to be registered with the Ministry of Health. |
| number of records | integer |  | M | The number of records, including the header, in the file. eg 23456 |
| batch number | integer |  | M | The sequential number of the batch. eg 43 |
| date sent | date 8 | CCYYMMDD | M | Must be a valid date. Must be on or before the current date. |
| file version | char 5 | ANN.N | M | ‘V05.0’ if the ‘Date Sent’ is on or after 1 July 2012.  |

### Event Record

**General rules for datetime fields:**

Must be a valid date & time ie. Date must be a valid date in the past or today. The 24 hour clock is used. HH must between 00 and 23 and MM must be between 00 and 59. Leading zeroes are required. No separator is allowed between date or time components.

Eg ‘201002241030’ is a valid date, ‘2010/02/24 10:30’ is not valid

There are also cross validation rules for the datetime fields for ED events. Refer to 12.6 Checks Between Related fields.

| **Field** | **Type** | **Format** | **Reqd.[[2]](#footnote-2)** | **Notes** |
| --- | --- | --- | --- | --- |
| record type | char 6 | A (6) | M | ‘EVENT’ for an add or update. ‘DELETE’ for a delete. Delete records may contain only key fields (client system identifier, and PMS unique identifier). No mandatory field checking will be done for other fields in DELETE records with the exception of datetime of service. Currently datetime of service must contain a valid date and time. It can be any datetime, it does not have to match the record being deleted. This will be corrected in a future release.  |
| event type | char 3 | AAA | M | OP (outpatient), ED (emergency department). CR (community referred diagnostic)The Community Referred Diagnostic Event should only be used when the diagnostic is independent of any FSA, follow up or treatment procedure and has been ordered by the GP. Refer to 13.4 Community Referred Diagnostic Event.This field has been made mandatory for all events with Date of Service on or after 1 July 2010 |
| health practitioner type | char 3 | AAA | M | M (doctor), N (nurse), O (other) |
| client system identifier | char 10 | A (10) | M | Validated against the external system table. New client system identifiers need to be registered with the Ministry of Health and must be associated with an extract system identifier. |
| pms unique identifier | varchar 14 | X (14) | M | The identifier as used in the client system for this event. Leading and trailing blanks will be trimmed off in the load process. |
| NHI | char 7 | AAANNNN | M | Must be registered on NHI at time of file transmission. |
| facility code | char 4 | XXXX | C | Must be a valid facility code. This is the code of the facility where the event took place. Mandatory if location type is Hospital Facility (i.e. 1, 2 or 3) but should be entered where available for other location types. Refer to 13.2 Events that occur outside a hospital |
| agency code | char 4 | XXXX | M | Must be a valid agency code. This is the code of the agency which delived the treatment, whereas the funding agency code (below) is the code fo the agency paying for the service. |
| location type | Integer 2 | NN | M | 1 (Public Hospital), 2 (Private Hospital), 3 (Psychiatric Hospital), 4 (Other Institution), 5 (Private Residence), 6 (Other), 10 (Residential Care), 11 (Marae), 12 (Primary Care), 13 (Other Community), 20 (Video Conference), 21 (Telephone), 22 (Written correspondence, email or letter), 23 (SMS messaging (text messaging)), 24 (Remote Patient Monitoring), 25 (Face-to-Face)Also known as Activity SettingRefer to 12.10 Events that occur outside a hospital |
| health specialty code | char 3 | ANN | M | As for NMDS. Must be a valid health specialty code and must be active for the Date of Service  |
| service type | char 8 | X (8) | M | PREADM (pre-admission), FIRST (first contact for client with condition at specialty), FOLLOWUP, CRD (community referred diagnostic) |
| equivalent purchase unit code | char 8 | X (8) | M | Is the purchase unit that would have been allocated if provided by a DHB as defined in the NSF data dictionary, regardless of funding. Must be a valid purchase unit code and must be active for the Date of Service.For DNA (Did Not Attend) or DNW (Did Not Wait), this is the Purchase Unit that would have been allocated had they attended or waited. Note there is a series of Nationwide Service Framework Data Dictionary Purchase Unit codes expressly for use in NNPAC for pre-admissions and subsequently admitted ED events. |
| acc claim number | char 12 | X(12) | O | Valid only if accident flag = ‘Y’ |
| accident flag | char 1 | A | M | ‘Y’ or ‘N’ or ‘U’ (unknown) |
| purchaser code | char 2 | XX | M | As for NMDS. Must be a valid Principal health purchaser code and must be active for the Date of Service. |
| attendance code | char 3  | AAA | M | ATT (attended), DNA (did not attend), DNW (did not wait) |
| volume | number | 99999.999(floating- point) | M | Zero if attendance code is DNA or DNW or client-based or programmed events, otherwise 1 or more if attendance code is ATT. This is not the number of events but the number of purchase units. |
| domicile code | char 4 | AAAA | O | Must include leading zeroes. This is used for deriving the patient’s DHB and as a data quality test to compare with the NHI domicile code. |
| datetime of presentation | datetime | CCYYMMDDHHMM | C | The date and time a patient presents/or is presented physically to the ED department; either to the triage nurse or clerical staff, whichever comes first. Mandatory for ED events with Datetime of service on or after 1 July 2010, null for all other events |
| datetime of service | datetime | CCYYMMDDHHMM | M | The date of service will be used to look up the NHI history tables to get the gender, ethnicity and domicile code of the patient at the time of the event.For ED events this is the date and time that a triage nurse/suitable ED medical professional **starts** the process of categorising the triage level of the incoming patient (i.e. 1 – 5).For outpatient visits the time of service should be the actual service start time if available. If not, then the booked appointment time may be used or a default time of ‘0000’ may be sent.Refer to further notes in 13.3 ED Timestamps |
| datetime of first contact | datetime | CCYYMMDDHHMM | C | The date and time that the triaged patient's treatment starts by a suitable ED medical professional (could be the same time as the datetime of service if treatment is required immediately i.e. triage level 1). Mandatory for ED events with Datetime of service on or after 1 July 2010 and attendance code ‘ATT’, null for all other events |
| datetime of departure | datetime | CCYYMMDDHHMM | C | The date and time of the physical departure of the patient from ED to an in-patient ward, or the time at which a patient begins a period of formal observation (whether in ED observation beds, an observation unit, or similar), or the time at which a patient being discharged from the ED to the community physically leaves the ED. Mandatory for ED events with Datetime of service on or after 1 July 2010 and attendance code ‘ATT’, null for all other eventsRefer to further notes in 13.3 ED Timestamps |
| triage level | integer | N | C | From the scale of 1 – 5Mandatory for ED events with Datetime of service on or after 1 July 2010 and attendance code ‘ATT’, null for all other events |
| event end type code | char | AA | C | Mandatory for ED events with Datetime of service on or after 1 July 2010 Must be a valid code in the Event End Type code table. |
| NMDS PMS unique identifier | varchar 14 | X (14) | C | NMDS PMS unique event identifier where a patient is admitted following their emergency event. The admission may be either because a patient has been admitted to an inpatient ward or there has been an administrative admission due to the 3 hour rule (see definition of admission in the glossary to the National Collections). Mandatory for events with Datetime of service on or after 1 July 2010 and attendance code = 'ATT' and equivalent purchase unit is like ED%A. |
| Funding agency code | Char | XXXX | CM | The Funding Agency Code is the code of the agency purchasing the treatement, whereas the agency code (above) is the code of the agency which delivered the treatment. The Funding Agncy Code is reported from version 5.0 of the load file. It is mandatory for events with a purchaser code of 20, 33, 34, 35, 55, A0. It must be a valid Agency Code and it must align with the Purchaser Code. Please refer to Section 12.8 for more on these rules. |

# Acknowledgement File

## Overview

A file is returned for each input file that passes pre-processing. It contains one record for each input record, marked as accepted or in error. The file is sent to the DHB via FTP with an accompanying email, both sent automatically.

The files are named NNPAC\_ACK\_extract system id\_batch number.

## Acknowledgement Record

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Format** | **Notes** |
| client system identifier | char 10 | A (10) |  Identifier of the source client system. |
| pms unique identifier | varchar 14 | X (14) | The identifier as used in the client system for this event. |
| extract system identifier | char 10 | A (10) | The identifier of the system the data was extracted from. |
| Batch Number | integer |  | The sequential number of the batch. eg 43 |
| action taken | char 8 | A (8) | ‘INSERTED’, ‘UPDATED’, ‘DELETED’, ‘ERROR’, ‘WARNING’ |

# Error File

## Overview

As well as being in the acknowledgement file, rejected records are also in a separate error file. The error file also contains the cautions.

The files are named NNPAC\_ERROR\_extract system id\_batch number.

If there are multiple errors for a record there will be multiple entries in the file, one for each error or warning.

## Error Record

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Format** | **Notes** |
| client system identifier | char 10 | A (10) | Identifier of the source client system.  |
| pms unique identifier | varchar 14 | X (14) | The identifier as used in the client system for this event. |
| NHI | char 7 | AAANNNN | Unencrypted |
| extract system identifier | char 10 | A (10) | The identifier of the extract system. The first three characters will be the DHB acronym as used in the NMDS header record. |
| Batch Number | integer |  | The sequential number of the batch. eg 43 |
| error number | char 8 | AAANNNNA | This is the standard error number format for MOH systems. |
| error text | varchar 256 | X (256) | Existing error messages (eg for NMDS) will be reused where appropriate. |

## Error Messages

### Error Messages – Pre-load batch validations

The following error messages may be produced when the input files are loaded into NNPAC. They are emailed to the operators’ email and the DHB (if email address found).

|  |  |
| --- | --- |
| **Error Message** | **Error Description** |
| NNPAC load failed. Error: Missing header record or file version in file: %1. This file has not been processed. | Header record is missing in file (%1) |
| NNPAC load failed. Error: Missing header record or file version in file: %1. This file has not been processed. | File version is missing in the header record |
| NNPAC load failed. Error: Invalid file version in file: %1. This file has not been processed. | File version not previous version or current version |
| NNPAC load failed. Error: Missing Extract Identifier in file: %1. This file has not been processed. | No extract identifier given in header record |

### Error Messages – Data warehouse batch validations

The following error messages may be produced by validation that occurs when moving data from the IDS to the data warehouse. These error messages are sent by email to the operator/DHB, prefixed with the following, for all the error messages: ‘Batch load failed for %1 (DHB). Extract\_system\_identifier: %2. Batch number: %3 (batch number). Error message: (as detailed in the table below).

|  |  |
| --- | --- |
| **Error Message** | **Error Description** |
| Missing extract system identifier | Extract System Identifier has not been supplied |
| Invalid extract system identifier %1 | The extract system identifier (%1) supplied is not in the dim\_external\_system |
| Date Sent is a required field. Missing Date Sent for system: %1, batch number: %2 | Date Sent has not been supplied for the system (%1) batch number (%2) |
| Missing batch number for system %1 | Batch number has not been supplied for system (%1) |
| Missing batch in sequence for system %1 last batch was %2 this batch %3 | Where batch number supplied > maximum (batch number) in dim\_nap\_batch for the extract identifier |
| Invalid File Version for system %1 | Where file\_version not previous version or current version for system (%1) |
| Records found %1 Records expected %2 for system %3 batch %4 | Where the count of records in load\_nap\_event differs from the number\_of\_records (supplied in the header record) |

**Example error message:**

‘Batch load failed for Canterbury DHB. Extract\_system\_identifier: CDHB\_DW. Batch number: 45. Error message: Records found 5 Records expected 4 for system CDHB\_DW batch 45’

### Error Messages - Event record validation

The following error messages may be produced when the event records are validated. The error messages can be in the form of errors (E) or cautions (C). If a record causes an error it will always be rejected. Cautions are used to describe why data is considered invalid. If a record causes a caution, it will be loaded.

The following table is a complete list of NNPAC error messages:

| **Prefix\_code** | **ID** | **Error Type** | **Error Message** | **Error Description** |
| --- | --- | --- | --- | --- |
| NAP | 5000 | E |  Could not find Record to delete | No record found to delete with the same key (extract system identifier, client system identifier, PMS unique identifier) as requested. |
| NAP | 5001 | E |  Record Type invalid: %1 | Record type (%1) not in list of valid record types (i.e. HEADER, EVENT, DELETE) |
| NAP | 5002 | E |  NHI invalid: %1 | NHI number (%1) not allocated to a person in the NHI system. |
| NAP | 5003 | E |  Invalid Accident Flag: %1 | Accident flag (%1) not one of the allowed values (i.e. Y, N, U). |
| NAP | 5004 | E |  Invalid Attendance Code: %1 | Attendance code (%1) not one of the allowed values (i.e. ATT, DNA, DNW). |
| NAP | 5005 | E |  Invalid Event Type: %1 | Event type not one of the allowed values. |
| NAP | 5006 | E |  Invalid Health Practitioner Type: %1 | Health practitioner (also known as provider) type (%1) not one of the allowed values (i.e. M, N, O). |
| NAP | 5007 | E |  Invalid Service Type: %1 | Service type (%1) not one of the allowed values (i.e. PREADM, FIRST, CRD, FOLLOWUP). |
| NAP | 5008 | E |  Invalid Hours in %2: %1 | Hours in the field (%2) are greater than 24 or not numeric. (%1 = hours entered) |
| NAP | 5009 | E |  Invalid Minutes in %2: %1 | Minutes in the field (%2) are greater than 60 or not numeric. (%1 = minutes entered) |
| NAP | 5010 | E |  Invalid Facility Code: %1 | Facility code (%1) is not in the list of facilities. (See Common Code tables on the Ministry web site[[3]](#footnote-3)). |
| NAP | 5011 | E |  Invalid Agency Code: %1 | Agency code is not in the list of agencies. (See Common Code tables on the Ministry web site). |
| NAP | 5012 | E | The Datetime of Service is after the processing date | The datetime of service is after the processing date. |
| NAP | 5013 | E | The Datetime of Service is 20 years before the processing date | The datetime of service is 20 years before the processing date. |
| NAP | 5014 | E | Invalid Date in %2: %1 | Datetime field (%2) does not contain a valid date (where %1 = actual date entered). |
| NAP | 5015 | E | Location Type invalid: %1 | The location type code (%1) is not one of the allowed values. (See list of valid codes on page 20). |
| NAP | 5016 | E | Equivalent Purchase Unit code invalid: %1 | The equivalent purchase unit code (%1) is not one of the allowed values for NNPAC (it may be valid in other datamarts). (See DIM\_Purchase\_Unit table) |
| NAP | 5017 | E | Purchaser Code invalid: %1 | Purchaser code (%1) not one of the allowed values. Also known as Principal Health Service Purchaser or Health Purchaser.  |
| NAP | 5018 | E | Health Specialty Code invalid: %1 | Health specialty code (%1) not one of the allowed values. (See Common Code tables on the Ministry web site). |
| NAP | 5019 | E | Volume %1 incompatible with Attendance Code: %2 | The value (%1) in the volume is not allowed for attendance code. For example, DNA should have a volume of 0. |
| NAP | 5020 | E | Invalid Client System Identifier: %1 | The client system identifier is not that agreed with MOH. |
| NAP | 5021 | E | No PMS Unique Identifier provided | The PMS unique identifier is missing. |
| NAP | 5022 | E | ACC Claim must be NULL when Accident Flag is %1 | ACC claim must be NULL when accident flag is (%1) (where %1 = populated value) |
| NAP | 5023 | E | Duplicate. All records for this EventID in this extract are rejected. | Duplicate. All records for this EventID in this extract are rejected. |
| NAP | 5028 | E | Purchaser Code %1 is invalid for this datetime of service | Purchaser Code (%1) is not yet active for use. Also known as Principal Health Service Purchaser or Health Purchaser |
| NAP | 5029 | E | Purchaser Code %1 is retired from use | Purchaser Code (%1) is retired from use. |
| NAP | 5030 | E | Health Specialty Code %1 invalid for this datetime of service | Health Specialty Code (%1) is not yet active for use. (See Common Code tables on the Ministry web site). |
| NAP | 5031 | E | Health Specialty Code %1 is retired from use | Health Specialty Code (%1) is retired from use. |
| NAP | 5032 | E | Purchase Unit Code %1 invalid for this datetime of service | Purchase Unit Code (%1) is not yet active for use. |
| NAP | 5033 | E | Purchase Unit Code %1 is retired from use | Purchase Unit Code (%1) is retired from use. |
| NAP | 5034 | E | Service Type %1 incompatible with Purchase Unit Code %2 | Service Type (%1) is incompatible with Purchase Unit Code (%2). |
| NAP | 5036 | E | Volume: %1 is incompatible with Preadmission Purchase Unit %2 | Volume (%1) is incompatible with Preadmission Purchase Unit (%2). |
| NAP | 5037 | E | Volume: %1 is invalid for Purchase Unit Code %2 (UOM=’client’). | Volume (%1) is invalid for Purchase Unit Code (%2) when (UOM=’client’). |
| NAP | 5038 | E | No longer used |  |
| NAP | 5039 | E | No longer used |  |
| NAP | 5040 | C | Domicile Code %1 is invalid for this Datetime of Service %2 | Domicile Code (%1)is not active at the Datetime of Service (%2). |
| NAP | 5041 | C | Domicile Code %1 is for an overseas resident | Domicile Code (%1) is for an overseas resident |
| NAP | 5042 | C | Domicile Code %1 does not correspond to a valid DHB | Domicile Code (%1) does not correspond to a valid DHB. |
| NAP | 5043 | E | Invalid file version %1 for period %2 | Invalid file version (%1) submitted for the period reported (%2).  |
| NAP | 5044 | E | Date Sent invalid: %1 | Date sent (%1) invalid |
| NAP | 5045 | E | %1 in the future: %2 | (Datetime field %1) (%2) is in the future |
| NAP  | 5046 | E | %1 is a required field | (Field %1) is a required field |
| NAP | 5047 | E | %1 is required for %2 | (Field %1) is a required field when the condition (%2) is true |
| NAP | 5048 | E | %1 invalid: %2 | (%2) is not one of the allowed values for (field %1) |
| NAP | 5049 | E | Attendance Code invalid: %1 | Attendance code (%1) must be ‘ATT’ |
| NAP | 5050 | E | %1 must be on or before %2 | Datetime field (%1) must be less than or equal to datetime field (%2) |
| NAP | 5052 | E | %1 must be null for %2 event type | A value has been submitted for (field %1) where null should have been submitted on an event type of (%2) |
| NAP | 5053 | E | %1 must be null for Attendance Code %2  | A value has been submitted for (field %1) where null should have been submitted on an event with attendance code of (%2) |
| NAP | 5054 | E | %1 must be null for Purchase Unit Code %2  | A value has been submitted for (field %1) where null should have been submitted on an event with purchase unit code of (%2) |
| NAP | 5055 | E | Service Type %1 is invalid for Event Type %2 | Service type code (%1) is not allowed for event type (%2) |
| NAP | 5056 | E | Event End Type: %1 incompatible with Purchase Unit or Attendance Code | Event end type (%1) is incompatible with purchase unit code or attendance code |
| NAP | 5057 | E | %1 %2 invalid for this datetime of service | (The code %1) (eg. Triage Level) containing a value of (%2) is not yet active for use |
| NAP | 5058 | E | %1 %2 is retired from use | The code %1 (eg. Triage Level) containing a value of %2 is retired from use |
| NAP | 5059 | E | Exceeds the %1 daily events allowed for %2/%3, %4, %5, %6 | This event exceeds the maximum daily events for this NHI, Purchase Unit, Date of Service and Funding Agency |
| NAP | 5060 | E |

|  |
| --- |
| Invalid Funding Agency: %1 |

 | Funding Agency code (%1) is not in the list of agencies (see Common Code tables). |
| NAP | 5061 | E | Funding Agency should be a DHB for Purchaser Code %1 | Funding Agency should have an agency type=01 DHB for purchaser codes 20, 35 and 55 |
| NAP | 5062 | E | Version %1 event records must have %2 fields | Version V5.0 event records must have 26 fields |

# Purchase Unit Data Quality Update

## Overview

Once per year (1st July) each DHB will provide a file showing the estimated percentage of events that they are providing for each and every purchase unit that is valid for the NNPAC. As some DHBs will be providing partial information about some purchase units, this information will be available on the intranet to allow analysts to use the data correctly

## Purchase Unit Data Quality Record

|  |  |  |  |
| --- | --- | --- | --- |
| **Field** | **Type** | **Format** | **Notes** |
| DHB Code | char 3  | AAA  | Validated against the MOH DHB code table. Leading zeroes included. |
| purchase unit code | char 8 | X (8) | Must be a valid purchase unit code. |
| unit of measure | char 256 |  | The Purchase Unit’s Unit of Measure. |
| record year | char 4 | CCYY | Must be this year. |
| percentage provided range | integer |  | The range of estimated percentage of non-admitted events that will be sent to the data mart that year. eg 1-20, 21-40, 41-60, 61-80, 81-100. Admitted events may exist in NMDS. |

# Business Rules

## Overview

The validation rules for individual fields are in the extract file layout. Other rules are defined here.

## Errors, Warnings and Cautions

Rules can generate errors, warnings or cautions. If a record causes an error it will always be rejected. Cautions are used to describe why data is considered invalid. If a record causes a caution, it will be loaded. If a record causes a warning, it will be rejected. However, if it is re-submitted it will be accepted. The system will record all warnings and check to see if the warning has already been sent to the DHB.

Warnings will be implemented at a later phase.

## Purchase unit and specialty cross-validation

The facility will be available to add rules for gender and age cross-validation with health specialty and purchase units, where such rules have been identified. For example, paediatric specialties may have a maximum age. These rules will generate warnings rather than errors.

This will be implemented at a later phase.

## Purchase Unit Date Validation

Start and End Dates were introduced for Purchase Unit Codes as at 1 July 2007. Validation is performed during the load process on the Equivalent Purchase Unit Code to ensure it is active for the Date of Service.

## Duplicate Events Validation

From 1 July 2008, duplicate events in an extract will all be rejected. Duplicate events are defined all those events, including deletes, with the same:

* Extract System Identifier
* Client System Identifier
* PMS Unique Identifier

 Any event with the same Funding Agency, same NHI, same purchase unit and same Date of Service that exceeds the max number of events allowed in a day for that purchase unit will be rejected.

* A list of ‘Maximum events allowed in a day’ for each purchase unit will be used for this validation from 1 July 2012. This allows for some purchase units to have multiple events, e.g., a patient may present to the ED departments more than once in a day.
* Events with an Attendance Code equal to Did Not Attend (DNA) or Did Not Wait (DNW) will be excluded from this validation and will be excluded when determining the number of daily events.
* This validation will consider both those events already updated to the datamart and other events in the load file.

## Checks Between Related Fields

Some data in an event record is validated against other data in the record or the system. This includes ensuring:

* The **IDF\_UOM** = ‘client’ and the **Volume** = 0
* The **Purchase Unit Type** = ‘P’ and the **Volume** = 0
* Service Type ‘CRD’ is only valid for Event Type ‘CR’
* Valid combinations of Purchase Unit Type and Service Type as shown in the table below.

|  |  |
| --- | --- |
| **Service Type** | **Purchase Unit Type** |
| F - First | S - Subsequent | P - Preadm | G – General | O – Procedure | C - Community |
| PREADM | - | - | Valid | - | - | - |
| FIRST | Valid | - | - | Valid | Valid | Valid |
| FOLLOWUP | - | Valid | - | Valid | Valid | Valid |
| CRD | - | - | - | Valid | Valid | Valid |

For ED events the datetime stamps must be in chronological order. ie

1. Datetime of presentation ≤ Datetime of service
2. Datetime of presentation ≤ Datetime of service ≤ Datetime of first contact if Datetime of first contact not null
3. Datetime of service ≤ Datetime of first contact ≤ Datetime of departure if Datetime of departure not null

## Cautions

Cautions are issued as a record is accepted with possibly the wrong IDF DHB.

## Funding Agency

Funding Agency rules are as follows

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  **Purchaser Code** | **17** | **20** | **33** | **34** | **35** | **55** | **98** | **19** | **6** | **A0** |
| **Accredited employer** | **Overseas eligible** | **MoH Screening Pilot** | **MOH-funded purchase** | **DHB-funded purchase** | **Due to strike** | **Mixed funding where no MOH, DHB or ACC purchase is involved** | **Overseas chargeable** | **Privately funded** | **ACC - direct purchase** |
| **The submitted funding agency code must be valid or may be null** | **Y** |  |  |  |  |  | **Y** | **Y** | **Y** |  |
| **The submitted agency code must be valid and have an agency type of 01** |  | **Y** |  |  | **Y** | **Y** |  |  |  |  |
| **The submitted Funding Agency Code must be 1236** |  |  | **Y** | **Y** |  |  |  |  |  |  |
| **The submitted Funding Agency Code must be1237** |  |  |  |  |  |  |  |  |  | **Y** |

# Guidelines for Coding Events

## Overview

This section provides additional guidelines for coding fields.

## Events that occur outside a hospital

For purchase units that have events that may occur outside the hospital, reporting should be as follows

**Location** - choose the location that best describes where the event took place. The options are:

 1 Public hospital

 2 Private Hospital

 3 Psychiatric Hospital

 4 Other Institution

 5 Private Residence

 6 Other

 10 Residential Care

 11 Marae

 12 Primary Care

 13 Other community

 20 Video Conference

 21 Telephone

 22 Written correspondence, email or letter

 23 SMS messaging (text messaging)

 24 Remote Patient Monitoring

 25 Face-to-Face

**Facility Code** Where a facility code is available in the facility code table then enter it but it must reflect the location of the event. If no facility code is available leave the field blank. If you are using a facility code for the first time in NNPAC or if a code is rejected by the NNPAC load please notify the Identity Data Management Team in the Information Group.- National Health Board.

Examples

1. For DOM101-Professional nursing services provided in the community which will occur in the patients home use 5 Private Residence and leave facility code blank.
2. For S00008 Minor Operations eg Skin Lesions provided in GP Practice use 12 Primary Care and the facility code of that GP Practice from facility code table (<http://www.health.govt.nz/nz-health-statistics/data-references/code-tables/common-code-tables/facility-code-table>)

## ED Timestamps

#### Datetime of Presentation

The date and time a patient presents/or is presented physically to the ED department; either the triage nurse or clerical staff, whichever comes first.

#### Datetime of Service (Triage)

The date and time that a triage nurse/suitable ED medical professional starts the process of categorising the triage level of the incoming patient (i.e. 1 – 5).

The appropriate standard of care is for the first contact with staff in the ED to be with a triage nurse ('triage first'), so this datetime ideally should be the same as 'datetime of presentation.' However, it is understood that patients may present to a receptionist first in some departments, or may wait in a triage queue on some occasions. Hence 'datetime of presentation' and 'datetime of triage' are recorded separately. However, DHBs should endeavour to have 'triage first' and to ensure triage is undertaken immediately upon the patient's arrival.

Note the 'datetime of triage' is from the start of triage. It is understood that many EDs record the time the triage nurse 'files' the electronic triage record for the patient and that this is often towards the end of the triage process. DHBs with EDs of this sort should endeavour to have a system which electronically records the start of triage.

#### Datetime of First Contact

The date and time that the triaged patient's treatment starts by a suitable ED medical professional (could be the same time as the above if treatment is required immediately i.e. triage level 1).

#### Datetime of Departure from ED

The date and time of the physical departure of the patient from ED to an in-patient ward, or the time at which a patient begins a period of formal observation (whether in ED observation beds, an observation unit, or similar), or the time at which a patient being discharged from the ED to the community physically leaves the ED.

The datetime of departureis the time at which the patient is physically moved from ED to an inpatient ward, or the time at which a patient begins a period of formal observation, whether in ED observation beds, an observation unit, or similar. The physical move will follow, or be concurrent with, a formal admission protocol, but it is the patient movement that stops the clock on the emergency event, not associated administrative decisions or tasks.

Inpatient wards include short stay units (or units with a similar function). Under certain circumstances, a ‘decant’ ward designed to deal with surge capacity will qualify as an inpatient ward. Key criteria are that patients should be in beds rather than on trolleys, and be under the care of appropriate clinical staff.

A formal observation area generally has dedicated space, dedicated staffing, and fixed capacity (beds). In relation to transfers to an APU; if there is a clinical intervention and supervision by ED staff over and above triage, then the time from presentation to transfer should be counted in reporting against the ED LOS target. Otherwise, it should be excluded.

Datetime of departureis the time at which a patient being discharged from the ED to the community physically leaves the ED. If a patient’s treatment is finished, and they are waiting in the ED facilities only as a consequence of their personal transport arrangements for pickup, they can be treated as discharged for the purposes of this measure. If the patient goes home then returns to become an inpatient, then the clock stops at the point they leave the ED. If the patient goes home then returns to ED for further care, it is counted as another ED admission.

## Community Referred Diagnostic Event

The type of events that should be reported under Community Referred Diagnostic Event include any tests that have purchase units that currently start with ‘CS’. See table below.

|  |  |
| --- | --- |
| **PURCHASE\_UNIT\_CODE** | **PU\_DESCRIPTION** |
| CS01001 | Community Radiology |
| CS02001 | Community Laboratory (Hospital) |
| CS02002 | Community Laboratory |
| CS02003 | Refugees and Asylum seekers - lab tests |
| CS02004 | Non-Schedule Community Laboratory Tests |
| CS03001 | Hospital Dispensing of Pharmaceuticals |
| CS04001 | Community referred tests - cardiology |
| CS04002 | Community referred tests - neurology |
| CS04003 | Community referred tests - audiology |
| CS04004 | Community referred tests - gastroenterology |
| CS04005 | Community referred tests - endocrinology |
| CS04007 | Community referred tests - urology |
| CS04008 | Community referred tests - respiratory |
| CS04009 | Community referred tests - Pacemaker physiology tests |
| CS05003 | Long Stay Labs and Pharms |
| CS05004 | Mobile Dental X-Ray Service |

## Deaths

There is no requirement to send NNPAC or NMDS events for patients who are dead on arrival in ED.

However, if a patient arrives in ED and receives treatment then dies, that event must be submitted to NNPAC as an EDA event and to NMDS too. This is the case irrespective of how long they received treatment.

1. Required – M = Mandatory, C = Conditional, O = Optional [↑](#footnote-ref-1)
2. Required – M = Mandatory, C = Conditional, O = Optional [↑](#footnote-ref-2)
3. For code tables on the Ministry web site go to http://www.nzhis.govt.nz/moh.nsf/pagesns/47 [↑](#footnote-ref-3)