

## NTD Patient Recruitment and Data Extraction Processes

**FOR HEALTH INFORMATION SERVICES (HIS) (or equivalent department)/  
CLINICAL PERFORMANCE UNIT (CPU)/HEALTH INFORMATION EXCHANGE (HIE)**

Version 2.0, dated 31 October 2023

The following document is intended as a quick reference guide for HIS/CPU/HIE staff delegated to perform the necessary National Transfusion Dataset (NTD) data extraction.

### Recruitment and Data Extraction Strategy

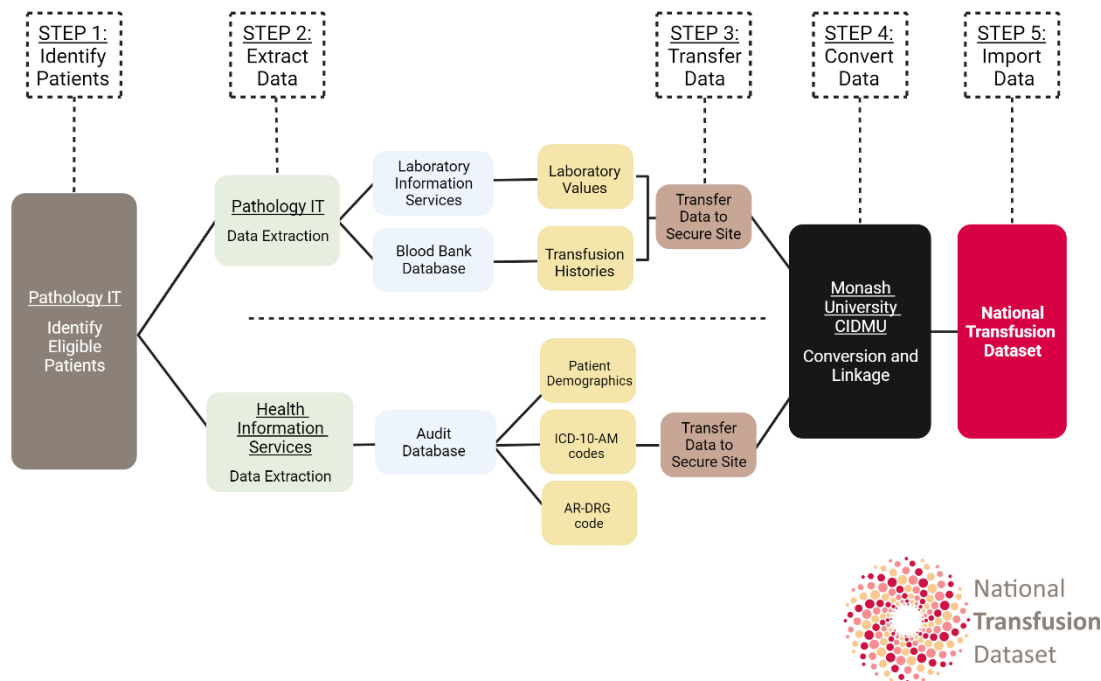


Figure 1. Data Extraction and Data Linkage Strategy employed by the NTD for Australian sites

## HIS/CPU/HIE Requirements:

| <b>ACTION</b> |  |
|---------------|--|
| <b>STEP 1</b> | <p><b>NO ACTION REQUIRED</b> – a list of patients eligible for the NTD will be forwarded to you by your hospital’s Pathology I.T. on a <b>biannual basis*</b> (see Data Extraction Schedule below)</p>   |
| <b>STEP 2</b> | <ul style="list-style-type: none"> <li>• <b>Extract all relevant administration and coding data</b> (as per NTD dataset) for each NTD patient identified in the relevant recruitment period</li> </ul> <p>Please ensure that data for <b>ALL ‘episodes of care’</b> within the formal hospital admission are extracted, not just the episode in which the transfusion took place</p>   |
| <b>STEP 3</b> | <ul style="list-style-type: none"> <li>• Before transferring data to Monash University, ensure that the file/s follow the NTD naming convention and are in the <b>standard</b> format (see ‘Important Notes’ and examples below).</li> <li>• Transfer extracted data using <b>Secure File Transfer Protocol (SFTP)</b>: <a href="https://www.monash.edu/researchinfrastructure/helix/capabilities/data-security">https://www.monash.edu/researchinfrastructure/helix/capabilities/data-security</a></li> </ul> |

\*Sites are may wish to extract data for the NTD more frequently. Please contact the NTD project manager to discuss the requirements at your site

### Important Notes

- Please keep the file type (e.g. ‘.xlsx’, ‘.csv’) as well as all column names and their order the same as the previous data extraction. Necessary changes to a site’s data format needs to be discussed with the NTD Project Manager in advance
- NTD naming convention example:  
‘YYMMDD\_NTD\_Hospital\_HIS\_RecruitmentPeriodYear.filetype’  
(e.g. 230605\_NTD\_ALF\_HIS\_Jan-March2023.xlsx’)
- Contact NTD Staff ([sphpm.ntd@monash.edu](mailto:sphpm.ntd@monash.edu)) if you require a SFTP login or are having technical difficulties

Example of HIS Administration data extract (please note that the format may differ between hospitals however, the SAME format should be provided each time)

|    | A         | B     | C       | D          | E   | F         | G         | H              | I              | J            | K            | L          | M        | N         | O         | P        | Q          | R        | S        | T        | U       | V         | W        | X         | Y         | Z     | AA       | AB       |  |
|----|-----------|-------|---------|------------|-----|-----------|-----------|----------------|----------------|--------------|--------------|------------|----------|-----------|-----------|----------|------------|----------|----------|----------|---------|-----------|----------|-----------|-----------|-------|----------|----------|--|
| 1  | MRN       | FIRST | FAMILY  | DOB        | SEX | EPI_ID    | EPI SEQ # | EPI START DATE | EPI START TIME | EPI END DATE | EPI END TIME | ADMDATE    | ADM TIME | ADM TRANS | SEP TRANS | ADM TYPE | SEPDATE    | SEP TIME | HOSP LOS | HOSP LOS | ICU HRS | VENT TIME | SEP MODE | SPEC NAME | SPEC UNIT | ANDRG | DRG DESC | DRG TYPE |  |
| 2  | 123456789 | John  | Smith   | 16/02/1918 | M   | 10000001  | 1         | 31/03/2012     | 10:14:00       | 19/04/2012   | 11:26:00     | 31/03/2012 | 10:14:00 | n/a       | n/a       | 1        | 14/05/2012 | 13:40:00 | 19       | 589      | 0       | 0         | 9        | Medical   | Geriatric | G46A  | Compl    | O        |  |
| 3  | 123456789 | John  | Smith   | 16/02/1918 | M   | 10000002  | 2         | 19/04/2012     | 11:26:00       | 14/05/2012   | 13:40:00     | 31/03/2012 | 10:14:00 | n/a       | n/a       | 1        | 14/05/2012 | 13:40:00 | 25       | 775      | 0       | 0         | 1        | Medical   | Geriatric | G61A  | GI Hae   | M        |  |
| 4  | 123456789 | John  | Smith   | 16/02/1918 | M   | 10000001  | 1         | 16/05/2012     | 09:03:00       | 21/05/2012   | 18:18:00     | 16/05/2012 | 09:03:00 | n/a       | n/a       | 1        | 23/05/2012 | 11:18:00 | 5        | 10       | 0       | 0         | 9        | Medical   | Geriatric | I08B  | Other F  | S        |  |
| 5  | 123456789 | John  | Smith   | 16/02/1918 | M   | 10000002  | 2         | 21/05/2012     | 18:18:00       | 23/05/2012   | 11:18:00     | 16/05/2012 | 09:03:00 | n/a       | n/a       | 1        | 23/05/2012 | 11:18:00 | 2        | 4        | 0       | 0         | 5        | Medical   | Geriatric | I78A  | Fractur  | M        |  |
| 6  | 123456789 | John  | Smith   | 16/02/1918 | M   | 10000001  | 1         | 24/05/2012     | 13:16:00       | 15/06/2012   | 09:30:00     | 24/05/2012 | 13:16:00 | n/a       | n/a       | 1        | 18/06/2012 | 08:00:00 | 22       | 44       | 0       | 0         | 9        | Medical   | Geriatric | E62A  | Respir:  | M        |  |
| 7  | 123456789 | John  | Smith   | 16/02/1918 | M   | 10000002  | 2         | 15/06/2012     | 09:30:00       | 18/06/2012   | 08:00:00     | 24/05/2012 | 13:16:00 | n/a       | n/a       | 1        | 18/06/2012 | 08:00:00 | 3        | 6        | 0       | 0         | 7        | Medical   | Geriatric | E62A  | Respir:  | M        |  |
| 8  | 987654321 | Jane  | Doe     | 25/11/1944 | F   | 20000001  | 1         | 20/02/2012     | 12:20:00       | 12/05/2012   | 10:10:00     | 20/02/2012 | 12:20:00 | XX Hosp   | XX Hosp   | 2        | 12/05/2012 | 10:10:00 | 82       | 5166     | 147     | 0         | 1        | General   | Upper G   | H01A  | Pancre   | S        |  |
| 9  | 987654321 | Jane  | Doe     | 25/11/1944 | F   | 20000001  | 1         | 5/06/2012      | 16:18:00       | 8/07/2012    | 21:50:00     | 5/06/2012  | 16:18:00 | XX Hosp   | XX Hosp   | 1        | 8/07/2012  | 21:50:00 | 33       | 297      | 0       | 0         | 7        | Medical   | Oncolog   | 801A  | OR Pro   | S        |  |
| 10 | 234567891 | Mary  | Le      | 11/03/1930 | F   | 12345678  | 1         | 19/03/2012     | 09:30:00       | 8/04/2012    | 15:22:00     | 19/03/2012 | 09:30:00 | XX Hosp   | ICU       | 2        | 8/04/2012  | 15:22:00 | 20       | 280      | 24      | 0         | 1        | General   | Upper G   | H01A  | Pancre   | S        |  |
| 11 | 876543219 | Sarah | Johnsor | 7/08/1939  | F   | 987654321 | 1         | 31/12/2011     | 03:27:00       | 11/01/2012   | 16:00:00     | 31/12/2011 | 03:27:00 | n/a       | n/a       | 1        | 11/01/2012 | 16:00:00 | 11       | 88       | 0       | 0         | 1        | Medical   | Haemat    | E62B  | Respir:  | M        |  |
| 12 | 876543219 | Sarah | Johnsor | 7/08/1939  | F   | 987654321 | 1         | 7/02/2012      | 14:15:00       | 29/03/2012   | 14:15:00     | 7/02/2012  | 14:15:00 | n/a       | n/a       | 1        | 31/03/2012 | 13:30:00 | 51       | 4386     | 0       | 0         | 9        | Medical   | Haemat    | D06Z  | Sinus ε  | S        |  |
| 13 | 876543219 | Sarah | Johnsor | 7/08/1939  | F   | 987654322 | 2         | 29/03/2012     | 14:15:00       | 31/03/2012   | 13:30:00     | 7/02/2012  | 14:15:00 | n/a       | n/a       | 1        | 31/03/2012 | 13:30:00 | 2        | 172      | 0       | 0         | 7        | Medical   | Haemat    | R61A  | Lymph    | M        |  |
| 14 |           |       |         |            |     |           |           |                |                |              |              |            |          |           |           |          |            |          |          |          |         |           |          |           |           |       |          |          |  |
| 15 |           |       |         |            |     |           |           |                |                |              |              |            |          |           |           |          |            |          |          |          |         |           |          |           |           |       |          |          |  |
| 16 |           |       |         |            |     |           |           |                |                |              |              |            |          |           |           |          |            |          |          |          |         |           |          |           |           |       |          |          |  |
| 17 |           |       |         |            |     |           |           |                |                |              |              |            |          |           |           |          |            |          |          |          |         |           |          |           |           |       |          |          |  |
| 18 |           |       |         |            |     |           |           |                |                |              |              |            |          |           |           |          |            |          |          |          |         |           |          |           |           |       |          |          |  |

**Example of HIS Diagnosis Codes data extract**

|    | A         | B         | C         | D         | E         | F  | G                    | H |
|----|-----------|-----------|-----------|-----------|-----------|--|----------------------|---|
| 1  | MRN       | ADM_ID    | EPI SEQ # | DIAG TYPE | DIAG CODE | DIAG DESC                                  | CONDITION ONSET FLAG |   |
| 2  | 987654321 | 123456789 | 1 01      |           | M8012/6   | Large cell carcinoma NOS, metastatic       | 2                    |   |
| 3  | 987654321 | 123456789 | 1 02      |           | C34.3     | Malignant neoplasm of lower lobe, bronc    | 2                    |   |
| 4  | 987654321 | 123456789 | 1 03      |           | M8012/3   | Large cell carcinoma NOS                   | 2                    |   |
| 5  | 987654321 | 123456789 | 1 04      |           | J95.8     | Other postprocedural respiratory disorde   | 1                    |   |
| 6  | 987654321 | 123456789 | 1 05      |           | J93.9     | Pneumothorax, unspecified                  | 1                    |   |
| 7  | 987654321 | 123456789 | 1 06      |           | T81.0     | Haemorrhage and haematoma complica         | 1                    |   |
| 8  | 987654321 | 123456789 | 1 07      |           | J94.2     | Haemothorax                                | 1                    |   |
| 9  | 987654321 | 123456789 | 1 P       |           | C79.88    | Secondary malignant neoplasm of other      | 2                    |   |
| 10 | 987654321 | 123456789 | 2 01      |           | C79.88    | Secondary malignant neoplasm of other      | 2                    |   |
| 11 | 987654321 | 123456789 | 2 02      |           | M8012/6   | Large cell carcinoma NOS, metastatic       | 2                    |   |
| 12 | 987654321 | 123456789 | 2 03      |           | C34.3     | Malignant neoplasm of lower lobe, bronc    | 2                    |   |
| 13 | 987654321 | 123456789 | 2 04      |           | M8012/3   | Large cell carcinoma NOS                   | 2                    |   |
| 14 | 987654321 | 123456789 | 2 05      |           | J95.8     | Other postprocedural respiratory disorde   | 2                    |   |
| 15 | 987654321 | 123456789 | 2 06      |           | J93.9     | Pneumothorax, unspecified                  | 2                    |   |
| 16 | 987654321 | 123456789 | 2 07      |           | T81.0     | Haemorrhage and haematoma complica         | 2                    |   |
| 17 | 987654321 | 123456789 | 2 08      |           | J94.2     | Haemothorax                                | 2                    |   |
| 18 | 987654321 | 123456789 | 2 P       |           | Z50.9     | Care involving use of rehabilitation proce | 2                    |   |
| 19 | 987654321 | 123456789 | 3 01      |           | J93.9     | Pneumothorax, unspecified                  | 2                    |   |
| 20 | 987654321 | 123456789 | 3 02      |           | Y83.8     | Other surgical procedures                  | 2                    |   |
| 21 | 987654321 | 123456789 | 3 03      |           | Y92.22    | Health service area                        | 2                    |   |
| 22 | 987654321 | 123456789 | 3 04      |           | C79.88    | Secondary malignant neoplasm of other      | 2                    |   |
| 23 | 987654321 | 123456789 | 3 05      |           | M8012/6   | Large cell carcinoma NOS, metastatic       | 2                    |   |
| 24 | 987654321 | 123456789 | 3 06      |           | C34.3     | Malignant neoplasm of lower lobe, bronc    | 2                    |   |
| 25 | 987654321 | 123456789 | 3 07      |           | M8012/3   | Large cell carcinoma NOS                   | 2                    |   |
| 26 | 987654321 | 123456789 | 3 08      |           | Z86.43    | Personal history of tobacco use disorder   | 2                    |   |
| 27 | 987654321 | 123456789 | 3 P       |           | J95.8     | Other postprocedural respiratory disorde   | 2                    |   |
| 28 | 987654321 | 123456789 | 4 01      |           | J95.8     | Other postprocedural respiratory disorde   | 2                    |   |
| 29 | 987654321 | 123456789 | 4 02      |           | J93.9     | Pneumothorax, unspecified                  | 2                    |   |
| 30 | 987654321 | 123456789 | 4 03      |           | J90       | Pleural effusion, not elsewhere classifie  | 2                    |   |
| 31 | 987654321 | 123456789 | 4 04      |           | Y83.8     | Other surgical procedures                  | 2                    |   |
| 32 | 987654321 | 123456789 | 4 05      |           | Y92.22    | Health service area                        | 2                    |   |
| 33 | 987654321 | 123456789 | 4 06      |           | C34.3     | Malignant neoplasm of lower lobe, bronc    | 2                    |   |
| 34 | 987654321 | 123456789 | 4 07      |           | M8012/3   | Large cell carcinoma NOS                   | 2                    |   |
| 35 | 987654321 | 123456789 | 4 08      |           | C79.88    | Secondary malignant neoplasm of other      | 2                    |   |
| 36 | 987654321 | 123456789 | 4 P       |           | Z50.9     | Care involving use of rehabilitation proce | 2                    |   |
| 37 |           |           |           |           |           |  |                      |   |
| 38 |           |           |           |           |           |  |                      |   |

### Example of HIS Procedure Codes data extract

|    | A         | B         | C               | D              | E              | F              | G   |
|----|-----------|-----------|-----------------|----------------|----------------|----------------|---|
| 1  | MRN       | ADM_ID    | EPISODE SEQ NO. | PROCEDURE TYPE | PROCEDURE DATE | PROCEDURE CODE | PROCEDURE DESC  |
| 2  | 987654321 | 123456789 | 1               | 01             | 15/09/2012     | 38488-01       | Replacement of aortic valve with bioprosthesis  |
| 3  | 987654321 | 123456789 | 1               | 02             | 15/09/2012     | 38497-01       | Coronary artery bypass, using 2 saphenous vein grafts                                   |
| 4  | 987654321 | 123456789 | 1               | 03             | 15/09/2012     | 38600-00       | Cardiopulmonary bypass, central cannulation   |
| 5  | 987654321 | 123456789 | 1               | 04             | 15/09/2012     | 55118-00       | 2 dimensional real time transoesophageal ultrasound of heart                            |
| 6  | 987654321 | 123456789 | 1               | 05             | 15/09/2012     | 92514-40       | General anaesthesia, ASA 40   |
| 7  | 987654321 | 123456789 | 1               | 06             | 20/06/2012     | 13882-01       | Management of continuous ventilatory support, more than 24 hours and less than 96 hours |
| 8  | 987654321 | 123456789 | 1               | 07             | 15/09/2012     | 92515-99       | Sedation, ASA 99  |
| 9  | 987654321 | 123456789 | 1               | 08             | 15/09/2012     | 92209-01       | Management of noninvasive ventilatory support, > 24 and < 96 hours                      |
| 10 | 987654321 | 123456789 | 1               | 09             | 15/06/2012     | 38218-00       | Coronary angiography with left heart catheterisation                                    |
| 11 | 987654321 | 123456789 | 1               | 10             | 20/06/2012     | 97521-01       | Adhesive restoration of anterior tooth, 1 surface, direct                               |
| 12 | 987654321 | 123456789 | 1               | 11             | 15/09/2012     | 97311-05       | Removal of 5 - 9 teeth or part(s) thereof   |
| 13 | 987654321 | 123456789 | 1               | 12             | 15/09/2012     | 97114-00       | Removal of calculus from surfaces of teeth  |
| 14 | 987654321 | 123456789 | 1               | 13             | 15/09/2012     | 11506-00       | Other measurement of respiratory function   |
| 15 | 987654321 | 123456789 | 1               | 14             | 15/09/2012     | 13706-02       | Administration of packed cells  |
| 16 | 987654321 | 123456789 | 1               | 15             | 15/09/2012     | 92062-00       | Administration of other serum   |
| 17 | 987654321 | 123456789 | 1               | 16             | 15/09/2012     | 13706-03       | Administration of platelets   |
| 18 | 987654321 | 123456789 | 1               | 17             | 15/09/2012     | 95550-03       | Allied health intervention, physiotherapy   |
| 19 | 987654321 | 123456789 | 1               | P              | 20/07/2012     | 33500-00       | Carotid endarterectomy  |
| 20 |           |           |                 |                |                |                |   |

Ready | Lab data | Tx Data | Admin Data | Diag Data | Proc Data | 100%

### Contact details

[sphpm.ntd@monash.edu](mailto:sphpm.ntd@monash.edu)

1800 811 326

X