

WA Data Linkage Unit Hospital Morbidity Data System (HMDS)

September 2006



Centre for Health Services Research
School of Population Health
The University of Western Australia



Data Linkage Unit
Health Information Centre
W.A Department of Health



Population Health Sciences
TVW Telethon Institute
for Child Health Research



Centre for Health Informatics
Division of Health Sciences
Curtin University of Technology

TABLE OF CONTENTS

1. DATABASE INFORMATION	5
1.1 The Hospital Morbidity Data System (HMDS)	5
1.2 The logical structure of the morbidity data	5
1.2.1 Data tables	5
1.2.2 Lpnos	6
1.2.3 Default characteristics of the fields	6
2. PROCESSING THE DATA	7
3. CHANGES TO THE MORBIDITY DATA SYSTEM	8
3.1 ICD codes	8
3.2 Doctors' codes	8
3.3 UMRNs	9
3.4 DRGs	9
4. VARIABLES	10
4.1 Table morbdata	10
aborig (indigenous status)	10
acc_no (account/admission no)	10
accomod	10
address (base address)	10
adm_date (date of admission)	11
adm_from (admitted from)	11
adm_time (time of admission)	11
adm_type (admission status)	11
age (admission age)	11
age_group	11
brth_num	Error! Bookmark not defined.
brth_ord	Error! Bookmark not defined.
cob (country of birth)	12
cont_hos (contracting establishment)	12
date_add (create date)	12
date_mod (modify data)	13
days_icu (days in ICU)	13
dob (date of birth)	13
d_o_leav (total leave days)	13
dqualnew	13
dr_adm (clinician responsible for care)	14
drg	14
dr_sep (clinician on separation)	14
emp_stat (employment status)	14
epi_care (care type)	14

event_id	15
further_care (referral to further care)	15
gname1_raw	Error! Bookmark not defined.
gname2_raw	Error! Bookmark not defined.
hith (hospital in home care days)	15
hosp_area (establishment area)	16
hosp_category (establishment category)	16
hospital (establishment)	16
hosp_region (establishment region)	17
hosp_type (establishment type)	17
hours_cmv	17
hsa (Health Service Area)	Error! Bookmark not defined.
ins_stat (insurance status)	17
interp (interpreter service)	17
language	17
lga	Error! Bookmark not defined.
link_acc (episode of care link account number)	18
location	18
loc_code (locality)	18
lpno	18
marital	18
mdc	19
mf_los	19
moth_umrn (mother's identifier)	19
mh_legal (mental health legal status)	19
n_of_leave	19
occup (occupation)	19
pat_epi (intended length of stay)	20
pat_type (client status)	20
pay_clas (payment classification)	20
postcode (postcode)	21
prev_treat (previous specialised treatment)	21
psych_days (days of psychiatric care)	21
readmis (readmission status)	21
ret_thea (unplanned return to theatre)	22
r_year	22
r_year_half	22
sep_date (separation date)	22
sep_time (separation time)	22
sep_to (discharged to)	22
sep_type (mode of separation)	23
sex (gender)	23
sor (SOR – to public psychiatric hospital)	24
spl_adm (speciality of clinician on admission)	24
spl_sep (speciality of clinician on separation)	24
src_ref (source of referral)	24
src_refl	25
src_refm	25
src_reft	26
state (state/territory)	26
suburb (suburb)	26
surname_raw	Error! Bookmark not defined.
type_accomm (type of usual accommodation)	26
umrn	27
up_date	27
vet_ent (veteran's card colour)	27
weight (infant weight / neonate)	27
4.2 Table morbdiag	28

diagcode (principal diagnosis, co-diagnosis, additional diagnosis)	28
diag_imp	28
diag_pos	28
diag_seq	28
diag_type	28
lpno	29
4.3 Table morbecod	30
activity (activity code)	30
ecode (external cause of injury)	30
ecod_pos	30
ecod_seq	31
ecod_type	31
lpno	31
p_occ (place of occurrence)	31
4.4 Table morbproc	33
date_proc	33
proccode (principal procedure and additional procedures)	33
proc_imp	33
proc_pos	33
proc_seq	33
proc_type	34
lpno	34
opdrcode (clinician for procedure)	34
4.5 Table morbdrgr	35
drg	35
grouper	35
lpno	35
mdc	35
4.6 Table morbmorph	36
morphcode	36
morph_pos	36
morph_seq	36
morph_type	36
lpno	36
4.7 Table morbgnam	37
gn_alias	37
gname (forenames)	37
gn_no	37
lpno	37
4.8 Table morbsnam	38
lpno	38
sn_alias	38
surname	38
5. HISTORY OF CODING VARIABLES	39
aborig (indigenous status)	39
adm_type (admission status)	39
age (admission age)	39
epi_care (care type)	39
hours_cmv	39
marital	39
pat_epi (intended length of stay)	40

pat_type (client status)	40
sep_type (mode of separation)	40
src_ref (source of referral)	41
6. DATABASE LAYOUT	42
6.1 Morbdata	42
6.2 Morbdiag	43
6.3 Morbecod	43
6.4 morbgnam	43
6.5 Morbproc	44
6.6 morbsnam	44
6.7 morbdrg	44
6.8 morbmorph	44
7. APPENDIX	45
Table A1 Country of birth codes	45
Table A2 Language codes	56

1. DATABASE INFORMATION

1.1 The Hospital Morbidity Data System (HMDS)

In 1968 all public hospitals (70% of the State's hospitals) started recording morbidity data. Coverage increased to 100% in 1971 when private hospitals also began recording morbidity data.

The HMDS collection commenced in 1970 and includes all inpatient episodes for defined admitted patients to public, private and freestanding day surgery hospitals in WA. The ABS was responsible for the HMDS until 1981, when the DOH WA took over responsibility for the system.

The database contains around sixty data items in addition to diagnosis and procedure codes, and currently receives information about almost 700,000 inpatient episodes per year.¹ The HA22 form is used to collect the required data from all hospitals. The data can be used for research projects to evaluate the demands on hospital services and assess the health care needs of Western Australians.

In November 1997 the HMDS was re-engineered from the mainframe environment to a relational database with Oracle software. At that time a number of fields were re-coded, some were discontinued, and some new fields were established. The benefits of the change in environment include the flexibility to incorporate new fields, the devolution of some edit tasks and quality maintenance measures to the hospitals, and the ability to update cases electronically. Processing of HMDS cases on the mainframe environment ceased in 1998.²

The Linked Database was transferred to a new Oracle-based system in March 1999. During this transfer some fields were re-coded to reflect the new HMDS coding system. See the individual variables for details.³

1.2 The logical structure of the morbidity data

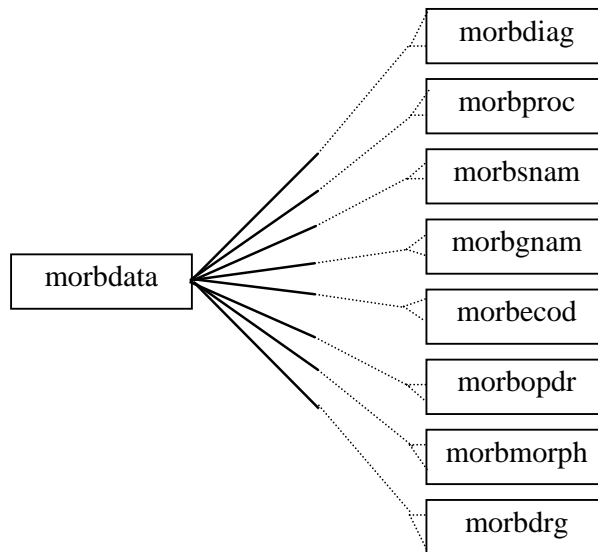
1.2.1 *Data tables*

The morbidity database contains nine tables. The diagram below represents the associations between each of the tables, although this representation is not defined within the database itself. The variables contained in each table are defined in Section 4.

¹ From July 1993, information about healthy newborn infants has been included on the HMDS. Before this, only second and subsequent births of a multiple birth and sick newborns were included.

² See H:\documentation\morbidity\new hmms system.doc for more information.

³ The current HMDS manual is available online at: <http://www.health.wa.gov.au/Publications/HMDS/>



1.2.2 *Lpnos*

Each table is indexed by the *lpno*, an 11 digit identifier. This increases the speed of access to records in the table whenever a reference is given to the *lpno*.

The following is a description of the positional meaning within the *lpno*.

- 1-2 The first two numbers of the *lpno* define the type of record. For morbidity records the first two numbers are 03.
- 3-5 The next three digits indicate the year of the record. Position 3 is the century (i.e. 1 = 19, 2= 20), and positions 4 and 5 are the year, e.g. 196 would indicate the year of the record was 1996.
- 6-11 The next six digits denote the number of the record for the particular year and type of record.

N.B. an 'E' is added to all hospital morbidity *lpnos*, indicating that the record is event based.

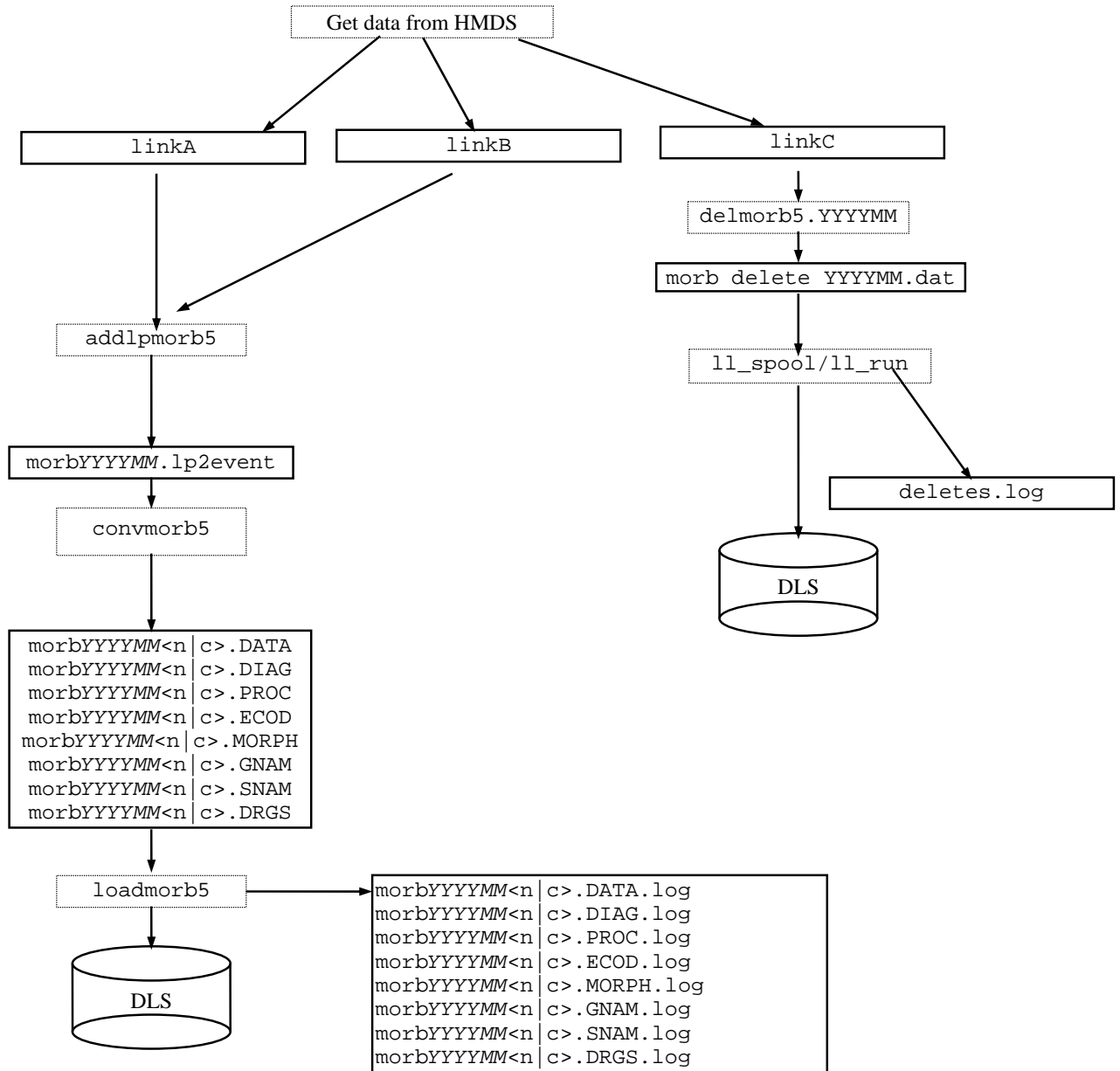
1.2.3 *Default characteristics of the fields*

All fields throughout the morbidity data system have two characteristics in common:

- most are of type character
- there are no predefined defaults.

2. PROCESSING THE DATA

This involves reading the data from the tape and processing each record before it goes into the database. The following diagram documents the steps involved.⁴



⁴ Further information can be found in: H:\documentation\morbidity\Morbidity_Monthly_Process.doc.

3. CHANGES TO THE MORBIDITY DATA SYSTEM

Until 1991, any amendments or changes made to the HMDS were made on the 1 January of each year. After this time, any changes were implemented on 1 July of each year.

3.1 ICD codes

The changes in ICD codes and the time period they were used for in the HMDS are listed in the table below.

Changes in ICD classifications

Time period	ICD coding version
January 1970 - December 1978	ICD - 8
January 1979 - December 1987	ICD - 9
January 1988 - June 1995	ICD - 9 CM
July 1995 - June 1996	ICD - 9 CM (Aust v1)
July 1996 - June 1999	ICD - 9 CM (Aust v2)
July 1999 - June 2000	ICD-10-AM 1st Ed
July 2000 - June 2002	ICD-10-AM 2nd Ed
July 2002 - June 2004	ICD-10-AM 3rd Ed
July 2004 -	ICD-10-AM 4th Ed

ICD-9 codes had either 3 or 4 digits, and the 3 digit codes were padded out with a preceding '9'. ICD-9-CM codes had 3 to 5 digits, but these codes were recorded as is with no padding.

In September 1999, all diagnosis, procedure, and ecode fields were updated to include decimal points, a preceding E for ecodes, and a hyphen in procedure codes. A new field was also added for the type of coding used.

3.2 Doctors' codes

A list of doctors' codes is published annually as these codes can change from year to year. For example, if a doctor dies or does not re-register, his/her code can be allocated to another doctor. Therefore, doctors' codes should be looked up in the list that applies for each year of data. In July 1995 the length of doctors' codes was increased from 5 to 6 characters by adding a preceding 0.

3.3 UMRNs

UMRNs were introduced in 1975 when teaching hospitals amalgamated their unit record number systems in order to give patients individual ID numbers.

Metropolitan public hospitals all use the same UMRN numbering system, and UMRNs from these hospitals begin with a letter. Rural public hospitals in the same health region use the same UMRN numbering system, but the system differs between health regions. Private hospitals have their own numbering systems which vary from hospital to hospital.

3.4 DRGs

Diagnostic related groups (DRGs) were introduced to the HMDS in 1988 using the American-based HCFA classification. Since then there have been many changes to the grouping of DRGs (see table below).

Changes in the grouping of DRGs

Financial year	Grouper versions used	Data available
1990/91	HCFA (US)	HCFA (US)
1991/92	HCFA (US)	HCFA (US)
1992/93	AN-DRG V1.0	AN-DRG V1.0
1993/94	AN-DRG V2.0	AN-DRG V2.0/V3.1
1994/95	AN-DRG V2.0	AN-DRG V2.0/V3.0/V3.1
1995/96	AN-DRG V3.0	AN-DRG V3.0/V3.1
1996/97	AN-DRG V3.1	AN-DRG V3.0/V3.1
1997/98	AN-DRG V3.1	AN-DRG V3.0/V3.1
1998/99	AN-DRG V3.1	AN-DRG V3.0/V3.1
1999/00	AR-DRG V4.1	AN-DRG V3.1/AR-DRG V4.1
2000/01	AR-DRG V4.1	AN-DRG V3.1/AR-DRG V4.1
2001/02	AR-DRG V4.2	AR-DRG V4.1/V4.2
2002/03	AR-DRG V4.2	AR-DRG V4.1/V4.2
2003/04	AR-DRG V5.0	AR-DRG V4.2/V5.0
2004/05	AR-DRG V5.0	AR-DRG V4.2/V5.0
2005/06		

The correct DRG for a particular separation date is stored in the MORBDATA table. However, the new HMDS system can store a number of DRGs for a record, so in September 1999 a new table (MORBDRG) was established to store any other DRGs for a record.

4. VARIABLES

4.1 Table morbdata

Where the variable name in the HMDS is different to that in the DLU database it is given in brackets.

aborig (indigenous status)

Indigenous status.

Size 1

Character Char

Coding

- 1 Aboriginal not Torres Strait Islander
- 2 Torres Strait Islander not Aboriginal
- 3 Aboriginal and Torres Strait Islander
- 4 not Aboriginal or Torres Strait Islander.

History

See the *History of coding variables* section.

acc_no (account/admission no)

Account number.

Size 12

Character Char

History

This field was added in July 1993.

Note: This is unique to each hospital, but not Statewide.

accomod

Type of accommodation occupied at discharge.

Size 1

Character Char

Coding

- 1 single room
- 2 shared room.

History

This variable was added in July 2000.

address (base address)

Usual residential address (house number, street name and street type).

Size 50

Character Char

History

Up until 30 June 1993, the address field was only six characters long.

From July 1993 to September 1999, the address field was 30 characters long.

Since September 1999 the address field has been 50 characters long.

adm_date (date of admission)

Admission date.

Size 8*Character* Integer**Coding**

Date format YYYYMMDD.

adm_from (admitted from)

Admitted from.

Size 4*Character* Char**Coding**

See the list of establishments in the HMDS manual.

adm_time (time of admission)

Time of admission.

Size 4*Character* Char**Coding**

24 hour clock format HHMM.

adm_type (admission status)

Admission type.

Size 1*Character* Char**Coding**

1	elective	(up to 30 June 2000)
2	emergency	(up to 30 June 2000)
3	elective – from waitlist	(from 1 July 2000)
4	elective – not from waitlist	(from 1 July 2000)
5	emergency	(from 1 July 2000).

History

Pre-1982 codes (see the *History of coding variables* section) were converted to 1 (elective) and 2 (emergency). From July 2000, codes 3 to 5 have been used instead of codes 1 and 2.

age (admission age)

Age at admission (in years)

Size 3*Character* Char**History**For the old codes see the *History of coding variables* section.

Note: this field is stored as number of days from birth to admission in the new HMDS but is converted to years.

age_group

Age group.

<i>Size</i>	2
<i>Character</i>	Char
Coding	
1	0 - 4 years
2	5 - 9 years
3	10 - 14 years
4	15 - 19 years
5	20 - 24 years
6	25 - 29 years
7	30 - 34 years
8	35 - 39 years
9	40 - 44 years
10	45 - 49 years
11	50 - 54 years
12	55 - 59 years
13	60 - 64 years
14	65 - 69 years
15	70 - 74 years
16	75 - 79 years
17	80 - 84 years
18	>= 85 years.

cob (country of birth)

Country of birth.

<i>Size</i>	4
<i>Character</i>	Char

Coding

See Appendix for codes.

History

This variable was two characters long until July 1995, when it changed to four characters. When the HMDS moved to the Oracle system in 1997, all country of birth codes were recoded to four digits.

From 1995 to 2002 the Australian Standard Classification of Countries for Social Statistics (ASCCSS) was used. In July 2002, the Standard Australian Classification of Countries (SACC) was introduced. The ASCCSS has not been mapped to SACC so both classifications are in use.

cont_hos (contracting establishment)

Contracting hospital.

<i>Size</i>	4
<i>Character</i>	Char

Coding

See the list of establishments in the HMDS manual.

History

This variable was added in July 1995.

date_add (create date)

Date of additions.

Size 8

Character Integer

Coding

Date format YYYYMMDD.

History

Since the new HMDS database was implemented in 1997, the date the record was created is stored in this field.

date_mod (modify data)

Date of the last corrections made to the record.

Size 8

Character Integer

Coding

Date format YYYYMMDD.

History

Since the new HMDS database was implemented in 1997, the last date the record was modified is stored in this field.

days_icu (days in ICU)

Number of days in an intensive care unit.

Size 4

Character Char

History

This field was added in July 1993.

dob (date of birth)

Date of birth.

Size 8

Character Integer

Coding

Date format YYYYMMDD.

d_o_leav (total leave days)

Number of days 'on leave'.

Size 4

Character Char

Note: this is the total number of days between formal admission and separation in which the patient was not cared for in the institution.

dqualnew

Number of days of qualified care.

Size 3

Character Char

History

This field was added in July 2000.

dr_adm (clinician responsible for care)

Doctor on admission.

Size 6

Character Char

Coding

See the doctor list for the specific year.

drg

Diagnostic related group code.

Size 4

Character Char

Coding

For mapping and descriptions of DRGs see the *Australian Refined Diagnosis Related Group* manual published by the Australian Government Department of Health and Ageing.

See section 3.4 for the DRG versions used by the HMDS at various times

History

This field was added in 1988.

Note: in the new HMDS a number of DRGs are stored - the correct one plus some back coded ones. This field holds the correct DRG for the separation date. Any others are stored in a separate table (MORBDRG).

dr_sep (clinician on separation)

Doctor on separation.

Size 6

Character Char

Coding

See the doctor list for the specific year.

emp_stat (employment status)

Employment status of patient.

Size 1

Character Char

Coding

- 1 child not at school
- 2 student
- 3 employed
- 4 unemployed
- 5 home duties
- 6 retired
- 7 pensioner
- 8 other.

History

This field was added in July 1998.

epi_care (care type)

Episode of care.

Size 2

Character Char

Coding

From July 2000 the following codes have been used:

- 21 acute care
- 22 rehabilitation care (sub-acute)
- 23 palliation care (sub-acute)
- 24 psychogeriatric care (acute)
- 25 maintenance care (non-acute)
- 26 newborn
- 27 organ procurement
- 28 boarder
- 29 geriatric evaluation and management.

History

The following codes, which were introduced in July 1998, are still used for data between 1998 and 2000:

- 0 palliation (designated program)
- 1 acute (includes qualified newborns)
- 2 rehabilitation (principal clinical intent)
- 3 palliation (principal clinical intent)
- 4 nonacute
- 5 other
- 6 newborn (unqualified)
- 7 rehabilitation (designated unit)
- 8 rehabilitation (designated program)
- 9 palliation (designated unit).

See the *History of coding variables* section for coding used before July 1998.

event_id

Unique ID for each record on the HMDS.

Size 9

Character Char

further_care (referral to further care)

Referral to further care (mental health institutions only).

Size 2

Character Char

Coding

- 1 not referred
- 2 private psychiatrist
- 3 other private medical practitioner
- 4 mental health / alcohol and drug inpatient facility
- 5 mental health / alcohol and drug non-inpatient facility
- 6 acute hospital
- 7 other.

hith (hospital in home care days)

The number of 'hospital in the home' days occurring within an episode of care for an admitted patient.

Size 3

Character Char

History

This variable was added on 1 July 2002.

hosp_area (establishment area)

Hospital area.

Size 2

Character Char

Coding

1 metropolitan

2 rural.

hosp_category (establishment category)

Hospital category.

Size 2

Character Char

Coding

1 teaching

2 non teaching

3 regional

4 district

5 psychiatric

6 nursing home

8 other health accommodation

9 community health

10 day surgery

11 nursing post

12 nursing post (home)

13 acute psychiatric

14 acute psychiatric day surgery

15 disabled children

16 home

17 deceased

18 unit

19 referral

20 acute hospital

21 other

22 day surgery (23/24 hour licence).

hospital (establishment)

Hospital code.

Size 4

Character Char

Coding

HMDS establishment codes - see list in HMDS manual.

hosp_region (establishment region)

Hospital region.

Size 2

Character Char

Coding

This field is blank for all years. Contact HMDS for an explanation of how this field is calculated.

hosp_type (establishment type)

Hospital type.

Size 2

Character Char

Coding

- 1 public
- 2 private
- 3 Commonwealth
- 4 other.

hours_cmv

Number of hours on mechanical ventilation.

Size 5

Character Char

History

This field was introduced in 1999 to replace time_cmv, which was originally added in 1993. See the *History of coding variables* section for the old codes.

ins_stat (insurance status)

Insurance status of patient.

Size 1

Character Char

Coding

- 1 has hospital insurance
- 2 does not have hospital insurance.

History

This field was added in July 1998.

interp (interpreter service)

Interpreter required?

Size 1

Character Char

Coding

- 1 yes
- 2 no.

language

Language spoken (if interpreter is required).

Size 2

Character Char

History

This field was added in July 2000 and the codes changed in July 2002.

200007-200206 old codes.

200207-200606 new codes.

200607 – 4 digit code

See the Appendix for the old and new codes.

link_acc (episode of care link account number)

Episode of care link account number.

Size 12

Character Char

Note: this variable has been collected since July 2000, but only in some hospitals.

location

Ward.

Size 20

Character Char (numerical or text)

History

This variable was called *ward* until July 1993.

loc_code (locality)

Local government code.

Size 6

Character Char

History

This has not been collected since July 2000.

lpno

Unique ID number.

Size 12

Character Char

Coding

See section 1.2.1.

Note: this field is added by the DLU.

marital

Marital status.

Size 1

Character Char

Coding

- 1 never married
- 2 widowed
- 3 divorced
- 4 separated

- 5 married / defacto
- 6 unknown / not stated.

History

See the *History of coding variables* section.

mdc

Major diagnostic category.

Size 2

Character Char

History

MDCs were introduced around mid-1993.

Note: the MDC field is generated at the same time as the DRG field.

mf_los

Length of stay (days).

Size 4

Character Char

moth_umrn (mother's identifier)

Mother's Unit Medical Record Number.

Size 10

Character Char

History

This field was added in July 1998.

Note: this variable is recorded only on the baby's record for a birth admission.

mh_legal (mental health legal status)

Legal status of patients admitted for assessment and / or treatment of a mental health disorder.

Size 1

Character Char

Coding

- 1 involuntary patient for all or part of the episode of care
- 2 voluntary patient for the entire episode of care.

n_of_leave

Number of leave periods.

Size 2

Character Char

History

This field was added in July 2000.

occup (occupation)

Occupation code.

Size 2

Character Char

Coding

See HMDS manual.

History

This variable has not been collected since July 2000.

pat_epi (intended length of stay)

Patient episode.

Size 1

Character Char

Coding

- 1 intended same day stay
- 2 intended overnight stay.

History

Coding for this variable changed when the HMDS changed to the new system in 1998. See the *History of coding variables* section for the old codes.

pat_type (client status)

Patient type.

Size 1

Character Char

Coding

- 0 funding hospital
- 1 qualified newborn
- 2 unqualified newborn
- 3 boarder
- 4 nursing home type
- 5 contract services
- 6 admitted client
- 7 organ procurement.

History

In July 1995 patient category was split into two fields: pat_type and pat_epi. See the *History of coding variables* section for the old codes for pat_type.

pay_clas (payment classification)

Payment classification.

Size 2

Character Char

Coding

From July 2003 the following codes were introduced:

- 21 Australian Health Care Agreements
- 22 private health insurance
- 23 self-funded
- 24 worker's compensation
- 25 motor vehicle third party personal claim
- 26 other compensation
- 27 Department of Veterans' Affairs (DVA)
- 28 Department of Defence
- 29 correctional facility
- 30 reciprocal health care agreement

- 31 ineligible
- 32 other.

The old codes are still used for data before this date:

- 1 public
- 2 private uninsured
- 3 private insured
- 4 Workers Compensation Assurance (WCA)
- 5 Motor Vehicle Insurance Trust (MVIT)
- 6 defence force personnel
- 7 ineligible
- 8 Department of Veterans Affairs (DVA)
- 9 other.

postcode (postcode)

Postcode of usual residence.

Size 6
Character Char

Coding

- 6*** Known WA postcode
- 8888 overseas visitor / sailor
- 6999 unknown address in WA
- 9999 unknown address.

History

9999 was added in July 2002, before this time 6999 was used for all unknown addresses.

prev_treat (previous specialised treatment)

Previous specialised treatment (mental health institutions only).

Size 2
Character Char

Coding

- 1 no previous admissions or service contacts
- 2 previous admissions but no service contacts
- 3 previous service contacts but no previous admissions
- 4 both previous admissions and service contacts
- 5 unknown.

psych_days (days of psychiatric care)

The number of days an admitted patient spent within a designated psychiatric unit.

Size 4
Character Char

readmis (readmission status)

Patient readmission.

Size 1
Character Char

Coding

- 1 planned readmission

2 unplanned readmission.

History

This variable was added in July 1995.

ret_thea (unplanned return to theatre)

Indicates if a patient unexpectedly returns to theatre for further surgery.

Size 1

Character Char

Coding

1 yes (unplanned return to theatre)

2 no (planned return to theatre).

History

This variable was added in July 1998.

r_year

Year of separation.

Size 4

Character Integer

Note: This variable is added to all records by the DLU.

r_year_half

Indicates whether the separation is in the first or second half of the year.

Size 1

Character Integer

Coding

1 day and month of year between 01/01 and 30/06

2 day and month of year between 01/07 and 31/12

Note: This variable is added to all records by the DLU.

sep_date (separation date)

Separation date.

Size 8

Character Integer

Coding

Date format YYYYMMDD.

sep_time (separation time)

Time of separation.

Size 4

Character Char

Coding

24 hour clock format HHMM.

sep_to (discharged to)

Discharged / transferred to.

Size 4

Character Char

Coding

See the list of establishments in the HMDS manual.

sep_type (mode of separation)

Separation type.

Size 1

Character Char

Coding

In July 2003 the codes changed slightly to:

- 1 transfer to acute hospital
- 2 transfer to residential aged care service
- 3 transfer to psychiatric hospital
- 4 transfer to other health care accommodation
- 5 statistical type change
- 6 left against medical advice
- 7 statistical discharge from leave
- 8 deceased
- 9 other / home.

The following codes, which were introduced in November 1998, are still used for data between 1998 and 2000:

- 1 transfer to acute hospital
- 2 transfer to nursing home
- 3 transfer to psychiatric facility
- 4 transfer to other health accommodation
- 5 statistical type change
- 6 left against medical advice
- 7 statistical discharge from leave
- 8 deceased
- 9 other / home.

History

For codes prior to this date see the *History of coding variables* section.

Note: Although only values 2 and 3 were changed in 2003 and the changes seem minor, they have implications for coding. For example, prior to July 2003, aged care hostels would be coded to 4 (transfer to other health accommodation) but with the change in wording they are now coded to 2 (transfer to residential aged care service).

sex (gender)

Sex / gender.

Size 1

Character Char

Coding

- 1 male
- 2 female
- 3 indeterminate
- 4 other.

Note: 'indeterminate' was used babies whose sex couldn't be determined, whereas 'other' was used for adult transsexuals and those who had undergone sex changes.

src_ref (SOR – to public psychiatric hospital)

Source of referral – to public psychiatric hospital (mental health institutions only).

Size 2

Character Char

Coding

- 1 private psychiatric practice
- 2 other private medical practice
- 3 other public psychiatric hospital
- 4 other health care establishment
- 5 other private hospital
- 6 law enforcement agency
- 7 other agency
- 8 outpatient department
- 9 other
- 10 unknown.

spl_adm (speciality of clinician on admission)

Speciality of the doctor who admitted the patient.

Size 2

Character Char

Coding

See the listing in the HMDS manual.

History

This field was added in July 1993. There was a coding system change in July 1998 and all data is coded to the new system.

spl_sep (speciality of clinician on separation)

Speciality of the doctor who discharged the patient.

Size 2

Character Char

Coding

See the listing in the HMDS manual.

History

This field was added in July 1993. There was a coding system change in July 1998 and all data is coded to the new system.

src_ref (source of referral)

Source of referral.

Size 2

Character Char

Coding

- 0 other/unknown
- 1 private medical practice (includes specialist/GP)
- 2 nursing home
- 3 community health service
- 4 inter-hospital transfer
- 5 outpatient department
- 6 emergency department

- 7 waiting list
- 8 psychiatric facility
- 9 statistical admission / type change.

History

This field was replaced by src_refl, src_refm and src_reft in July 2000.

The coding changed slightly in 1998. For the old codes the *History of coding variables* section. For data pre July 2000, need to use src_ref.

src_refl

Source of referral – location prior to admission.

Size 2

Character Char

Coding

From July 2003 the codes are:

- 1 home
- 2 residential aged care service
- 3 other health care accommodation
- 4 acute hospital
- 5 psychiatric hospital
- 6 prison
- 7 other.

The following codes are still used for data before July 2003:

- 1 home
- 2 nursing home
- 3 hostel
- 4 hospital
- 5 psychiatric facility
- 6 prison
- 7 other.

History

This field was added in July 2000. Together with src_refm and src_reft it replaces src_ref for post July 2000 admissions.

src_refm

Source of referral – type of medical referral.

Size 2

Character Char

Coding

- 1 GP
- 2 specialist clinician
- 3 outpatient department clinician
- 4 emergency department clinician
- 5 hospital clinician (re-admission)
- 6 community health clinician
- 7 statistical admission / type change
- 8 other.

History

This field was added in July 2000. Together with src_refl and src_reft it replaces src_ref for post July 2000 admissions.

src_reft

Source of referral – transport used.

Size 2

Character Char

Coding

- 1 private / public transport
- 2 hospital - patient transport
- 3 ambulance - emergency
- 4 Royal Flying Doctor Service (takes priority over ambulance, etc)
- 5 helicopter (Evac)
- 6 other.

History

This field was added in July 2000. Together with src_refl and src_refm it replaces src_ref for post July 2000 admissions.

state (state/territory)

State / Territory of usual residence.

Size 1

Character Char

Coding

- 0 overseas
- 1 New South Wales
- 2 Victoria
- 3 Queensland
- 4 South Australia
- 5 Western Australia
- 6 Tasmania
- 7 Northern Territory
- 8 Australian Capital Territory
- 9 other Territories.

suburb (suburb)

Town or suburb of usual residence.

Size 30

Character Char

History

This field was added in July 1993.

type_accomm (type of usual accommodation)

Type of usual accommodation (mental health institutions only).

Size 2

Character Char

Coding

- 1 house or flat
- 2 independent unit – retirement village or similar
- 3 hostel or hostel type accommodation

- 4 psychiatric hospital
- 5 acute hospital
- 6 other accommodation
- 7 no usual residence
- 10 correctional institute.

umrn

Unit Medical Record Number.

Size 10

Character Char

Coding

See section 3.3.

up_date

Date the record was updated in the DLU's database.

Size 8

Character Integer

Coding

Date format YYYYMMDD.

History

This field was added in September 1999 and applied to data that had been added or modified since 1 October 1998.

Note: This field is initially set to the date the record was loaded then is changed if the record is updated.

vet_ent (veteran's card colour)

Veteran's entitlement.

Size 1

Character Char

Coding

1 Gold

2 White.

History

From January 1996 the codes above apply.

This field was added in July 1993 with the codes 1 – yes and 2 – no.

Amendments to codes made in July 1995 were as follows:

1 Yellow

2 White

3 Red

4 Mauve.

weight (infant weight / neonate)

Admission weight (neonates).

Size 4

Character Char

4.2 Table morbdiag

diagcode (principal diagnosis, co-diagnosis, additional diagnosis)

Diagnosis code.

Size 6

Character Char

Coding

Valid ICD codes. Diagcode_1 is the principal diagnosis, diagcode_2 is the co-diagnosis, and the other diagcodes relate to the additional diagnoses.

History

In September 1999, all diagnosis codes were recoded to include the decimal point, e.g. 4567 changed to 456.7.

diag_imp

Category of the diagnosis in the original flat file.

Size 1

Character Char

Coding

P principal diagnosis

C co-diagnosis

A additional diagnosis.

diag_pos

Position of the diagnosis in the original flat file.

Size 2

Character Char

Coding

Ranges from 1 to 22.

Note: although the HMDS now records an unlimited number of diagnoses the DLU extract only contains the first 22.

diag_seq

Indicates the sequence of this diagnosis in the original data to the HMDS.

Size 3

Character Char

diag_type

Indicates the version of ICD used.

Size 1

Character Char

Coding

See section 3.1

History

This field was added in September 1999.

Note: this field is added by the DLU and the version of ICD used is based on sep_date.

Ipno

Unique ID number.

Size 12

Character Char

Coding

See section 1.2.1.

Note: this field is added by the DLU.

4.3 Table morbecod

activity (activity code)

Type of activity the person was doing when they were injured.

Size 8

Character Char

Coding

From July 2000 onwards ICD-10-AM 2nd edition codes have been used.

History

From July 1999 to June 2000 the following codes were used:

- 0 engaged in organised sport
- 1 engaged in leisure activity
- 2 while working for income
- 3 while engaged in other work
- 4 while resting, sleeping, eating or other vital activities
- 8 while engaged in other activities/post operative
- 9 unspecified.

Up to 30 June 1999 the coding was:

- 1 sports activity
- 2 leisure activity
- 3 working for income
- 4 other type of work (i.e. unpaid housework)
- 5 resting, sleeping, personal activity
- 6 being nursed or cared for
- 7 engaged in formal education
- 8 other specified activity
- 9 unspecified activity.

ecode (external cause of injury)

External cause of injury.

Size 8

Character Char

Coding

Valid ICD codes.

History

In September 1999, all ecodes were recoded to include the decimal point and the preceding 'E'. For example, 3456 changed to E345.6.

ecod_pos

Position of the ecode in the original flat file.

Size 2

Character Char

Coding

Ranges from 1 to 4.

Note: although the HMDS now records an unlimited number of ecodes the DLU extract only contains the first 4.

ecod_seq

Indicates the sequence of this ecocode in the original data to the HMDS.

Size 4
Character Char

ecod_type

Indicates the type of ICD code.

Size 1
Character Char

Coding

See section 3.1

History

Added to all records in September 1999.

Note: this field is added by the DLU and the version of ICD used is based on sep_date.

lpno

Unique ID number.

Size 12
Character Char

Coding

See section 1.2.1.

Note: this field is added by the DLU.

p_occ (place of occurrence)

Place where the injury occurred.

Size 8
Character Char

Coding

From July 2000 onwards ICD-10-AM 2nd edition codes have been used.

History

From July 1999 to June 2000 the following codes were used:

- 0 home
- 1 residential institution
- 2 school, public administration
- 3 sports, athletics arena
- 4 street/highway
- 5 trades and services area
- 6 industrial and construction area
- 7 farm
- 8 other
- 9 unknown / post-operative complication arising after discharge.

Up to 30 June 1999 the following codes applied:

- 0 home
- 1 farm
- 2 mine quarry
- 3 industrial premises
- 4 recreation/sports facility

- 5 street/highway
- 6 public building
- 7 residential institution
- 8 other
- 9 unknown / post-operative complication arising after discharge.

4.4 Table morbproc

date_proc

Date the procedure was performed.

Size 8

Character Integer

Coding

YYYYMMDD.

History

proccode (principal procedure and additional procedures)

Procedure code.

Size 8

Character Char

Coding

Valid ICD codes. Proccode_1 is the principal procedure, and the other proccodes relate to additional procedures.

History

In September 1999 all procedure codes were recoded to include any dash or decimal point, e.g. 5678 changed to 5-678 for 1978-1987 data, and to 56.78 for 1988-1999 data. In 2003 the entire morbidity data was replaced by a complete dump from HMDS. Procedure codes are stored as supplied by the HMDS. ICD-9 codes (1978-1987) are stored as NN.NN rather than N-NNN. **WARNING:** Please make sure you use dates to determine the type of procedure code.

proc_imp

Category of the procedure.

Size 1

Character Char

Coding

P principal procedure

A additional procedure.

proc_pos

Position of the procedure in the original flat file.

Size 2

Character Char

Coding

Ranges from 1 to 11.

Note: although the HMDS now records an unlimited number of procedures the DLU extract only contains the first 11.

proc_seq

Indicates the sequence of this procedure in the original data to the HMDS.

Size 4
Character Char

proc_type

Indicates the type of ICD code.

Size 1
Character Char

Coding

See section 3.1.

History

Added to all records in September 1999.

Note: this field is added by the DLU and the version of ICD used is based on sep_date.

lpno

Unique ID number.

Size 12
Character Char

Coding

See section 1.2.1.

Note: this field is added by the DLU.

opdrcode (clinician for procedure)

Code for the clinician performing the procedure.

Size 6
Character Char

Coding

See listing in the HMDS manual.

4.5 Table morbdrg

This table is used to store any extra DRG/MDC code supplied. HMDS will generally code to the current DRG (stored in morbdata) and to the previous version (stored here).

drg

Diagnostic related group code

Size 4

Character Char

Coding

For mapping and descriptions of DRGs see the *Australian Refined Diagnosis Related Group* manual published by the Australian Government Department of Health and Ageing.

grouper

DRG grouper used.

Size 2

Character Char

Coding

See section 3.4.

lpno

Unique ID number.

Size 12

Character Char

Coding

See section 1.2.1.

Note: this field is added by the DLU.

mdc

MDC code.

Size 2

Character Char

Coding

For mapping and descriptions of DRGs see the *Australian Refined Diagnosis Related Group* manual published by the Australian Government Department of Health and Ageing.

4.6 Table morbmorph

This table is used to store the morphology codes for cancer records. The morphology code should follow the diagnosis it refers to when it is given to the HMDS.

morphcode

ICD morphology code.

Size 7

Character Char

History

This variable was added to the HMDS in July 2000.

morph_pos

The position of the morphology code (supplied from the HMDS).

Size 2

Character Char

morph_seq

Indicates the sequence of this morphology code in the original data to the HMDS.

Size 4

Character Char

morph_type

Indicates the type of ICD code.

Size 1

Character Char

Coding

See section 3.1.

History

Added to all records in September 1999.

Note: this field is added by the DLU and the version of ICD used is based on sep_date.

lpno

Unique ID number.

Size 12

Character Char

Coding

See section 1.2.1.

Note: this field is added by the DLU.

4.7 Table morbgnam

This table contains information about the patient's given name(s) and alias(es). This information is the output of the convmorb process and is used to improve the linkage process.

For example, if a person's given names are Mary Elizabeth and she also goes by the name of Liz, three records would be created for her in this table as shown below.

lpno	gn_alias	gname	gn_no
01000456789	0	Mary	1
01000456789	0	Elizabeth	2
01000456789	1	Liz	1

gn_alias

Number of the alias.

Size 1

Character Char

Coding

- 0 no alias,
- 1 one alias
- 2 two aliases, etc.

Note: this field is added by the DLU and ranges from 0 to 9.

gname (forenames)

Given name or alias.

Size 25

Character Char

Note: this field is added by the DLU. Original names are stored as gname1_raw and gname2_raw in MORBDATA.

gn_no

The number of the given name.

Size 1

Character Char

Note: this field is added by the DLU and ranges from 1 to 9.

lpno

Unique ID number.

Size 12

Character Char

Coding

See section 1.2.1

Note: this is a unique number added by the DLU.

4.8 Table morbsnam

This table contains information about the patient's surname, and any alias(es) for the surname. This information is the output of the process and is used to improve the linkage process.

For example, if a person's surname is Williams, but they are also known as Smith, two records would be created for them in this table as shown below.

lpno	sn_alias	surname
01000456789	0	Williams
01000456789	1	Smith

lpno

Unique ID number.

Size 12

Character Char

Coding

See section 1.2.1

Note: this is a unique number added by the DLU.

sn_alias

Number of the surname alias for a particular person

Size 1

Character Char

Coding

0 no alias,

1 one alias

2 two aliases, etc.

Note: this field is added by the DLU and ranges from 0 to 9.

surname

Surname or alias.

Size 25

Character Char

Note: this field is added by the DLU. Original names are stored as surname_raw in MORBDATA.

5. HISTORY OF CODING VARIABLES

This section is for historical purposes only. Data is not stored in these formats in the current HMDS.

aborig (indigenous status)

Recoded in March 1999, when data transferred to new Oracle database, from:

1 non-Aboriginal

2 Aboriginal.

Re-coding:	OLD	NEW
	1	4
	2	3

adm_type (admission status)

Pre-1982 data codes were converted from 1, 2, 3, 7 to 1 (elective) and 4, 5, 6, 8, 9 to 2 (emergency).

age (admission age)

Coding changed in March 1999 from:

000 under 1 day

001 - 030 1-30 days

101 - 111 1 - 11 months

201 - 320 1 - 120 years.

epi_care (care type)

Before July 1998 the following codes were used:

1 acute

2 rehabilitation (principal clinical intent)

3 palliation

4 non-acute

5 other.

hours_cmv

This field was introduced in 1999 to replace time_cmv, which was originally added in 1993. The old codes were:

4*** number of hours

0*** number of days

1*** number of months

2*** number of years.

marital

Recoded in March 1999, when data transferred to new Oracle database, from:

1 never married

2 married, de facto

3 widow, widower

4 divorced

5 separated.

Re-coding:	OLD	NEW
-------------------	-----	-----

1	1
2	5
3	2
4	3
5	4
null	6

pat_epi (intended length of stay)

In July 1995 codes were re-coded to the following codes:

- 1 overnight(intended same day)
- 2 planned same day(intended overnight)
- 3 unplanned same day.

Before July 1995 the codes were:

- 1 inpatient
- 2 same day
- 3 boarder.

Re-coding: OLD NEW

1	2
2	1
3	2

pat_type (client status)

Codes for pat_type until July 1995 were:

- 1 acute
- 2 subacute
- 3 awaiting residential placement (non-acute).

sep_type (mode of separation)

Before 1993 the codes were:

- 0 discharged home
- 1 discharged to another hospital
- 2 discharged to another institution
- 3 discharged at own risk
- 4 next of kin or local contact
- 5 discharged home or domiciliary service
- 6 deceased with autopsy
- 7 deceased without autopsy
- 8 deceased with autopsy unknown
- 9 deceased coroner's case
- 10 stillborn.

In July 1995 the codes were converted to:

- 1 discharged
- 2 transfer to acute hospital
- 3 transfer to nursing home
- 4 deceased
- 5 discharged against medical advice
- 6 reclassified this hospital
- 7 discharged from leave

8 discharged other hospital accommodation

9 other.

Re-coding: OLD NEW (from old HMDS to new in November 1998)

1	9
2	1
3	2
4	8
5	6
6	5
7	7
8	4
9	9

src_ref (source of referral)

Coding changed in 1998 from:

1 private medical practice
 2 nursing home
 3 community health service
 4 interhospital transfer
 5 outpatient department (OPD)
 6 emergency
 7 waiting list
 8 psychiatric facility
 9 other/unknown.

Re-coding: OLD NEW
 9 0

6. DATABASE LAYOUT

The following is a list of tables and their fields in a shortened form. The fields in bold have an associated index.

6.1 Morbdata

Name	Null?	Type

LPNO	NOT NULL	VARCHAR2(12)
R_YEAR	NOT NULL	NUMBER(4)
R_YEAR_HALF	NOT NULL	NUMBER(1)
UP_DATE		NUMBER(8)
DATE_ADD		NUMBER(8)
DATE_MOD		NUMBER(8)
EVENT_ID		VARCHAR2(9)
HOSPITAL		VARCHAR2(4)
HOSP_AREA		VARCHAR2(2)
HOSP_REGION		VARCHAR2(2)
HOSP_TYPE		VARCHAR2(2)
HOSP_CATEGORY		VARCHAR2(2)
HSA		VARCHAR2(2)
ACC_NO		VARCHAR2(12)
ADM_DATE		NUMBER(8)
ADM_TIME		VARCHAR2(4)
SEP_DATE		NUMBER(8)
SEP_TIME		VARCHAR2(4)
MF_LOS		VARCHAR2(4)
UMRN		VARCHAR2(10)
MOTH_UMRN		VARCHAR2(10)
GNAME1_RAW		VARCHAR2(30)
GNAME2_RAW		VARCHAR2(30)
SURNAME_RAW		VARCHAR2(50)
ADDRESS		VARCHAR2(50)
SUBURB		VARCHAR2(30)
POSTCODE		VARCHAR2(6)
STATE		VARCHAR2(1)
LOC_CODE		VARCHAR2(6)
LGA		VARCHAR2(5)
DOB		NUMBER(8)
AGE		VARCHAR2(3)
AGE_GROUP		VARCHAR2(2)
SEX		VARCHAR2(1)
ABORIG		VARCHAR2(1)
COB		VARCHAR2(4)
MARITAL		VARCHAR2(1)
EMP_STAT		VARCHAR2(1)
INTERP		VARCHAR2(1)
OCCUP		VARCHAR2(2)
SRC_REF		VARCHAR2(2)
PAT_EPI		VARCHAR2(1)
ADM_FROM		VARCHAR2(4)
LOCATION		VARCHAR2(20)
DR_ADM		VARCHAR2(6)
SPL_ADM		VARCHAR2(2)
DR_SEP		VARCHAR2(6)
SPL_SEP		VARCHAR2(2)
ADM_TYPE		VARCHAR2(1)

WEIGHT	VARCHAR2 (4)
D_O_LEAV	VARCHAR2 (4)
PSYCH_DAYS	VARCHAR2 (4)
MH_LEGAL	VARCHAR2 (1)
PAY_CLAS	VARCHAR2 (1)
VET_ENT	VARCHAR2 (1)
INS_STAT	VARCHAR2 (1)
DAYS_ICU	VARCHAR2 (4)
HOURS_CMV	VARCHAR2 (5)
READMIS	VARCHAR2 (1)
RET_THEA	VARCHAR2 (1)
EPI_CARE	VARCHAR2 (2)
PAT_TYPE	VARCHAR2 (1)
CONT_HOS	VARCHAR2 (4)
SEP_TYPE	VARCHAR2 (1)
SEP_TO	VARCHAR2 (4)
LINK_ACC	VARCHAR2 (12)
LANGUAGE	VARCHAR2 (2)
SRC_REFL	VARCHAR2 (2)
SRC_REFM	VARCHAR2 (2)
SRC_REFT	VARCHAR2 (2)
ACCOMOD	VARCHAR2 (1)
DQUALNEW	VARCHAR2 (3)
N_OF_LEAV	VARCHAR2 (2)
PREV_TREAT	VARCHAR2 (2)
SOR	VARCHAR2 (2)
FURTHER_CARE	VARCHAR2 (2)
TYPE_ACCOMM	VARCHAR2 (2)
HITH	VARCHAR2 (2)
DRG	VARCHAR2 (4)
MDC	VARCHAR2 (2)
BRTH_ORD	VARCHAR2 (1)
BRTH_NUM	VARCHAR2 (1)

6.2 Morbdiag

Name	Null?	Type
LPNO	NOT NULL	VARCHAR2 (12)
DIAG_POS	NOT NULL	VARCHAR2 (2)
DIAG_IMP		VARCHAR2 (1)
DIAG_SEQ		VARCHAR2 (3)
DIAGCODE		VARCHAR2 (6)
DIAG_TYPE		VARCHAR2 (1)

6.3 Morbecod

Name	Null?	Type
LPNO	NOT NULL	VARCHAR2 (12)
ECOD_POS	NOT NULL	VARCHAR2 (2)
ECOD_SEQ		VARCHAR2 (3)
ECODE		VARCHAR2 (8)
P_OCC		VARCHAR2 (8)
ACTIVITY		VARCHAR2 (8)
ECOD_TYPE		VARCHAR2 (1)

6.4 morbgnam

Name	Null?	Type
-----	-----	-----

LPNO	NOT NULL	VARCHAR2(12)
GN_ALIAS	NOT NULL	VARCHAR2(1)
GN_NO	NOT NULL	VARCHAR2(1)
GNAME		VARCHAR2(25)

6.5 Morbproc

Name	Null?	Type
-----	-----	-----
LPNO	NOT NULL	VARCHAR2(12)
PROC_POS	NOT NULL	VARCHAR2(2)
PROC_IMP		VARCHAR2(1)
PROC_SEQ		VARCHAR2(3)
PROCCODE		VARCHAR2(8)
OPDRCODE		VARCHAR2(6)
DATE_PROC		VARCHAR2(8)
PROC_TYPE		VARCHAR2(1)

6.6 morbsnam

Name	Null?	Type
-----	-----	-----
LPNO	NOT NULL	VARCHAR2(12)
SN_ALIAS	NOT NULL	VARCHAR2(1)
SURNAME		VARCHAR2(25)

6.7 morbdrg

Name	Null?	Type
-----	-----	-----
LPNO	NOT NULL	VARCHAR2(12)
GROUPER	NOT NULL	VARCHAR2(2)
DRG		VARCHAR2(4)
MDC		VARCHAR2(2)

6.8 morbmorph

Name	Null?	Type
-----	-----	-----
LPNO	NOT NULL	VARCHAR2(12)
MORPH_POS	NOT NULL	VARCHAR2(2)
MORPH_SEQ		VARCHAR2(3)
MORPHCODE		VARCHAR2(7)
MORPH_TYPE		VARCHAR2(1)

7. APPENDIX

Table A1 Country of birth codes

OID	Old COB (ASCCSS)	NID	New COB (SACC)	Comment
000 0	Inadequately Described	0000	Inadequately Described	
000 1	At Sea	0001	At Sea	
000 2	Not Elsewhere Classified	0002	Not Elsewhere Classified	
000 3	Not Stated	0003	Not Stated	
100 0	Other Pacific Island Countries	1000	Oceania and Antarctica, nfd	Supplementary code.
110 0	Australia (nfd)	1101	Australia	
110 1	New South Wales	0901	New South Wales	Supplementary code.
110 2	Victoria	0902	Victoria	Supplementary code.
110 3	Queensland	0903	Queensland	Supplementary code.
110 4	South Australia	0904	South Australia	Supplementary code.
110 5	Western Australia	0905	Western Australia	Supplementary code.
110 6	Tasmania	0906	Tasmania	Supplementary code.
110 7	Northern Territory	0907	Northern Territory	Supplementary code.
110 8	Australian Capital Territory	0908	Australian Capital Territory	Supplementary code.
110 9	Christmas/Cocos Island (Australia)	0909	Other Territories (Ninth State)	Supplementary code.
120 0	Australian External Territories (nfd)	1199	Australian External Territories, nec	Not exact mapping.
120 3	Norfolk Island	1102	Norfolk Island	
129 9	Australian External Territories, Other	1199	Australian External Territories, nec	
130 1	New Zealand	1201	New Zealand	
140 0	Melanesia (nfd)	1300	Melanesia, nfd	Supplementary code.
140 1	New Caledonia	1301	New Caledonia	
140 2	Papua New Guinea	1302	Papua New Guinea	
140 3	Solomon Islands	1303	Solomon Islands	
140 4	Vanuatu	1304	Vanuatu	
150	Micronesia (nfd)	1400	Micronesia, nfd	Supplementary code.

0				
150 1	Federated States of Micronesia	1404	Micronesia, Federated States of	Changed name.
150 2	Guam	1401	Guam	
150 3	Kiribati	1402	Kiribati	
150 4	Marshall Islands	1403	Marshall Islands	
150 5	Nauru	1405	Nauru	
150 6	Northern Mariana Islands	1406	Northern Mariana Islands	
150 7	Palau	1407	Palau	
160 0	Polynesia (excluding Hawaii) (nfd)	1500	Polynesia (excludes Hawaii), nfd	Supplementary code.
160 1	Cook Islands	1501	Cook Islands	
160 2	Fiji	1502	Fiji	
160 3	French Polynesia	1503	French Polynesia	
160 4	Niue	1504	Niue	
160 5	Samoa, American	1506	Samoa, American	
160 6	Samoa	1505	Samoa	
160 7	Tokelau	1507	Tokelau	
OID	Old COB (ASCCSS)	NID	New COB (SACC)	Comment
160 8	Tonga	1508	Tonga	
160 9	Tuvalu	1511	Tuvalu	
161 0	Wallis and Futuna	1512	Wallis and Futuna	
169 9	Polynesia (excluding Hawaii), Other	1599	Polynesia (excludes Hawaii), nec	
170 0	Antarctica (nfd)	1600	Antarctica, nfd	Supplementary code.
170 1	Adelie Land (France)	1601	Adélie Land (France)	
170 2	Argentinian Antarctic Territory	1602	Argentinian Antarctic Territory	
170 3	Australian Antarctic Territory	1603	Australian Antarctic Territory	
170 4	British Antarctic Territory	1604	British Antarctic Territory	
170 5	Chilean Antarctic Territory	1605	Chilean Antarctic Territory	
170 6	Queen Maud Land (Norway)	1606	Queen Maud Land (Norway)	
170 7	Ross Dependency (New Zealand)	1607	Ross Dependency (New Zealand)	
200 0	Europe and the Former USSR (nfd)	0911	Europe, nfd	Supplementary code.
210	United Kingdom and	2100	United Kingdom, nfd	Supplementary code.

0	Ireland (nfd)			
210 1	England	2102	England	
210 2	Scotland	2105	Scotland	
210 3	Wales	2106	Wales	
210 4	Northern Ireland	2104	Northern Ireland	
210 5	Channel Islands	2101	Channel Islands	
210 6	Isle of Man	2103	Isle of Man	
210 7	Ireland, Republic of	2201	Ireland	
220 0	Southern Europe (nfd)	3100	Southern Europe, nfd	Supplementary code.
220 1	Albania	3201	Albania	
220 2	Andorra	3101	Andorra	
220 3	Cyprus	3205	Cyprus	
220 4	Gibraltar	3102	Gibraltar	
220 5	Greece	3207	Greece	
220 6	Holy See	3103	Holy See	
220 7	Italy	3104	Italy	
220 8	Malta	3105	Malta	
220 9	Portugal	3106	Portugal	
221 0	San Marino	3107	San Marino	
221 1	Spain	3108	Spain	
222 0	Yugoslavia	3213	Yugoslavia, Federal Republic of	Amalgamated in SACC.
222 1	Bosnia-Herzegovina	3202	Bosnia and Herzegovina	
222 2	Croatia	3204	Croatia	
222 3	Former Yugoslav Republic of Macedonia (FYROM)	3206	Former Yugoslav Republic of Macedonia (FYROM)	
222 6	Slovenia	3212	Slovenia	
223 3	Serbia	3213	Yugoslavia, Federal Republic of	Amalgamated in SACC.
230 0	Western Europe (nfd)	2300	Western Europe, nfd	Supplementary code.
230 1	Austria	2301	Austria	
230 2	Belgium	2302	Belgium	
230	France	2303	France	

3				
230 5	Germany	2304	Germany	
230 6	Liechtenstein	2305	Liechtenstein	
230 7	Luxemburg	2306	Luxembourg	
OID	Old COB (ASCCSS)	NID	New COB (SACC)	Comment
230 8	Monaco	2307	Monaco	
230 9	Netherlands	2308	Netherlands	
231 0	Switzerland	2311	Switzerland	
240 0	Northern Europe (nfd)	2400	Northern Europe, nfd	Supplementary code.
240 1	Denmark	2401	Denmark	
240 2	Faeroe Islands	2402	Faeroe Islands	
240 3	Finland	2403	Finland	
240 4	Greenland	2404	Greenland	
240 5	Iceland	2405	Iceland	
240 6	Norway	2406	Norway	
240 7	Sweden	2407	Sweden	
250 0	Eastern Europe (nfd)	3300	Eastern Europe, nfd	Supplementary code.
250 1	Bulgaria	3203	Bulgaria	
250 2	Czechoslovakia	0914	Czechoslovakia, nfd	Supplementary code.
250 3	Hungary	3304	Hungary	
250 4	Poland	3307	Poland	
250 5	Romania	3211	Romania	
250 6	Czech Republic	3302	Czech Republic	
250 7	Slovak Republic	3311	Slovakia	
260 0	USSR and the Baltic States (nfd)	0912	Former USSR, nfd	Supplementary code.
260 1	Armenia	7202	Armenia	
260 2	Azerbaijan	7203	Azerbaijan	
260 3	Belarus	3301	Belarus	
260 4	Estonia	3303	Estonia	
260 5	Georgia (USSR)	7204	Georgia	
260	Kazakh	7205	Kazakhstan	

6				
260 7	Kirghiz	7206	Kyrgyz Republic	Changed name.
260 8	Latvia	3305	Latvia	
260 9	Lithuania	3306	Lithuania	
261 0	Moldova	3208	Moldova	
261 1	Russia	3308	Russian Federation	
261 2	Tadzhikistan	7207	Tajikistan	
261 3	Turkmen	7208	Turkmenistan	
261 4	Ukraine	3312	Ukraine	
261 5	Uzbek	7211	Uzbekistan	
300 0	Middle East and North Africa (nfd)	4000	North Africa and the Middle East, nfd	Supplementary code.
310 0	Middle East (nfd)	4200	Middle East, nfd	Supplementary code.
310 1	Bahrain	4201	Bahrain	
310 2	Gaza Strip	4202	Gaza Strip and West Bank	Amalgamated in SACC.
310 3	Iran	4203	Iran	
310 4	Iraq	4204	Iraq	
310 5	Israel	4205	Israel	
310 6	Jordan	4206	Jordan	
310 7	Kuwait	4207	Kuwait	
310 8	Lebanon	4208	Lebanon	
310 9	Oman	4211	Oman	
311 0	Qatar	4212	Qatar	
311 1	Saudi Arabia	4213	Saudi Arabia	
311 2	Syria	4214	Syria	
311 3	Turkey	4215	Turkey	
311 4	United Arab Emirates	4216	United Arab Emirates	
311 5	West Bank	4202	Gaza Strip and West Bank	Amalgamated in SACC.
311 6	Yemen	4217	Yemen	
OID	Old COB (ASCCSS)	NID	New COB (SACC)	Comment
320 0	North Africa (nfd)	4100	North Africa, nfd	Supplementary code.
320	Algeria	4101	Algeria	

1				
320 2	Cape Verde	9104	Cape Verde	
320 3	Egypt	4102	Egypt	
320 4	Libya	4103	Libya	
320 5	Mauritania	9122	Mauritania	
320 6	Morocco	4104	Morocco	
320 7	Sudan	4105	Sudan	
320 8	Tunisia	4106	Tunisia	
320 9	Western Sahara	4107	Western Sahara	
329 9	North Africa, Other	4199	North Africa, nec	
410 0	Southeast Asia (nfd)	5000	South-East Asia, nfd	Supplementary code.
410 1	Brunei	5201	Brunei Darussalam	
410 2	Cambodia	5102	Cambodia	
410 3	Indonesia	5202	Indonesia	
410 4	Laos	5103	Laos	
410 5	Malaysia	5203	Malaysia	
410 6	Burma	5101	Burma (Myanmar)	
410 7	Philippines	5204	Philippines	
410 8	Singapore	5205	Singapore	
410 9	Thailand	5104	Thailand	
411 0	Vietnam	5105	Viet Nam	
510 0	Northeast Asia (nfd)	6000	North-East Asia, nfd	Supplementary code.
510 1	China	6101	China (excludes SARs and Taiwan Province)	
510 2	Hong Kong	6102	Hong Kong (SAR of China)	
510 3	Japan	6201	Japan	
510 4	Korea, Democratic People's Republic of	6202	Korea, Democratic People's Republic of (North)	
510 5	Korea, Republic of	6203	Korea, Republic of (South)	
510 6	Macau	6103	Macau (SAR of China)	Changed name.
510 7	Mongolia	6104	Mongolia	
510	Taiwan	6105	Taiwan	Changed from Taiwan

8				(Province of China).
520 6	East Timor	5206	East Timor	ASCCSS code is adopted from SACC by HMDS.
610 0	Southern Asia (nfd)	7100	Southern Asia, nfd	Supplementary code.
610 1	Afghanistan	7201	Afghanistan	
610 2	Bangladesh	7101	Bangladesh	
610 3	Bhutan	7102	Bhutan	
610 4	India	7103	India	
610 5	Maldives	7104	Maldives	
610 6	Nepal	7105	Nepal	
610 7	Pakistan	7106	Pakistan	
610 8	Sri Lanka	7107	Sri Lanka	
710 0	Northern America (nfd)	8100	Northern America, nfd	Supplementary code.
710 1	Bermuda	8101	Bermuda	
710 2	Canada	8102	Canada	
710 3	St Pierre and Miquelon	8103	St Pierre and Miquelon	
710 4	USA	8104	United States of America	
800 0	South America, Central America and the Caribbean (nfd)	8000	Americas, nfd	Supplementary code. Not exact mapping.
810 0	South America (nfd)	8200	South America, nfd	Supplementary code.
OID	Old COB (ASCCSS)	NID	New COB (SACC)	Comment
810 1	Argentina	8201	Argentina	
810 2	Bolivia	8202	Bolivia	
810 3	Brazil	8203	Brazil	
810 4	Chile	8204	Chile	
810 5	Colombia	8205	Colombia	
810 6	Ecuador	8206	Ecuador	
810 7	Falkland Islands	8207	Falkland Islands	
810 8	French Guiana	8208	French Guiana	
810 9	Guyana	8211	Guyana	
811 0	Paraguay	8212	Paraguay	
811	Peru	8213	Peru	

1				
811 2	Surinam	8214	Suriname	
811 3	Uruguay	8215	Uruguay	
811 4	Venezuela	8216	Venezuela	
820 0	Central America (nfd)	8300	Central America, nfd	Supplementary code.
820 1	Belize	8301	Belize	
820 2	Costa Rica	8302	Costa Rica	
820 3	El Salvador	8303	El Salvador	
820 4	Guatemala	8304	Guatemala	
820 5	Honduras	8305	Honduras	
820 6	Mexico	8306	Mexico	
820 7	Nicaragua	8307	Nicaragua	
820 8	Panama	8308	Panama	
830 0	Caribbean (nfd)	8400	Caribbean, nfd	Supplementary code.
830 1	Anguilla	8401	Anguilla	
830 2	Antigua and Barbuda	8402	Antigua and Barbuda	
830 3	Aruba	8403	Aruba	
830 4	Bahamas	8404	Bahamas	
830 5	Barbados	8405	Barbados	
830 6	Cayman Island	8406	Cayman Islands	
830 7	Cuba	8407	Cuba	
830 8	Dominica	8408	Dominica	
830 9	Dominican Republic	8411	Dominican Republic	
831 0	Grenada	8412	Grenada	
831 1	Guadeloupe	8413	Guadeloupe	
831 2	Haiti	8414	Haiti	
831 3	Jamaica	8415	Jamaica	
831 4	Martinique	8416	Martinique	
831 5	Montserrat	8417	Montserrat	
831 6	Netherlands Antilles	8418	Netherlands Antilles	

831 7	Porto Rico	8421	Puerto Rico	
831 8	St Kitts-Nevis	8422	St Kitts and Nevis	
831 9	St Lucia	8423	St Lucia	
832 0	St Vincent and the Grenadines	8424	St Vincent and the Grenadines	
832 1	Trinidad and Tobago	8425	Trinidad and Tobago	
832 2	Turks and Caicos Islands	8426	Turks and Caicos Islands	
832 3	Virgin Islands, British	8427	Virgin Islands, British	
832 4	Virgin Islands, US	8428	Virgin Islands, United States	
900 0	Africa (excluding North Africa) (nfd)	9000	Sub-Saharan Africa, nfd	Supplementary code.
910 0	Central and West Africa (nfd)	9100	Central and West Africa, nfd	Supplementary code.
910 1	Benin	9101	Benin	
910 2	Burkina Faso	9102	Burkina Faso	
OID	Old COB (ASCCSS)	NID	New COB (SACC)	Comment
910 3	Cameroon	9103	Cameroon	
910 4	Central African Republic	9105	Central African Republic	
910 5	Chad	9106	Chad	
910 6	Congo	9107	Congo	
910 7	Côte d'Ivoire	9111	Côte d'Ivoire	
910 8	Equatorial Guinea	9112	Equatorial Guinea	
910 9	Gabon	9113	Gabon	
911 0	Gambia	9114	Gambia	
911 1	Ghana	9115	Ghana	
911 2	Guinea	9116	Guinea	
911 3	Guinea-Bissau	9117	Guinea-Bissau	
911 4	Liberia	9118	Liberia	
911 5	Mali	9121	Mali	
911 6	Niger	9123	Niger	
911 7	Nigeria	9124	Nigeria	
911 8	Sao Tom_ and Principe	9125	Sao Tomé and Principe	
911 9	Senegal	9126	Senegal	

912 0	Sierra Leone	9127	Sierra Leone	
912 1	Togo	9128	Togo	
912 2	Zaire	9108	Congo, Democratic Republic of	Changed name
920 0	Southern and East Africa (nfd)	9200	Southern and East Africa, nfd	Supplementary code.
920 1	Angola	9201	Angola	
920 2	Botswana	9202	Botswana	
920 3	Burundi	9203	Burundi	
920 4	Comoros	9204	Comoros	
920 5	Djibouti	9205	Djibouti	
920 7	Kenya	9208	Kenya	
920 8	Lesotho	9211	Lesotho	
920 9	Madagascar	9212	Madagascar	
921 0	Malawi	9213	Malawi	
921 1	Mauritius	9214	Mauritius	
921 2	Mayotte	9215	Mayotte	
921 3	Mozambique	9216	Mozambique	
921 4	Namibia	9217	Namibia	
921 5	Reunion	9218	Réunion	
921 6	Rwanda	9221	Rwanda	
921 7	St Helena	9222	St Helena	
921 8	Seychelles	9223	Seychelles	
921 9	Somalia	9224	Somalia	
922 0	South Africa	9225	South Africa	
922 1	Swaziland	9226	Swaziland	
922 2	Tanzania	9227	Tanzania	
922 3	Uganda	9228	Uganda	
922 4	Zambia	9231	Zambia	
922 5	Zimbabwe	9232	Zimbabwe	
922 6	Eritrea	9206	Eritrea	
922	Ethiopia	9207	Ethiopia	

7				
---	--	--	--	--

Note: nfd = not further defined.

Table A2 Language codes

OID	Old Language	NID	New Language
00	Australian Aboriginal	07	Australian Indigenous Languages, NEC
01	English	19	English
02	Fijian	21	Fijian
03	Hawaiian	95	Other Languages, NFD
04	Maori	95	Other Languages, NFD
05	Pidgin English	95	Other Languages, NFD
06	New Guinea Native Language	95	Other Languages, NFD
07	Samoan	61	Samoan
08	Tongan	77	Tongan
09	Other Oceanic Language	95	Other Languages, NFD
11	Scots Gaelic	95	Other Languages, NFD
12	Welsh	84	Welsh
14	Irish	35	Irish
15	Albanian	01	Albanian
16	Macedonian	46	Macedonian
17	Icelandic	95	Other Languages, NFD
18	Bulgarian	11	Bulgarian
19	Czech	17	Czech
20	Danish	18	Danish
21	Estonian	20	Estonian
22	Finnish	22	Finnish
23	French	23	French
24	German	24	German
25	Greek	26	Greek
26	Hungarian	33	Hungarian
27	Italian	36	Italian
28	Latvian	44	Latvian
29	Lithuanian	45	Lithuanian
30	Maltese	48	Maltese
31	Dutch / Flemish	51	Netherlandic
32	Norwegian	52	Norwegian
33	Polish	56	Polish
34	Portuguese	57	Portuguese
35	Romanian	59	Romanian
36	Spanish	67	Spanish
37	Swedish	69	Swedish
38	Slovenian	65	Slovene
39	Ukrainian	79	Ukrainian
40	Russian	60	Russian
41	Serbo-Croatian	62	Serbian
42	Arabic	03	Arabic (Including Lebanese)
43	Armenian	04	Armenian
44	Burmese	13	Burmese
45	Khmer / Cambodian	39	Khmer
46	Mandarin	49	Mandarin
47	Cantonese	14	Cantonese
48	Hokkien	32	Hokkien
49	Teochew	73	Teochew
50	Georgian	95	Other Languages, NFD
51	Hindi	30	Hindi
52	Indonesian (Bahasa)	34	Indonesian
53	Iranian / Persian / Farsi	53	Persian

54	Assyrian	06	Assyrian (Including Aramaic)
55	Hebrew	29	Hebrew
56	Japanese	37	Japanese
57	Bengali	08	Bengali
58	Korean	40	Korean
59	Lao	43	Lao
60	Lebanese	03	Arabic (Including Lebanese)
61	Malay	47	Malay
62	Pakistani/Urdu	80	Urdu
63	Filipino / Tagalog	70	Tagalog (Filipino)
64	Tamil	71	Tamil
65	Sinhalese / Sri Lankan	63	Sinhalese
66	Telegu	72	Telugu
67	Tetum	75	Timorese*
68	Thai	74	Thai
69	Punjabi	58	Punjabi
70	Turkish	78	Turkish
71	Vietnamese	81	Vietnamese
72	Other Asian Language	95	Other Languages, NFD
73	Dari	53	Persian
75	Croatian	16	Croatian
76	Serbian	62	Serbian
77	Slovak	64	Slovak
78	Yiddish	86	Yiddish
79	Other European Language	95	Other Languages, NFD
80	Central American Indian Language	95	Other Languages, NFD
81	South American Indian Language	95	Other Languages, NFD
82	North American Indian Language	95	Other Languages, NFD
84	Somali	66	Somali
85	Bantu	95	Other Languages, NFD
86	Ethiopian (Now Eritrean)	95	Other Languages, NFD
87	Sudanese	95	Other Languages, NFD
88	Swahili	68	Swahili
90	Afrikaans	00	Afrikaans
91	Other African Language	95	Other Languages, NFD
92	Chinese (Specified Dialect Not Classified)	95	Other Languages, NFD
93	Chinese (Dialect Unspecified)	95	Other Languages, NFD
96	Sign Language	97	Non Verbal, Inc. Sign Languages eg Auslan, Makaton
97	Other Language (Not Classified)	95	Other Languages, NFD
98	Inadequately Described	96	Inadequately Described
99	Not Known	98	Not Stated

Note: NFD = not further defined; NEC = not elsewhere classified.

Mappings in bold are those which could not be exactly mapped.

* this was mapped to 95 (other languages nfd) on 04/04/2002.