Use of routinely collected national data sets for reporting on induced abortion in Australia

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Foreword

The lack of national data on induced abortion in Australia represents a gap in health statistics. The AIHW's *Reproductive Health Indicators in Australia 2002* report included an indicator on induced abortions in Australia, but national data were not reported for it because data on induced abortion were not available on a routine basis Australia-wide.

This report comprehensively assesses the extent to which different forms of routinely collected data can be used to quantify the incidence of induced abortion in Australia. The innovative use of data combined from hospital and non-hospital sources helps to provide a more complete picture of reproductive health in Australia, as well as providing a basis for regular reporting in the future.

The compilation of the data contained in this document represents the best effort to date to provide a factual database on the incidence of induced abortion. The report does not include any analysis of the legal, social or moral issues often raised in discussion of abortion.

Richard Madden

Director

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Cecilia Burke and Ainsley Morrissey from the AIHW coordinated the printing and publication process.

Abbreviations and symbols

ABS	Australian Bureau of Statistics
ACAS	Australian Congenital Anomalies System
ACS	Australian Coding Standards
ACT	Australian Capital Territory
ACT MPIN	Australian Capital Territory Maternal and Perinatal Information Network
AIHW	Australian Institute of Health and Welfare
ALOS	Average length of stay
Anaes.	Anaesthesia
ANZACPM	Australian and New Zealand Antecedent Classification of Perinatal Mortality
ANZARD	Australian and New Zealand Assisted Reproduction Database
APFA	Abortion Providers Federation of Australasia
ARM	Artificial Rupture of Membranes
ART	Assisted Reproductive Technology
ASA	American Society of Anesthesiologists Physical Status Classification
ASHR	Australian Study of Health and Relationships
Assist.	Assisted
CCOPMM	Consultative Council on Obstetrics and Paediatric Mortality and Morbidity (Vic)
COPMM	Council of Obstetric and Paediatric Mortality and Morbidity (Tas)
D&C	Dilation and curettage
D&E	Dilation and evacuation
DHS	Department of Human Services
DoH	Department of Health
DoHA	Department of Health and Ageing
FIGO	Federation of International Gynecologists and Obstetricians
HIC	Health Insurance Commission
ICD	International Classification of Diseases
ICD-10	International Statistical Classification of Diseases and Related Health Problems, 10th Revision
ICD-10-AM	International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification
Incl.	Including
MBS	Medicare Benefits Schedule

n.a.	Not available
n.p.	Not published
NHDC	National Health Data Committee
NHDD	National Health Data Dictionary
NHMD	National Hospital Morbidity Database
NMDS	National Minimum Data Set
NMMD	National Maternal Mortality Database
NPDC	National Perinatal Data Collection
NPSU	National Perinatal Statistics Unit
NSW	New South Wales
NT	Northern Territory
PIMCWA	Perinatal and Infant Mortality Committee of Western Australia
PSANZ PDC	Perinatal Society of Australia and New Zealand Perinatal Death Classification
Qld	Queensland
QMPQC	Queensland Maternal and Perinatal Quality Council
RACP	Royal Australasian College of Physicians
RANZCOG	Royal Australian and New Zealand College of Obstetricians and Gynaecologists
RCOG	Royal College of Obstetricians and Gynaecologists
SA	South Australia
SAASC	South Australian Abortion Statistics Collection
SABDR	South Australian Birth Defects Register
SLA	Statistical Local Area
Tas	Tasmania
UNSW	University of New South Wales
USA	United States of America
USSR	Union of Soviet Socialist Republics
Vic	Victoria
WA	Western Australia
WAANS	Western Australian Abortion Notification System
WHA	Women's Health Australia
WHO	World Health Organization
. .	Not applicable

Executive summary

This report examines the utility of the available routinely collected national data sources for enumerating induced abortion in Australia. It outlines a methodology for estimating the number of induced abortions in Australia using the Medicare data and the National Hospital Morbidity Database (NHMD) data. Both data sets were used because neither has complete ascertainment of induced abortion.

The Medicare data includes information on services provided to patients other than those admitted to hospital, and to private patients admitted to hospital, for which Medicare claims have been presented and processed. The NHMD data includes information on almost all hospitalisations in Australia. Private patients treated as admitted patients in hospitals are included in both data sets.

Induced abortion may be defined as the termination of pregnancy through medical or surgical intervention (WHO 2005; FIGO 1999). The number of induced abortions in Australia was estimated using data from the NHMD for admitted patients in all states and territories, and Medicare data for out-of-hospital services for those states and territories in which abortion services are provided in non-hospital facilities as well as in hospitals. The alternative method of using Medicare data for all claims for induced abortion services whether in-hospital or out-of-hospital, and data for public patients treated in hospitals from the NHMD was examined, but it was found that this method could not be used because induced abortion could not be specifically identified in the Medicare data for private patients admitted to hospital.

The methodology developed for this report will be used by the AIHW to regularly report on the estimated number of induced abortions in Australia.

National Hospital Morbidity Database

Criteria for extracting data on induced abortion from the NHMD were developed. They are females with:

- a principal or additional diagnosis of ICD-10-AM code *O04.5–O04.9 Medical abortion, complete or unspecified*; and
- an abortion-related ICD-10-AM procedure code (see Chapter 2).

Both a diagnosis code and an abortion-related procedure code are required because correct coding of induced abortion requires both codes to be assigned and neither the procedure codes nor the diagnosis codes are specific for induced abortions. The procedure codes represent procedures that are undertaken for induced abortion and for other reasons (such as following spontaneous abortion). The diagnosis codes may be assigned when a patient is admitted for an abortion procedure but, for some reason, the procedure is not carried out. The presence of both an abortion-related procedure code and an abortion-related diagnosis code effectively provide two pieces of information that indicate an induced abortion has occurred, rather than only one, less specific piece of information.

These criteria may over-estimate the number of induced abortions because separations where it was not specified that the *Medical abortion* was complete are included. Under-

enumeration may result from the exclusion of a relatively small number of separations with a diagnosis of *O05 Other abortion* or *O06 Unspecified abortion* and the possible non-use of codes *O04.5–O04.9 Medical abortion, complete or unspecified* for cases with gestation of more than 20 weeks.

These criteria were validated using data from the abortion notifications data collections in South Australia and Western Australia and found to be satisfactory for enumeration of induced abortion in the NHMD. Overall, the discrepancies between the NHMD data for South Australia extracted using these criteria and the data reported to the abortion notification data collection in South Australia were relatively small (0.2% more induced abortions reported to the NHMD than the notifications in 2002 and 0.3% fewer in 2003). For Western Australia, the discrepancies were larger compared to those for South Australia, with 10.2% more induced abortions carried out in hospitals reported to the notifications data collection than were reported to the NHMD in 2002 and 5.4% more in 2003.

Medicare data

The classification of induced abortion in the Medicare data was examined. A number of MBS-item numbers were considered to be either intended to be used for induced abortion or theoretically related to induced abortion (see Chapter 2). However, none of them are specific for induced abortion because they could be applicable to other types of pregnancy with abortive outcomes. There is no diagnostic information available in the Medicare data, so no indication for the procedure is available.

Estimating the number of induced abortions using the Medicare data and the NHMD

To achieve complete coverage for induced abortion in Australia, both the NHMD and the Medicare data sets are needed, because neither has complete coverage of induced abortion. It was proposed that an estimate of induced abortion in Australia could be determined, either by adding non-hospital services in the Medicare data to separations in the NHMD, or by adding public patient separations in the NHMD to hospital and non-hospital services in the Medicare data.

The latter method cannot be used because, as described above, induced abortion cannot be specifically identified in the Medicare data. Therefore the number of induced abortions would likely be over-estimated and the degree of this over-estimation cannot be determined using the available data.

The former method could be used for the estimate if the following assumptions are made:

- Services for MBS-item *16525 Management of second trimester labour*, MBS-item *35639G/35640S Uterus, curettage of*, and for MBS-items which could theoretically be associated with induced abortion - MBS-items *35653–35657* and *35661–35673 Hysterectomy*, MBS-item *35649 Hysterotomy or uterine myomectomy* and MBS-items *16519*, *16520* and *16522 Caesarean section* are only provided in hospitals.
- Services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* that are provided out-of-hospital are only for induced abortion.

If these assumptions are correct, then the number of induced abortions in Australia could be estimated by adding the number of non-hospital services for MBS-item *35643 Evacuation of*

the contents of the gravid uterus by curettage or suction curettage in the Medicare data to the number of separations with induced abortion in the NHMD data.

Hospitals included in the NHMD and the Medicare data

Hospitals included in the Medicare data differ from those in the NHMD data. In the Medicare data, some hospitals, although licensed by the relevant state or territory health authority, are not declared by the Commonwealth for Medicare and private health insurance purposes. Therefore, services provided in these hospitals would be classified as non-hospital services in the Medicare data provided for this report, and would be included twice (because they would also be included in the NHMD which includes data from hospitals licensed by the state and territory health authorities), thus potentially over-estimating the number of induced abortions. In the NHMD, the coverage of private hospitals is incomplete for some jurisdictions, so the number of induced abortions may be under-estimated.

Application of the estimation methodology at the state and territory level

The hospitals included in the Medicare data and the NHMD data were different among the states and territories, and legislation affecting where abortion services are provided also varies among the states and territories. Therefore, the states and territories were considered separately when developing the methodology for estimating the number of induced abortions in Australia. An estimate of the number of induced abortions in Australia for 2003 was determined using:

- The number of separations with induced abortion from the NHMD only for Queensland, South Australia and the Northern Territory, because induced abortion must be done in hospitals in these jurisdictions.

  For Queensland the number of induced abortions would likely be accurate.

  For South Australia, the number of induced abortions would likely be accurate. As noted above the number of induced abortions in the NHMD was slightly higher than the number of notifications of induced abortion to the South Australian Abortion Statistics Collection (SAASC) in 2002 (0.2%) and slightly lower in 2003 (0.3%).

  For the Northern Territory, the number of induced abortions may be under-estimated because the coverage of private free-standing day hospitals in the Northern Territory is incomplete in the NHMD.

- The number of separations with induced abortion from the NHMD and the number of non-hospital services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* for New South Wales, Victoria, Tasmania, and the Australian Capital Territory.

  Under state and territory legislation, induced abortion is undertaken in both hospitals and non-hospital facilities in these jurisdictions.

  For New South Wales, the number of induced abortions would likely be over-estimated because some facilities which provide abortion services may be regarded as hospitals in one data set, but as non-hospitals in the other. The number of induced abortions may also be under-estimated because there were fewer separations with induced abortion reported to the NHMD than there were in-hospital services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* in the Medicare data.

For Victoria, the number of induced abortions may be under-estimated because the coverage of private hospitals in Victoria is incomplete in the NHMD.

For Tasmania, there is no information available that indicates that the method would not be accurate (i.e. there is no evidence of gaps or overlaps in coverage).

For the Australian Capital Territory, the number of induced abortions may be under-estimated because the coverage of private free-standing day hospitals in the Australian Capital Territory is incomplete in the NHMD.

- The age-specific rates of induced abortion calculated for all states and territories except Western Australia and applied to the female population of Western Australia.

  This method was used because of possible differences in the definition of hospitals in the Medicare data and the NHMD, evidenced by the considerable discrepancy between private patient separations in the NHMD (2,702 separations) and the number of in-hospital services in the Medicare data (834 services). Adding the number of separations with induced abortion from the NHMD to the number of non-hospital services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* from the Medicare data would result in possible marked double counting of services provided in these facilities.

The estimate was then adjusted to account for the estimated 13.1% of private patients who receive induced abortion services but who do not claim a Medicare benefit (Nickson et al. 2004). This was applied to the non-hospital Medicare services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* for New South Wales, Victoria, Tasmania and the Australian Capital Territory.

Results

Estimated number of induced abortions in Australia

These data are presented in more detail in Chapter 3.

- Overall, the estimated number of induced abortions in Australia in 2003 was 84,218. The rate of induced abortion was 19.7 per 1,000 women aged 15–44 years.
- Residents of Major cities accounted for the highest number of induced abortions (excluding induced abortions carried out in Western Australia) (57,727, 76.2%). The age-standardised rate per 1,000 women was highest in Major cities (19.3 per 1,000 women) and lowest in Very remote areas (6.7 per 1,000 women).
- The number of induced abortions was highest for women aged 20–24 years (21,826, 25.9%). The age-specific induced abortion rates per 1,000 women aged 15–44 were highest for the 20–24 year age group (32.7 induced abortions per 1,000 women aged 20–24 years) and lowest for the 40–44 year age group (6.7 induced abortions per 1,000 women aged 40–44 years).

Induced abortion in the NHMD

Induced abortion was defined in the NHMD as separations with a diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* and an abortion-related procedure. Separations with a diagnosis of *O06.5–O06.9 Unspecified abortion, complete or unspecified* from

a private free-standing day hospital facility(ies) in Victoria were also included (see Chapter 2). These data are presented in more detail in Chapter 4.

- Overall, there were 50,314 separations with induced abortion in 2003, 13,268 (26.4%) in public hospitals and 37,046 (73.6%) in private hospitals.
- The proportion of patients with induced abortion treated on a same day basis, that is admitted and separated on the same date, was 97.7% (49,147 separations).
- The separation rate for induced abortion per 1,000 women aged 15–44 was 11.8. For public hospitals, the rate was 3.1 per 1,000 women aged 15–44 years and for private hospitals it was 8.7 per 1,000 women aged 15–44 years.
- The average length of stay for separations with induced abortion was 1.0 day. Excluding same day stays, the average length of stay was 1.8 days.
- Overall, private patient separations accounted for 76.1% (38,285) of all separations with induced abortion.
- The highest number of separations with induced abortion was in the 20–24 year age group (13,316 separations, 26.5%, 19.9 separations per 1,000 women aged 20–24 years).
- Residents of Major cities accounted for the highest number of separations with induced abortion (36,709 separations, 73.1%). The age-standardised separation rate for induced abortion was highest for women usually resident in Remote areas (13.5 per 1,000 women).
- For separations where the duration of pregnancy was recorded, 94.6% (45,068 separations) had duration of pregnancy $\leq$13 completed weeks and 0.7% (325 separations) had duration of pregnancy of $\geq$20 completed weeks.
- The most commonly reported procedure for separations with induced abortion was *35643-01 Suction curettage of uterus* (43,109 separations, 43,130 procedures, 85.7% of separations).

Medicare data

These data are for services provided in 2003 for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* for which Medicare claims were presented and processed. These data are presented in more detail in Chapter 5.

- Overall, in 2003 there were 73,014 services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage*.
- The service rate for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* was 17.1 per 1,000 women aged 15–44 years.
- The highest number of services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* was for women in the 20–24 year age group (16,934 services, 25.4 per 1,000 women aged 20–24 years).
- Residents of Major cities claimed the highest number of services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* (56,328 services, 77.2%, 18.8 services per 1,000 women).

Induced abortions at or after 20 weeks gestation

Identification of induced abortions at or after 20 weeks gestation is limited in the NHMD and the Medicare data. Other national routinely collected data sets and state-based data collections were therefore assessed as sources of data on these induced abortions.

National Hospital Morbidity Database

Induced abortion at or after 20 weeks gestation can be identified in the NHMD as separations with a diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* and an induced abortion-related procedure, which also have duration of pregnancy recorded as ≥20 completed weeks (ICD-10-AM diagnosis codes O09.3–O09.5). The number of induced abortions at or after 20 weeks gestation is likely under-estimated in the NHMD because some induced abortions for known or suspected fetal abnormality or damage at or after 20 weeks gestation may not be identifiable in the NHMD. This is because it is not clear from the coding instructions (ACS *1511 Termination of pregnancy*) that a diagnosis of *O04 Medical abortion* is required in these cases.

Medicare data

MBS-item *16525 Management of second trimester labour* may be applicable for some induced abortion services at or after 20 weeks gestation. However, this MBS-item is not specific for induced abortion. Also, this MBS-item would be used for induced abortions carried out in the 14th–19th weeks, but not for those in the third trimester of pregnancy.

National Perinatal Data Collection

Induced abortions occurring at 20 weeks gestation or more are in scope for the National Perinatal Data Collection. However, induced abortions cannot be identified separately from stillbirths and live births.

ABS Perinatal Mortality Data

Induced abortions occurring at or after 20 weeks gestation are included in the ABS Perinatal Mortality Data. However induced abortions cannot generally be separately identified in this data set.

State-based data collections

Induced abortions at or after 20 weeks gestation are included in various state-based data collections, including from perinatal mortality committees, abortion notification collections in Western Australia and South Australia, and congenital anomalies data collections. The extent to which induced abortions can be identified varies among the collections and among the states and territories.

Data development

Data development work that could enhance routine reporting of induced abortion in national data sets is presented in Chapter 8. Involvement of government, service providers, relevant medical colleges and professional bodies, and information experts would be

important for the development of any enhanced data collection arrangements. The data development work includes:

National Hospital Morbidity Database

- Consideration of reducing the number of Australian Coding Standards related to induced abortion in ICD-10-AM to simplify coding and analysis of data on induced abortion.
- Improving the completeness of identification of hospitals in the NHMD, so that data for facilities reporting to the NHMD that are regarded as non-hospitals in the Medicare data can be excluded when NHMD and Medicare data are combined.
- Voluntary reporting of additional items (developed in consultation with stakeholders) as part of the NHMD.

Medicare data

- Arranging for separate data on Medicare items claimed with a 75% rebate and with an 85% rebate to be routinely available (within appropriate confidentialisation arrangements) would facilitate analyses of data on induced abortions and other procedures that are undertaken both in hospitals and in non-hospital settings.

Other routinely collected data

- Consideration of investigating whether there is variation in perinatal death certification practices among the states and territories and, if so, whether standardisation should be sought.
- Developing the Australian Congenital Anomalies System to include induced abortions with congenital anomalies, regardless of gestational age, from all states and territories. This was a recommendation arising from the Review of the National Congenital Malformations and Birth Defects Data Collection in 2004 and is part of the work program for the National Birth Anomalies Steering Committee.

Non-hospital facilities

- Consideration of the development of a system of voluntary reporting of induced abortions by service providers in non-hospital facilities.

1 Introduction

The *Reproductive Health Indicators in Australia 2002* report was released by the Australian Institute of Health and Welfare's National Perinatal Statistics Unit (AIHW NPSU) in March 2003 (AIHW NPSU: Ford et al. 2003). This report contained indicators of reproductive health which were informed by World Health Organization indicators and priority areas for indicator development, including abortion (WHO 1997). The indicator 'Annual number of induced abortions' was presented in the report, however, the indicator was incomplete because of a lack of routinely collected national data on induced abortion.

There is no single comprehensive national data collection on induced abortion in Australia, for example resulting from mandated notification. Legislation relating to induced abortion and notification of it varies among the states and territories (de Crespigny & Savulescu 2004; Petersen 2005). Notification of induced abortion is not required in New South Wales, Victoria, Queensland, Tasmania, the Northern Territory and the Australian Capital Territory.

The abortion notification collections maintained by South Australia and Western Australia are a potential source of information relevant to national data on induced abortion (Chan et al. 2005, Straton et al. 2005). However, the robustness of a national estimate based on data from these states depends upon the generalisability of the rates reported by them to the other states. Variation is possible between jurisdictions because of different age structures and other demographics; differing arrangements for induced abortion, for example as affected by the differing state and territory legislation; and women's use of services in states and territories other than their state or territory of usual residence. In addition, whilst annual notifications data for South Australia have been published routinely, data for Western Australia, although published recently for 1999–2004, have not been available on a routine basis in the past.

Some information related to induced abortion is included in two national routinely collected data sets—Medicare data (collated by Medicare Australia, formerly the Health Insurance Commission (HIC)) and the AIHW National Hospital Morbidity Database (NHMD). However, while these two national collections may have some potential to be used to provide estimates of the number of induced abortions, neither has been validated for enumerating induced abortion and neither has complete ascertainment of induced abortion. Theoretically, however, the number of induced abortions in Australia could be estimated by using the Medicare data (which includes information on Medicare Australia-billed services provided to patients other than those admitted to hospital, and those provided to private patients admitted to hospital), and the NHMD data (which includes information on almost all hospitalisations in Australia and therefore on all abortions undertaken for admitted patients). Private patients treated as admitted patients in hospitals are included in both data sets. Therefore, the number of induced abortions in Australia could be estimated using data from the NHMD plus Medicare data for out-of-hospital services; or Medicare data plus data for public patients treated in hospitals from the NHMD.

There are a number of other national routinely collected data sets that include data relating to conception, pregnancy, childbirth and the puerperium. These are the National Perinatal Data Collection (NPDC), the National Maternal Mortality Database (NMMD), the ABS Perinatal mortality data collection, the Australian and New Zealand Assisted Reproduction Database (ANZARD) and the Australian Congenital Anomalies System (ACAS). However,

the extent to which they include information relating to induced abortion is very limited. Hence, they are briefly described in Chapter 7 (and, if applicable, in relation to induced abortions at or after 20 weeks gestation in Chapter 6), but not considered substantively in this report.

Limited information on induced abortion in Australia is also available from two Australian population based surveys—the Australian Longitudinal Study on Women's Health and the Australian Study of Health and Relationships, both of which include some questions on induced abortion. However, as these surveys are not national routinely collected data sources they are not considered in this report, although they are briefly described in Chapter 7.

Purpose of this report

The purpose of this report is to examine the utility of the available routinely collected national data sources for enumerating induced abortion in Australia, including whether the number of induced abortions can be estimated by using the Medicare data and the NHMD data. Statistics on induced abortion are presented with consideration of the limitations of the data.

Structure of this report

This chapter provides background information and definitions and describes the data sources.

Chapter 2: Methods

This chapter describes the methodology and discusses the limitations of the data sources, including those related to identifying induced abortion.

Chapter 3: Induced abortion estimate

This chapter presents data on induced abortion, estimated using the NHMD data and the Medicare data.

Chapter 4: Induced abortion in the NHMD

This chapter presents data on induced abortion from the NHMD.

Chapter 5: Medicare data

This chapter presents Medicare data on services provided in 2003 for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage and suction curettage* for which Medicare claims were presented and processed.

Chapter 6: Induced abortion at or after 20 weeks gestation

This chapter examines the identification of induced abortion at or after 20 weeks gestation in national routinely collected data sets and in state-based data collections.

Chapter 7: Other national routinely collected data sets

This chapter describes national routinely collected data sets other than the NHMD and the Medicare data that include data relating to conception, pregnancy, childbirth and the puerperium.

Chapter 8: Data development

This chapter outlines data development work that could enhance routine reporting of induced abortion in national data sets.

Definitions

The focus of this report is induced abortion. Induced abortion may be defined as the termination of pregnancy through medical or surgical intervention (FIGO 1999; WHO 2005).

Abortions that are not induced are referred to as spontaneous abortion or miscarriage. Spontaneous abortion occurs naturally and may be caused by factors including fetal maldevelopment (e.g. due to chromosomal anomalies), and maternal factors such as endocrine abnormalities (e.g. progesterone deficiency), acquired diseases (e.g. pneumonia, rubella), psychological (e.g. stress and anxiety) and mechanical factors (e.g. irritation or trauma to the uterus), or uterine abnormalities (e.g. bicornuate or septet; incompetent cervix) (Beischer et al. 1997; Cunningham et al. 1997). However, in many cases the cause is not established. Spontaneous abortion includes missed abortion (early fetal death with the retention of the dead fetus) and blighted ovum (a fertilised egg which does not develop or which stops developing at an early stage).

A molar pregnancy (hydatidiform mole) is a tumour that forms in the uterus and an ectopic pregnancy is a pregnancy which is located outside the lining of the uterus. The removal of hydatidiform moles and the discontinuation of ectopic pregnancy typically involve surgical intervention but are not usually regarded as induced abortion.

Abortion may be complete or incomplete. A complete abortion is where the products of conception are completely expelled and an incomplete abortion is where some of the products of conception are retained. The retained products of conception are usually removed after they are detected.

Induced abortion is usually complete, but may be incomplete due to technical failure of the procedure.

A range of surgical and non-surgical procedures can be performed for induced abortion. The following provides some information about the methods of induced abortion currently used in Australia, but is not considered to be definitive.

Surgical procedures for induced abortion are performed from about 7 weeks gestation. They include suction curettage of the uterus, dilatation of the cervix and curettage of the uterus, and dilatation of the cervix and evacuation of the uterus. Suction curettage, and dilatation of the cervix and curettage of the uterus are usually performed up to approximately 12–14 weeks gestation. After this, dilatation of the cervix and evacuation of the uterus is used. Prostaglandins may also be administered to prime the cervix prior to surgically induced abortion. This is more common in nulliparous women or when the duration of pregnancy is greater than 10–12 weeks.

Non-surgical procedures for induced abortion are generally performed from about 14 weeks gestation using a range of routes (e.g. vaginal insertion, oral ingestion, intra-amniotic injection) and regimens of prostaglandin administration.

In this report, the term ‘induced abortion’ is used to refer to termination of pregnancy using medical or surgical intervention. However, sometimes the term ‘termination of pregnancy’ is used to indicate induced abortion, for example, if it is the term used in the coding instructions.

Data sources

National routinely collected data sets including induced abortion

National Hospital Morbidity Database

The National Hospital Morbidity Database (NHMD) is compiled by the Australian Institute of Health and Welfare from data supplied by the state and territory health authorities. It is a collection of electronic confidentialised summary records for admitted patients separated from almost all public and private hospitals in Australia; exceptions within the public sector are very limited and those within the private sector are estimated to account for about 1.8% of hospital separations for 2002–03 and 2003–04 (AIHW 2004, 2005). Information on hospital patients who are not admitted is not included.

Each record is for a hospital separation, that is, for an episode of admitted patient care that ended with a discharge, transfer, death or change in care type. The data are reported to the NHMD as separations in each financial year, thus the 2002–03 data relate to hospital separations in the period 1 July 2002 to 30 June 2003. In this report, data are presented for the calendar years 2000, 2001, 2002 and 2003, so the data relate to separations in the period 1 January 2000 to 31 December 2003. A record is included for each separation, not for each patient, so patients who separated from hospital more than once are included more than once in the database.

The NHMD contains demographic, administrative and length of stay data as well as data on the diagnoses of the patients and the procedures they underwent in hospital. Diagnoses and procedures are coded using the International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification (ICD-10-AM). The diagnosis classification is based on the World Health Organization's ICD-10, and the procedure classification was developed from a basis of the Commonwealth's Medicare Benefits Schedule (MBS). ICD-10-AM also contains Australian Coding Standards, which are guidelines for the use of ICD-10-AM (NCCH 2002).

Some information on the quality of coded diagnosis and procedure data in the National Hospital Morbidity Database is presented in *Australian Hospital Statistics* (AIHW 2003, 2004, 2005). Analyses of coding quality in Queensland (QLD Health 2005), Victoria (Vic DHS 2002, Vic DHS 2005) and New South Wales (AIHW 2004) have shown that coded data are generally of good quality but that coding is not always completely accurate.

Medicare data

Medicare data are compiled by Medicare Australia and were provided by the Department of Health and Ageing (DoHA) for this report. These data are for Medicare items for services provided in 2003 for which claims for Medicare benefits have been presented and processed. They include items for services provided outside hospitals and also for services provided to private patients admitted to hospital. The data do not cover patients treated as public patients admitted to hospitals, or patients who are not eligible for Medicare, or patients who do not claim a Medicare rebate for a service eligible for a rebate.

The Medicare data contains information on procedures based on MBS-item numbers. There is no diagnostic information available in the Medicare data, so no information on the indication for the procedure (such as a diagnosis) is available.

These data may be subject to misclassification, for example, the MBS item or the age group recorded may be incorrect. There is no information available to assess the quality of the Medicare data.

State-based routinely collected data sets on induced abortion notifications

South Australian Abortion Statistics Collection

Published data from the South Australian Abortion Statistics Collection (SAASC) for 2002 and 2003 were used in this report. The data were published in the *Pregnancy Outcome in South Australia* report (Chan et al. 2003, Chan et al. 2005). All abortions performed in South Australia are required to be notified under the Criminal Law Consolidation (Medical Termination of Pregnancy) Regulations 1996. The notifications are made on a standard form which contains information such as the age of the woman, marital status, gestational age, method of abortion, indication for the abortion, previous abortions, and postoperative complications.

The legislation mandates that abortions be carried out by a legally qualified medical practitioner, in a prescribed hospital, prior to 28 weeks gestation. The woman must have resided in South Australia for at least two months before the abortion is carried out.

Western Australian Abortion Notification System

Data from the Western Australian Abortion Notification System (WAANS) for 2002 and 2003 were provided by the Western Australian Department of Health for use in this report. All abortions performed in Western Australia are required to be notified under section 335 (5) (b) and (d) of the *Health Act 1911* (Part XIII). The notifications are made on a standard form which contains information such as the age of the woman and other demographics, gestational age, method of abortion and indication for abortion.

The legislation mandates that abortions must be carried out by a medical practitioner. However, unlike South Australia, they can be carried out in a hospital or a non-hospital facility.

Notes on data sources

The data sources used in this report are administrative so the data presented are not necessarily completely accurate. Inaccuracy may result from miscoding or misrecording of diagnoses, procedures and MBS-items; non-compliance with coding instructions; or misclassification of age groups, for example. Care should therefore be taken when interpreting data based on a small number of events.

2 Methods

Data on induced abortion were retrospectively analysed from the AIHW National Hospital Morbidity Database (NHMD), aggregate Medicare data provided by the DoHA, published data from the South Australian Abortion Statistics Collection (SAASC) and aggregate data from the Western Australian Abortion Notification System (WAANS) provided by the Western Australian Department of Health.

AIHW National Hospital Morbidity Database

Criteria for extracting data on induced abortion from the NHMD were developed. This involved:

- examining the third edition of the International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification (ICD-10-AM) for diagnosis codes specific for induced abortion; codes for procedures that can be undertaken for induced abortion; and Australian Coding Standards (ACS) (0011, 1503, 1504, 1510, 1511, 1513, 1518, 1536 and 1544) related to abortion.

  Code selection was undertaken with advice from the National Centre for Classification in Health (NCCH) and the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG), and with reference to the South Australian and Western Australian abortion notification forms, obstetric texts and the literature;
- examining patterns of use of the codes in the NHMD;
- validating the criteria by comparing data extracted from the NHMD using these criteria with published data from the SAASC. By law, all abortions undertaken in South Australia are carried out in 'prescribed' hospitals, and are notified to the SAASC. This enabled comparison of South Australian hospital morbidity data reported to the NHMD with data from the SAASC; and
- validating the criteria by comparing data extracted from the NHMD using these criteria with data from the WAANS provided by the Western Australian Department of Health. By law, all abortions undertaken in Western Australia are notified to the WAANS. Abortions undertaken in-hospital are separately identified in this collection. This enabled comparison of Western Australian hospital morbidity data reported to the NHMD with in-hospital data from the WAANS.

ICD-10-AM diagnosis codes specific for induced abortion

Hospital morbidity records include multiple diagnosis data. Essentially all hospital morbidity records have a principal diagnosis reported, and most have one or more additional diagnoses (AIHW 2005). The National Health Data Dictionary (NHDC 2003) definitions are:

- Principal diagnosis: the diagnosis established after study to be chiefly responsible for occasioning the admitted patient's episode of care in hospital.

- Additional diagnosis: a condition or complaint either coexisting with the principal diagnosis or arising during the episode of admitted patient care.

The diagnosis codes used in the criteria were used if they were recorded as the principal diagnosis or an additional diagnosis or both.

The ICD-10-AM classification contains a section on pregnancy with abortive outcome (Table 2.1). Consideration was first given to the groupings at the 3-character level, and also the 4th character detail (see below).

Table 2.1: ICD-10-AM disease classification – pregnancy with abortive outcome

ICD-10-AM diagnosis code (3-character level)	Description
O00	Ectopic pregnancy
O01	Hydatidiform mole
O02	Other abnormal products of conception
O03	Spontaneous abortion
O04	Medical abortion
O05	Other abortion
O06	Unspecified abortion
O07	Failed attempted abortion
O08	Complications following abortion and ectopic and molar pregnancy

At the 3-character level, ICD-10-AM diagnosis code *O04 Medical abortion* was considered to be specific for induced abortion and was therefore included in the criteria. Following the ICD-10-AM index entry for abortion (Box 2.1), *O04 Medical abortion* would be coded for induced abortion described as legal, medical, psychiatric or therapeutic. It is not clear how 'legal' would have been interpreted in this context given that legislation relating to induced abortion varies among the states and territories and that induced abortion is technically illegal in some states (de Crespigny & Savulescu 2004, Petersen 2005). However, it is assumed that the legality of the abortion would not have influenced the coding and that *O04 Medical abortion* would be coded for induced abortions that are carried out by medical practitioners. In 2003, there were 52,157 separations with a diagnosis of *O04 Medical abortion* reported to the NHMD and of these 49,869 met the other criteria to be included (see below).

Box 2.1: Extract of ICD-10-AM index entry for abortion

Abortion (complete) (incomplete) O06.-

- illegal O05.-
- induced O06.-
- - for
- - - legal indications O04.-
- - - medical indications O04.-
- - - psychiatric indications O04.-
- - nonmedical O05.-
- legal (induced) O04.-
- medical O04.-
- spontaneous O03.-
- therapeutic O04.-

Note: - denotes the 4th character of the ICD-10-AM code.

Source: NCCH 2002.

ICD-10-AM diagnosis code *O05 Other abortion* would not be coded for induced abortion. Following the ICD-10-AM index entry for abortion (Box 2.1), ICD-10-AM code *O05 Other abortion* would be coded for illegal abortion or for abortion undertaken by persons other than medical practitioners. As for *O04 Medical abortion*, it is not clear how 'illegal abortion' would have been interpreted, however, it was assumed that the legality of the abortion has not affected the coding. It may be that *O05 Other abortion* is used if the abortion was initially carried out by persons other than a medical practitioner, or the term 'non-medical' may have been interpreted as referring to induced abortion undertaken surgically, as opposed to medically, or to spontaneous abortion. Because of the uncertainty about the way this code has been used it was not considered to be specific for induced abortion and it was excluded from the criteria.

There were 115 separations with a diagnosis of *O05 Other abortion* reported to the NHMD in 2003. Of these only 29 would have met the other criteria to be included (see below). An unknown proportion of these may have been for induced abortion. Exclusion of these separations may have therefore led to an under-estimate of the number of induced abortions.

ICD-10-AM diagnosis code *O06 Unspecified abortion* may be coded for induced abortion, or it may be coded for other types of pregnancy with abortive outcomes, including spontaneous abortion. Following the ICD-10-AM index entry for induced abortion (Box 2.1), the abortion may be recorded as unspecified because it was not described as for legal, medical or psychiatric indications. Following the first index entry for abortion (Box 2.1), the abortion may be recorded as unspecified because the type of abortion (e.g. induced, spontaneous) was not specified. Therefore, this code was not considered to be specific for induced abortion and it was excluded from the criteria.

There were 1,024 separations with a diagnosis of *O06 Unspecified abortion* reported to the NHMD in 2003. Of these 578 met the other criteria to be included (see below). However, the majority of these (77.0%, 445 separations) were reported for private free-standing day hospital facilities in Victoria. Private hospitals are not identified separately in the NHMD for Victoria. Instead, private hospitals are grouped into regions and private free-standing day hospital facilities are reported as a single group, separately from other private hospitals. Therefore, it was not possible to determine whether these separations were from one private free-standing day hospital facility or from several private free-standing day hospital facilities in Victoria. The diagnosis code *O06 Unspecified abortion* was only reported for a small number of separations in private free-standing day hospital facilities in other states and territories, and in other private hospitals in Victoria and other states and territories. Therefore, it was assumed that the assignment of this code was likely to be for induced abortion, possibly assigned in error, using the first index entry for abortion (Box 2.1). The Victorian Department of Human Services advised that it was reasonable to include separations from this establishment(s) that had a diagnosis of *O06 Unspecified abortion* and met the other criteria in the estimate (Victorian Department of Human Services 2005, personal communication). Therefore, these 445 separations were included in the estimate for this report. This would possibly have resulted in an over-estimation of the number of induced abortions because an unknown proportion may have been for other pregnancy with abortive outcomes (such as spontaneous abortion). It was considered that this would have been less than the under-estimate that would have resulted from excluding these separations. However, the inclusion of *O06 Unspecified abortion* is not considered part of the standard criteria for extracting data on induced abortion from the NHMD.

The treatment of ectopic pregnancy and hydatidiform mole is not usually considered to be induced abortion. Therefore, ICD-10-AM diagnosis codes *O00 Ectopic pregnancy* and *O01 Hydatidiform mole* were excluded from the criteria. Spontaneous abortion, which includes

blighted ovum and missed abortion, is not induced, so ICD-10-AM codes *O03 Spontaneous abortion* and *O02 Other abnormal products of conception* (which includes codes for blighted ovum and missed abortion) were also excluded from the criteria.

Failed abortion is where the pregnancy continues after an induced abortion has been attempted. This can occur following either surgical or medical methods of induced abortion (WHO 2003). ICD-10-AM code *O07 Failed attempted abortion* was excluded from the criteria because for patients with this code, the pregnancy was not terminated in the episode of care.

ICD-10-AM diagnosis codes for complications following abortion and ectopic and molar pregnancy (O08) include for haemorrhage, infection, shock, renal failure, metabolic disorders, trauma or damage to the cervix, and uterine perforation (NCCH 2002). The ICD-10-AM Australian Coding Standard that relates to complications following abortion or ectopic and molar pregnancy (ACS 1544) states that codes from ICD-10-AM diagnosis code category *O08 Complications following abortion and ectopic and molar pregnancy* are assigned when a patient is re-admitted with a delayed complication from an abortion that was undertaken during a previous episode of care. Therefore, this code was excluded from the criteria because the induced abortion would have been recorded in the NHMD for the first admission, or as an MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* in a non-hospital facility (see below).

Incomplete and complete abortion

Fourth character subdivisions are included for ICD-10-AM diagnosis codes O03 to O06 (Table 2.2). The fourth character indicates whether the abortion is incomplete, or complete or unspecified, and whether there was a complication, and if so the type.

Table 2.2: Fourth character subdivision used with ICD-10-AM categories O03–O06

Fourth-character subdivisions	
.0	Incomplete, complicated by genital tract and pelvic infection
.1	Incomplete, complicated by delayed or excessive haemorrhage
.2	Incomplete, complicated by embolism
.3	Incomplete, with other and unspecified complications
.4	Incomplete, without complication
.5	Complete or unspecified, complicated by genital tract and pelvic infection
.6	Complete or unspecified, complicated by delayed or excessive haemorrhage
.7	Complete or unspecified, complicated by embolism
.8	Complete or unspecified, with other and unspecified complications
.9	Complete or unspecified, without complication

Source: NCCH 2002.

Incomplete medical abortion (ICD-10-AM codes O04.0–O04.4) was excluded from the criteria for induced abortion. If a patient is admitted because of retained products of conception from an induced abortion in a previous admission, they will have two records in the NHMD, one for each admission. For their first admission, they would be assigned a code for *Medical abortion, complete or unspecified* (O04.5–O04.9) and for their second admission, they would be assigned a code for *Medical abortion, incomplete* (O04.0–O04.4). To avoid double counting, only their first admission should be included.

However, if during the episode of care in which the induced abortion was performed it became apparent that the induced abortion was incomplete, the principal diagnosis would

be *O04.0–O04.4 Medical abortion, incomplete* and only one record would exist in the NHMD. Therefore, excluding separations with a diagnosis of *O04.0–O04.4 Medical abortion, incomplete* would underestimate the number of induced abortions. In 2003 there were 1,385 separations with a diagnosis of *O04.0–O04.4 Medical abortion, incomplete*. It is not known how many of these would not have been preceded by an episode for which an *O04.5–O04.9 Medical abortion, complete or unspecified* code was recorded.

Diagnosis code use relating to suspected fetal abnormality

The guidelines for coding induced abortion because of known or suspected fetal abnormality or damage (*ACS 1511 Termination of pregnancy*) are different if the induced abortion occurs before fetal viability (defined in *ACS 1511* as before 20 weeks gestation or less than 400g fetal weight) or after fetal viability (20 weeks or more gestation or 400g or more fetal weight) and this affects whether *O04 Medical abortion* is coded or not. The ACS states that *O04 Medical abortion* is assigned as the principal diagnosis before fetal viability. It also states that the code for the reason for termination of pregnancy should be assigned as the principal diagnosis if the termination of pregnancy occurs after fetal viability.

Therefore, if the induced abortion occurs before fetal viability, *O04 Medical abortion* should be assigned as the principal diagnosis with a code such as *O35.0 Maternal care for (suspected) central nervous system malformation in fetus* as an additional diagnosis to indicate the reason for termination. If the induced abortion occurs after fetal viability a code for the reason for the termination such as *O35.0 Maternal care for (suspected) central nervous system malformation in fetus* should be assigned as the principal diagnosis. In these cases, *O04 Medical abortion* could be assigned as an additional diagnosis to indicate an intention to terminate the pregnancy. However, it is not clear from the ACS that the *O04 Medical abortion* code is required in these cases.

Hence, there may be under-enumeration of such induced abortions because *O04 Medical abortion* may not be assigned as an additional diagnosis in all these cases. In 2003 there were 503 separations with a principal diagnosis of *O35 Maternal care for known or suspected fetal abnormality and damage* and an abortion-related procedure. Of these 81 (16.1%) had an additional diagnosis of *O04 Medical abortion*.

Codes in the *O35 Maternal care for known or suspected fetal abnormality or damage* group would also be assigned when there is no intention to terminate, so cannot be used alone to indicate that an induced abortion had occurred. The use of an *O35 Maternal care for known or suspected fetal abnormality or damage* code and a code for an induced abortion-related procedure also does not necessarily indicate induced abortion, because the induced abortion-related procedures can be undertaken for reasons other than induced abortion.

Diagnosis code use for procedures not undertaken

The diagnosis codes *O04 Medical abortion* may have been assigned when a patient was admitted for an induced abortion but for some reason, the procedure was not carried out. In these cases, the principal diagnosis may still be medical abortion (see ACS *0011 Admission for surgery not performed*). In 2003 there were 908 separations with a principal diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* which did not have an abortion-related procedure reported and 916 separations with this as any diagnosis which did not have an abortion-related procedure reported. These separations were not included in the criteria (see below).

Summary

In summary, the diagnosis codes that were specific for induced abortion and suitable to be used in attempts to enumerate induced abortions in this data collection were considered to be:

- *O04.5–O04.9 Medical abortion, complete or unspecified.*

This may over-enumerate induced abortions because separations where it was not specified that the *Medical abortion* was complete are included. Also these codes may be assigned even if the procedure is not carried out.

Under-enumeration may have resulted from the exclusion of the relatively small number of separations with a diagnosis of *O05 Other abortion* or *O06 Unspecified abortion* and the possible non-use of *O04 Medical abortion* codes for cases with gestation of more than 20 weeks.

There were 445 separations in a Victorian private free-standing day hospital facility(ies) with a diagnosis of *O06.5–O06.9 Unspecified abortion, complete or unspecified* that were included in the estimate of the number of induced abortions in this report (see above). However, these codes are not considered part of the standard criteria for extracting data on induced abortion from the NHMD.

ICD-10-AM procedure codes related to induced abortion

The ICD-10-AM procedure codes that may be related to induced abortion are presented in Table 2.3. These procedures are not all specific for induced abortion because they could be performed for other types of pregnancy with abortive outcomes (e.g. spontaneous abortion) or for the diagnosis or treatment of gynaecological diseases.

Major operations, such as hysterectomy, hysterotomy and caesarean section would not usually be used as primary methods of abortion. Hysterectomy would likely only be used where the operation was warranted independently (WHO 2003). Hysterotomy and caesarean section would likely only be used if there was an obstetric reason, for example, so that a comprehensive autopsy could be performed to confirm prenatal diagnosis of a congenital anomaly (Ellwood 2005).

An initial list was developed by examination of Volumes 3, 4 and the Australian Coding Standards of ICD-10-AM (NCCH 2002), reference to texts on obstetrics (Beischer et al. 1997; Cunningham et al. 1997) and the literature (Foran 2001; WHO 2003; RCOG 2004; Ellwood 2005) and through consultation with the NCCH and the RANZCOG. Analysis of the NHMD data was then undertaken to assess the extent to which each procedure is used for induced abortion and to confirm that analysis on the basis of procedure codes alone would not be appropriate for enumerating induced abortion.

Table 2.3: ICD-10-AM procedure codes that may be related to induced abortion

ICD-10-AM procedure code	Description	Apparent specificity[(a)] for induced abortion
Curettage of uterus		
[1265] 35640-00	Dilation and curettage of uterus [D&C]	Not specific
[1265] 35640-01	Curettage of uterus without dilation	Not specific

(Continued)

Table 2.3 (continued): ICD-10-AM procedure codes that may be related to abortion

ICD-10-AM procedure code	Description	Apparent specificity[(a)] for induced abortion
Evacuation of gravid uterus		
[1267] 35643-00	Dilation and curettage [D&C] following abortion or for termination of pregnancy	Not specific
[1267] 35643-01	Suction curettage of uterus	Not specific
[1267] 35643-02	Dilation and evacuation of uterus [D&E]	Not specific
Antepartem application, insertion or removal procedures		
[1330] 90461-00	Intra-amniotic injection for abortion	Specific
[1330] 90462-00	Insertion of prostaglandin suppository for induction of abortion	Specific
[1330] 90463-00	Fetal reduction	Specific
Medical or surgical induction of labour		
[1334] 90465-00	Medical induction of labour, oxytocin	Not specific
[1334] 90465-01	Medical induction of labour, prostaglandin	Not specific
[1334] 90465-02	Other medical induction of labour	Not specific
[1334] 90465-03	Surgical induction of labour by artificial rupture of membranes [ARM]	Not specific
[1334] 90465-04	Other surgical induction of labour	Not specific
[1334] 90465-05	Medical and surgical induction of labour	Not specific
Caesarean section		
[1340] 16520-00	Elective classical caesarean section	Not specific
[1340] 16520-01	Emergency classical caesarean section	Not specific
[1340] 16520-02	Elective lower segment caesarean section	Not specific
[1340] 16520-03	Emergency lower segment caesarean section	Not specific
Other procedures associated with delivery		
[1343] 90476-00	Procedures on fetus to facilitate delivery	Not specific
Incision procedures on uterus		
[1262] 35649-00	Hysterotomy	Not specific
Hysterectomy		
[989] 90450-00	Anterior pelvic exenteration	Not specific
[989] 90450-01	Posterior pelvic exenteration	Not specific
[989] 90450-02	Total pelvic exenteration	Not specific
[1268] 35653-00	Subtotal abdominal hysterectomy	Not specific
[1268] 35653-01	Total abdominal hysterectomy	Not specific
[1268] 35653-02	Abdominal hysterectomy with unilateral salpingo-oophorectomy	Not specific
[1268] 35653-03	Abdominal hysterectomy with bilateral salpingo-oophorectomy	Not specific
[1268] 35661-00	Abdominal hysterectomy with extensive retroperitoneal dissection	Not specific
[1268] 35670-00	Abdominal hysterectomy with radical excision of pelvic lymph nodes	Not specific
[1268] 35667-00	Radical abdominal hysterectomy	Not specific
[1268] 35664-00	Radical abdominal hysterectomy with radical excision of pelvic lymph nodes	Not specific
[1269] 35657-00	Vaginal hysterectomy	Not specific
[1269] 35750-00	Laparoscopically assisted vaginal hysterectomy	Not specific
[1269] 35756-00	Laparoscopically assisted vaginal hysterectomy proceeding to abdominal hysterectomy	Not specific
[1269] 35673-00	Vaginal hysterectomy with unilateral salpingo-oophorectomy	Not specific

(Continued)

Table 2.3 (continued): ICD-10-AM procedure codes that may be related to abortion

ICD-10-AM procedure code	Description	Apparent specificity[(a)] for induced abortion
[1269] 35673-01	Vaginal hysterectomy with bilateral salpingo-oophorectomy	Not specific
[1269] 35753-00	Laparoscopically assisted vaginal hysterectomy with unilateral salpingo-oophorectomy	Not specific
[1269] 35753-01	Laparoscopically assisted vaginal hysterectomy with bilateral salpingo-oophorectomy	Not specific
[1269] 35756-01	Laparoscopically assisted vaginal hysterectomy proceeding to abdominal hysterectomy with unilateral salpingo-oophorectomy	Not specific
[1269] 35756-01	Laparoscopically assisted vaginal hysterectomy proceeding to abdominal hysterectomy with unilateral salpingo-oophorectomy	Not specific
[1269] 35756-02	Laparoscopically assisted vaginal hysterectomy proceeding to abdominal hysterectomy with bilateral salpingo-oophorectomy	Not specific
[1269] 35667-01	Radical vaginal hysterectomy	Not specific
[1269] 35664-01	Radical vaginal hysterectomy with radical excision of pelvic lymph nodes	Not specific
[1270] 90443-00	Other excision of uterus	Not specific

(a) Based on descriptor and Australian Coding Standards as applicable.

NHMD analysis for induced abortion-related procedures

As noted above, the procedures considered to be related to abortion are not all specific for induced abortion. In 2003, not all separations for any of the procedures had a principal or additional diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified*.

In 2003, the proportion of separations with a procedure code of *[1265] 35640–00 Dilation and curettage [D&C]* and a principal or additional diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* reported was 0.1% (56 separations). For 51 separations (0.1%), *O04.5–O04.9 Medical abortion, complete or unspecified* was reported as the principal diagnosis (Table 2.4). For separations with this procedure and no diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* reported, the most common principal diagnosis was *N92.0 Excessive and frequent menstruation with regular cycle* (9,621 separations, 13.9%), followed by *N93.8 Other specified abnormal uterine and vaginal bleeding* (5,319 separations, 7.7%) and *Z30.2 Sterilisation* (4,591 separations, 6.6%) (data not shown). This procedure is therefore most commonly reported with diagnoses that are not related to abortion.

There were 1.7% (12 separations) of separations with a procedure code of *[1265] 35640-01 Curettage of uterus without dilation* and a principal or additional diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* reported. For 10 separations (1.4%), *O04.5–O04.9 Medical abortion, complete or unspecified* was reported as the principal diagnosis (Table 2.4). For separations with this procedure and no diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* reported, the most common principal diagnosis was *N92.0 Excessive and frequent menstruation with regular cycle* (93 separations, 13.1%), followed by *N84.0 Polyp of corpus uteri* (40 separations, 5.6%) (data not shown). This procedure is therefore most commonly reported with diagnoses that are not related to abortion.

Proportions of separations for which a diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* were reported were 52.6% (6,447 separations) for separations with a procedure code of *[1267] 35643–00 Dilation and curettage [D&C] following abortion or for termination of pregnancy*, 64.6% (43,109 separations) for separations with a procedure code of *[1267] Suction curettage of uterus*, and 72.2% (376 separations) for separations with a procedure code of *[1267] Dilation and evacuation of uterus [D&E]*. For the majority of these separations

O04.5–O04.9 Medical abortion, *complete or unspecified* was reported as the principal diagnosis (Table 2.4). For separations with these procedure codes and no diagnosis of *O04.5–O04.9 Medical abortion*, *complete or unspecified* reported, the most common principal diagnoses were *O03.4 Spontaneous abortion*, *without complication (2,563 separations, 44.1%)*, *O02.1 Missed abortion* (9,901 separations, 41.9%) and *O02.1 Missed abortion* (66 separations, 45.5%), respectively (data not shown). Therefore, these procedure codes were commonly reported with diagnoses related to induced abortion, and also with diagnoses related to abortion, other than induced abortion.

Three procedures were considered to be specific for induced abortion. These were *[1330] 90461–00 Intra-amniotic injection for abortion*, *[1330] 90462–00 Insertion of prostaglandin suppository for induction of abortion* and *[1330] 90463-00 Fetal reduction* (Table 2.3). The proportion of separations with these procedures and a diagnosis of *O04.5–O04.9 Medical abortion*, *complete or unspecified* was expected to be close to 100%. However, the proportions of separations with these procedures that also had a diagnosis of *O04.5–O04.9 Medical abortion*, *complete or unspecified* reported were 46.2%, 42.5% and 0.0% respectively (Table 2.4). For *[1330] 90461–00 Intra-amniotic injection for abortion* and *[1330] 90462–00 Insertion of prostaglandin suppository for induction of abortion*, a large proportion (85.7% and 97.4% respectively) of separations with these procedures and no diagnosis of *O04.5–O04.9 Medical abortion*, *complete or unspecified* reported had a principal diagnosis in the range O00 to O06, so they were reported with diagnoses of abortion other than induced abortion (data not shown).

For *[1330] 90463-00 Fetal reduction* there were no separations with a principal or additional diagnosis of *O04.5–O04.9 Medical abortion*, *complete or unspecified* reported (Table 2.4). This is likely to be because the coding instructions indicate that, for the purposes of coding, this procedure does not result in an abortion or delivery, that is, abortion and delivery codes are not required (See ACS *1536 Fetal reduction*). This reflects that with this procedure, the fetus is absorbed into the uterus. The procedure is usually used for multiple pregnancies and involves the reduction of the number of intra-uterine fetuses. However, this procedure could be considered to be used for induced abortion, since it results in the removal of a fetus from the uterus.

Small proportions of separations with a procedure of *Medical induction of labour* (ICD-10-AM procedure codes *[1334] 90465-00*, *90465-01 and 90465-02*) had a diagnosis of *O04.5–O04.9 Medical abortion*, *complete or unspecified* (0.3%, 4.8% and 8.3% respectively). There were no separations with a procedure of *[1334] 90465-04 Other surgical induction of labour* and a diagnosis of *O04.5–O04.9 Medical abortion*, *complete or unspecified*. The coding instructions (ACS *1513 Induction*) provide guidelines for coding terminations of pregnancy where labour is induced by medical means. ACS *1513 Induction* states that terminations of pregnancy would generally involve labour if they occurred after 14 completed weeks gestation and that codes from Block *[1334] Medical or surgical induction of labour* would be assigned (ICD-10-AM procedure codes *[1334] 90465-03 Surgical induction of labour by artificial rupture of membranes [ARM]* and *[1334] 90465-04 Other surgical induction of labour* are not referred to in the ACS). There were 890 separations with a procedure in the procedure block *[1334] Medical or surgical induction of labour* and a diagnosis of *O04.5–O04.9 Medical abortion*, *complete or unspecified*. Of these, 856 had duration of pregnancy recorded and most of these had duration of pregnancy of ≥ 14 weeks (781 separations, 91.2%).

Table 2.4: Number of separations with an induced abortion-related procedure and proportion with a diagnosis of O04.5–O04.9 Medical abortion, complete or unspecified[a], by procedure, 2003

ICD-10-AM procedure code	Number of separations with the induced abortion-related procedure	Principal diagnosis of O04.5–9		Additional diagnosis of O04.5–9		Principal or additional diagnosis of O04.5–9[b]	
		Sepns	Per cent	Sepns	Per cent	Sepns	Per cent
[1265] 35640-00 Dilation and curettage of uterus [D&C]	69,344	51	0.1	5	0.0	56	0.1
[1265] 35640-01 Curettage of uterus without dilation	721	10	1.4	2	0.3	12	1.7
[1267] 35643-00 Dilation and curettage [D&C] following abortion or for termination of pregnancy	12,260	6,419	52.4	16	0.1	6,447	52.6
[1267] 35643-01 Suction curettage of uterus	66,734	42,581	63.8	105	0.2	43,109	64.6
[1267] 35643-02 Dilation and evacuation of uterus [D&E] (ICD-10-AM third edition only)	521	375	72.0	1	0.2	376	72.2
[1330] 90461-00 Intra-amniotic injection for abortion	26	11	42.3	1	3.8	12	46.2
[1330] 90462-00 Insertion of prostaglandin suppository for induction of abortion	870	365	42.0	5	0.6	370	42.5
[1330] 90463-00 Fetal reduction	6	0	0.0	0	0.0	0	0.0
[1334] 90465-00 Medical induction of labour, oxytocin	7,254	16	0.2	5	0.1	21	0.3
[1334] 90465-01 Medical induction of labour, prostaglandin	15,898	687	4.3	73	0.5	760	4.8
[1334] 90465-02 Other medical induction of labour	1,103	86	7.8	5	0.5	91	8.3
[1334] 90465-03 Surgical induction of labour by artificial rupture of membranes [ARM]	5,457	1	0.0	0	0.0	1	0.0
[1334] 90465-04 Other surgical induction of labour	285	0	0.0	0	0.0	0	0.0
[1334] 90465-05 Medical and surgical induction of labour	38,987	17	0.0	5	0.0	22	0.1
[1340] 16520-00, 16520-01, 16520-02, 16520-03 Caesarean section	71,719	1	0.0	0	0.0	1	0.0
[1343] 90476-00 Procedures on fetus to facilitate delivery	38	1	2.6	0	0.0	1	2.6
[1262] 35649-00 Hysterotomy	52	16	30.8	1	1.9	17	32.7
[1268], [1269], [989] 90450-00, 90450-01, 90450-02, [1270] 90443-00 Hysterectomy	23,959	5	0.0	1	0.0	6	0.0

(a) Includes 445 separations with a diagnosis of *O06.5–O06.9 Unspecified abortion, complete or unspecified* in a private free-standing day hospital facility(ies) in Victoria.

(b) Some records have O04.5–O04.9 recorded as the principal diagnosis and as an additional diagnosis. Therefore, the total proportion with O04.5–O04.9 as a diagnosis for each procedure may not add up to the proportion with a principal diagnosis or an additional diagnosis of O04.5–O04.9 for each procedure.

There was one separation with a procedure of *[1340] 16520-00, 16520-01, 16520-02 or 16520-03 Caesarean section* and a principal diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* (Table 2.4). For separations with this procedure and no diagnosis of *O04.5–O04.9*

Medical abortion, *complete or unspecified* reported, the most common principal diagnosis was *O34.2 Maternal care due to uterine scar from previous delivery* (20,194 separations, 28.2%), followed by *O32.1 Maternal care for breech presentation* (6,281 separations, 8.8%) (data not shown). This procedure is therefore most commonly reported with diagnoses that are not related to abortion.

There was one separation with a procedure of *[1343] 90476–00 Procedures on fetus to facilitate delivery* and a principal diagnosis of *O04.5–O04.9 Medical abortion*, *complete or unspecified* (Table 2.4). For separations with this procedure and no diagnosis of *O04.5–O04.9 Medical abortion*, *complete or unspecified* reported, the most common principal diagnosis was *O66.0 Obstructed labour due to shoulder dystocia* (6 separations, 16.2%) (data not shown). This procedure is therefore most commonly reported with diagnoses that are not related to abortion.

There were 17 separations (32.7%) with a procedure of *Hysterotomy* (ICD-10-AM procedure code *[1262] 35649-00*) that had a diagnosis of *O04.5–O04.9 Medical abortion*, *complete or unspecified* and for 16 of these *O04.5–O04.9 Medical abortion*, *complete or unspecified* was the principal diagnosis (Table 2.4). For separations with this procedure code and no diagnosis code of *O04.5–O04.9 Medical abortion*, *complete or unspecified* reported, the principal diagnosis with the highest number of separations was *D25.9 Leiomyoma of uterus, unspecified* (8 separations, 22.9%), followed by *O36.4 Maternal care for intrauterine death* (5 separations, 14.3%) (data not shown). There were 6 separations (17.1%) with a principal diagnosis in the range O00 to O06. This procedure is therefore most commonly reported with diagnoses related to induced abortion, and it is also reported with diagnoses related to abortion, other than induced abortion.

There were 6 separations with a procedure of *Hysterectomy* (ICD-10-AM procedure blocks *[1268]*, *[1269]*, and ICD-10-AM procedure codes *[989] 90450-00*, *[989] 90450-01*, *[989] 90450-02*, *[1270] 90443-00*) and a diagnosis of *O04.5–O04.9 Medical abortion*, *complete or unspecified* (Table 2.4). For separations with these procedure codes and no diagnosis code of *O04.5–O04.9 Medical abortion*, *complete or unspecified* reported, the principal diagnosis with the highest number of separations was *N92.0 Excessive and frequent menstruation with regular cycle* (5,036 separations, 21.0%) followed by *D25.9 Leiomyoma of uterus, unspecified* (4,779 separations, 20.0%) (data not shown). This procedure is therefore most commonly reported with diagnoses that are not related to abortion.

Requirement for both a diagnosis and procedure

The criteria used in this report for extracting data on induced abortion includes a requirement that separations have both a diagnosis specific for induced abortion and an abortion-related procedure. This is because correct coding of induced abortion requires both codes to be assigned. In addition, as noted above, the diagnosis code may have been assigned when the patient was admitted for an induced abortion but for some reason the abortion was not carried out. Also, the induced abortion-related procedures are not specific for induced abortion, so the diagnosis code must be used to determine which patients underwent induced abortion. In addition, the diagnoses or procedures may be incorrectly coded. The existence of an abortion-related procedure code, for separations with a diagnosis that is specific for induced abortion, helps to confirm that the diagnosis code is correct, and vice versa, to a lesser extent.

Criteria for induced abortion – NHMD

The criteria for extracting data on induced abortion from the NHMD are females with:

- a principal or additional diagnosis of ICD-10-AM code *O04.5–O04.9 Medical abortion, complete or unspecified*; and
- an abortion-related procedure (see Table 2.3).

In 2003, there were 50,314 separations with a diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* and an abortion-related procedure (this included 445 separations with a diagnosis of *O06.5–O06.9 Unspecified abortion, complete or unspecified* and an abortion-related procedure in a private free-standing day hospital facility(ies) in Victoria (see above)).

Validation of the criteria

The criteria developed for extracting data on induced abortion from the NHMD were validated by comparing data for South Australia from the NHMD with published data from the South Australian Abortion Statistics Collection (SAASC) for 2002 and 2003 (Chan et al. 2003; Chan et al. 2005) and by comparing data for Western Australia from the NHMD with unpublished data on in-hospital services from the Western Australian Abortion Notification System (WAANS) for 2002 and 2003.

Comparison of data for South Australia and Western Australia from the NHMD with data from the SAASC and in-hospital data from the WAANS respectively, is useful because the state collections are based on different collection mechanisms to the NHMD, but have the same apparent scope of all induced abortions in hospitals in South Australia and Western Australia. The SAASC and the WAANS only include information on induced abortions, so it is not necessary to select episodes that represent induced abortion in these data sets, as it is for the NHMD.

Comparison with the South Australian Abortion Statistics Collection

Overall, in 2002 there were 5,417 induced abortions notified to the SAASC, compared to 5,427 separations for induced abortion reported to the NHMD for South Australia (a difference of 0.2%). The age distribution was slightly different for the SAASC compared to the NHMD. The largest difference was in the 15–19 year age group where there were 17 more induced abortions reported to the NHMD than were notified to the SAASC. Compared to the SAASC, for the 25–29 year age group there were 15 more induced abortions reported to the NHMD and for the 30–34 year age group there were 15 fewer induced abortions reported to the NHMD (Table 2.5).

In 2003, there were 15 more induced abortions notified to the SAASC (5,214) than were reported to the NHMD (5,199) for South Australia, a difference of 0.3%. The age distribution was again slightly different in the two collections. The largest difference was in the 40–44 year age group where there were 11 more induced abortions notified to the SAASC than were reported to the NHMD for South Australia. Compared to the SAASC, there were 4 more induced abortions reported to the NHMD for South Australia in the <15 years, 30–34 years and >44 years age groups (Table 2.5).

It is not clear why there were higher numbers of induced abortions recorded in the NHMD in 2002 compared to the SAASC and lower numbers in 2003.

Reasons for the higher numbers of induced abortions recorded in the NHMD in 2002 (0.2%) may be that the SAASC possibly does not include some abortions in South Australia (for example because they are not notified); Chan and Sage (Chan & Sage 2005) reported that abortions were assumed to be under notified in the SAASC by 1%. There may be misclassification of some episodes in the NHMD, for example, with a diagnosis of medical abortion rather than spontaneous abortion, or with an abortion-related procedure rather than another procedure. (There is no information available on coding quality for these records for the South Australian data in the NHMD.)

Table 2.5: Comparison of the number of induced abortions reported to the SAASC[(a)] and the NHMD[(b)] for South Australia, by 5-year age group, 2002 and 2003

	2002				2003			
Age group	SAASC	NHMD	Difference	% Difference	SAASC	NHMD	Difference	% Difference
<15	20	17	3	15.0	25	29	–4	–16.0
15–19	1,229	1,246	–17	–1.4	1,107	1,103	4	0.4
20–24	1,483	1,487	–4	–0.3	1,426	1,425	1	0.1
25–29	1,066	1,081	–15	–1.4	1,016	1,006	10	1.0
30–34	846	831	15	1.8	848	852	–4	–0.5
35–39	525	524	1	0.2	535	534	1	0.2
40–44	233	227	6	2.6	237	226	11	4.6
>44	15	14	1	6.7	20	24	–4	–20.0
Total	**5,417**	**5,427**	**–10**	**–0.2**	**5,214**	**5,199**	**15**	**0.3**

(a) Chan et al. 2003, Chan et al. 2005.

(b) AIHW National Hospital Morbidity Database.

Reasons for the lower numbers of induced abortions recorded in the NHMD in 2003 (0.3%) may be misclassification of some episodes in the NHMD, for example, with a diagnosis of spontaneous abortion, rather than medical abortion. Some abortions for fetal abnormality and damage that were undertaken after 20 weeks gestation may not have been included in the analysis of the NHMD. However, these explanations would likely also apply in 2002 and the latter would have led to a greater difference between the two data sets for that year.

Reasons for the differences between the data sets for some age groups are also not clear. For 2002, the overall difference between the collections was 10 induced abortions, but the differences for some of the age groups were larger, with a mixture of more and fewer induced abortions being reported to the NHMD for South Australia compared to those notified to the SAASC across the age groups. For example, in the 15–19 year age group there were 17 more induced abortions reported to the NHMD for South Australia than were notified to the SAASC but there were 15 less induced abortions reported to the NHMD for South Australia in the 30–34 year age group.

For 2003, the differences mainly appear to be because overall, more induced abortions were notified to the SAASC than were reported to the NHMD for South Australia. Extra records were notified to the SAASC for the 15–19 year, 20–24 year, 25–29 year, 35–39 year and 40–44 year age groups, but fewer records were notified to the SAASC for the <15 year, 30–34 year and >44 year age groups.

This suggests that some induced abortions have been assigned to the wrong age group in one or both of the data collections, or that the data collections are capturing slightly different sets of induced abortions. It could be that for some records errors may have been made with the date variables, resulting in some of these records being assigned to incorrect age groups.

Age may have been recorded rather than date of birth and in some cases the age may not have been accurate. Differences between the two data sets may also be due to the date of separation from hospital being used in the NHMD and the date of the procedure being used in the SAASC. However, in most cases, these dates would be the same, since induced abortions are usually carried out on a same day basis.

Overall the discrepancies between the NHMD data extracted using the criteria for induced abortion and the data reported from the SAASC are relatively small, and indicate that the criteria would be satisfactory for enumeration of induced abortion in the NHMD.

Comparison with the Western Australian Abortion Notification System

In Western Australia, approximately 50% of abortion services are provided in hospitals. In 2002 there were 8,262 abortions notified to the WAANS and of these, 4,159 (50.3%) were provided in hospital. Similarly in 2003, 48.2% (3,820) of the 7,933 abortions notified to the WAANS were provided in hospital.

In 2002 there were 4,159 induced abortions carried out in hospitals notified to the WAANS, compared to 3,734 separations for induced abortion reported to the NHMD for Western Australia, a difference of 10.2% (Table 2.6). The age distributions were similar, however, there were more induced abortions notified to the WAANS than were reported to the NHMD in all age groups except the <15 year and >44 year age groups. The largest difference was in the 20–24 year age group where there were 83 more induced abortions notified to the WAANS than were reported to the NHMD. Age was not reported for 163 (3.9%) induced abortions notified to the WAANS, so the actual differences between the WAANS and the NHMD could be larger for some age groups (Table 2.6).

Table 2.6: Comparison of the number of in-hospital induced abortions reported to the WAANS[(a)] and the NHMD[(b)] for Western Australia, by 5-year age group, 2002 and 2003

	2002				2003			
Age group	WAANS	NHMD	Difference	% Difference	WAANS	NHMD	Difference	% Difference
<15	16	16	0	0.0	11	12	–1	–9.1
15–19	782	725	57	7.3	746	743	3	0.4
20–24	1,061	978	83	7.8	1,034	981	53	5.1
25–29	818	762	56	6.8	775	706	69	8.9
30–34	681	631	50	7.3	601	604	–3	–0.5
35–39	454	436	18	4.0	395	383	12	3.0
40–44	165	164	1	0.6	178	167	11	6.2
>44	19	22	–3	–15.8	18	19	–1	–5.6
Not reported	163	0	163	100.0	62	0	62	100.0
Total	**4,159**	**3,734**	**425**	**10.2**	**3,820**	**3,615**	**205**	**5.4**

(a) Unpublished data on in-hospital services from the Western Australian Abortion Notification System.

(b) AIHW National Hospital Morbidity Database.

In 2003 there were 205 more induced abortions carried out in hospitals notified to the WAANS (3,820) than were reported to the NHMD (3,615) for Western Australia, a difference of 5.4% (Table 2.6). The age distributions were similar, but there were differences in the numbers reported in each age group. The largest difference was in the 25–29 year age group

where 69 more induced abortions were notified to the WAANS than were reported to the NHMD. Age was not reported for 62 (1.6%) induced abortions notified to the WAANS, so the actual differences could be greater (Table 2.6).

The reason for the higher number of induced abortions carried out in hospitals notified to the WAANS than reported to the NHMD for Western Australia for both years is not clear. It may be that some facilities that are regarded as hospitals in the WAANS are not regarded as hospitals for the purpose of reporting to the NHMD. Ascertainment of induced abortions carried out in 'hospitals' may not be equivalent in the WAANS and the NHMD. For example, induced abortions carried out in 'hospitals' in the WAANS may have been for non-admitted patients who were not formally admitted to hospital, and are not included in the NHMD. There may have been misclassification of the abortion diagnosis code categories in the NHMD and/or other misclassification of data (e.g. for procedures). Some induced abortions carried out in hospitals at or after 20 weeks gestation may be included in the WAANS but may not be identifiable in the NHMD. However, in 2003, there were 31 induced abortions at or after 20 weeks gestation notified to the WAANS and in 2004 there were 38 (Straton et al. 2005), so under-ascertainment of induced abortions at or after 20 weeks gestation in the NHMD would not fully account for the differences in the counts.

No information was available on the facilities that report to the WAANS. Hence, a comparison of the facilities that report to the WAANS and to the NHMD was not able to be made in an attempt to clarify these discrepancies.

Medicare data

Classification of Medicare services

The MBS-item numbers associated with induced abortion are presented in Table 2.7. Other MBS-item numbers that could theoretically be related to induced abortion are presented in Table 2.8. None of these MBS-items are specific for induced abortion because they could be applicable to other types of pregnancy with abortive outcomes or for the diagnosis or treatment of gynaecological diseases. There is no diagnostic information available in the Medicare data, so no indication for the procedure is available.

Table 2.7: MBS-item numbers associated with induced abortion

MBS item number	Description	Apparent specificity[(a)] for induced abortion
Evacuation of gravid uterus		
35643	EVACUATION OF THE CONTENTS OF THE GRAVID UTERUS BY CURETTAGE OR SUCTION CURETTAGE not being a service to which items 35639/35640 applies, including procedures to which item 35626, 35627 or 35630 applies, where performed (Anaes.)	Not specific
Management of second trimester labour		
16525	MANAGEMENT OF SECOND TRIMESTER LABOUR, with or without induction, for intrauterine fetal death, gross fetal abnormality or life threatening maternal disease, not being a service to which item 35643 applies (Anaes.)	Not specific

(a) Based on the descriptor.

The MBS items in Table 2.7 are intended to be used for induced abortion. The MBS items in Table 2.8 were chosen based on reference to texts on obstetrics (Beischer et al. 1997;

Cunningham et al. 1997) and the literature (Foran 2001; WHO 2003; RCOG 2004; Ellwood 2005), and on the analysis of the NHMD presented above. The intent is for these items to be used for procedures other than induced abortion. They are presented here because, based on the literature and analysis of the NHMD, they could theoretically be related to induced abortion. There is no information available to determine whether these items have been claimed in association with induced abortion.

Table 2.8: MBS-item numbers that may be associated with induced abortion

MBS item number	Description	Apparent specificity[(a)] for induced abortion
Curettage of uterus		
35639G/ 35640S[(b)]	UTERUS CURETTAGE OF, with or without dilatation (including curettage for incomplete miscarriage) under general anaesthesia, or under epidural or spinal (intrathecal) nerve block where undertaken in a hospital or approved day hospital facility, including procedures to which item 35626, 35627 or 35630 applies, where performed (Anaes.)	Not specific
Incision procedures on uterus		
35649	HYSTEROTOMY or UTERINE MYOMECTOMY, abdominal (Anaes.) (Assist.)	Not specific
Caesarean section		
16519	MANAGEMENT OF LABOUR and delivery by any means (including Caesarean section) including post-partum care for 5 days	Not specific
16520	CAESAREAN SECTION and post-operative care for 7 days where the patient's care has been transferred by anothermedical practitioner for management of the confinement and the attending medical practitioner has not provided any of the antenatal care (Anaes.)	Not specific
16522	MANAGEMENT OF LABOUR AND DELIVERY, or delivery alone, (including Caesarean section), where in the course of antenatal supervision or intrapartum management 1 or more of the following conditions is present, including postnatal care for 7 days: multiple pregnancy; recurrent antepartum haemorrhage from 20 weeks gestation; grades 2, 3 or 4 placenta praevia; baby with a birth weight less than or equal to 2500gm; preexisting diabetes mellitus dependent on medication, or gestational diabetes requiring at least daily blood; glucose monitoring; trial of vaginal delivery in a patient with uterine scar, or trial of vaginal breech delivery; preexisting hypertension requiring antihypertensive medication, or pregnancy induced hypertension of at least 140/90mmHg associated with at least 1+ proteinuria on urinalysis; prolonged labour greater than 12 hours with partogram evidence of abnormal cervimetric progress; fetal distress defined by significant cardiotocograph or scalp pH abnormalities requiring immediate delivery; OR conditions that pose a significant risk of maternal death	Not specific
Hysterectomy		
35653–35657 and 35661–35673	HYSTERECTOMY	Not specific

(a) Based on the descriptor.

(b) In some cases two levels of fees are applied to the same service in General Medical Services, with each level of fee being allocated a separate item number. The item identified by the letter 'S' applies in the case where the procedure has been rendered by a recognised specialist in the practice of his or her specialty and the patient has been referred. The item identified by the letter 'G' applies in any other circumstance.

As noted for the NHMD data, major operations, such as hysterectomy, hysterotomy and caesarean section would not usually be used as primary methods of abortion. Hysterectomy would likely only be used where the operation was warranted independently (WHO 2003). Hysterotomy and caesarean section would likely only be used if there was an obstetric reason, for example, so that a comprehensive autopsy could be performed to confirm prenatal diagnosis of a congenital anomaly (Ellwood 2005).

The MBS-item number *35639G/35640S Uterus curettage of*, could be used for induced abortion. In the NHMD, as noted above, the data indicate that the similar procedure codes for suction curettage of uterus are used for both induced abortions and other indications (Table 2.4). However, MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* would be likely to be used in preference to *35639G/35640S Uterus curettage of*, for example because the schedule fee for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* ($184.95) is higher than that for *35639G/35640S* ($114.50/$155.30) (DoHA 2004). The Department of Health and Ageing advised that MBS-item *35639G/35640S Uterus curettage of* would be used for incomplete induced abortion (Medicare Benefits Branch, DoHA 2005, personal communication).

In the NHMD data, other procedures such as hysterectomy, hysterotomy and caesarean section were also shown to be associated with induced abortion (Table 2.4). It is possible that equivalent MBS-items could similarly be associated with induced abortion. But on the basis of the NHMD data, their use for induced abortion would be relatively rare.

MBS-items *16525 Management of second trimester labour* is not specific for induced abortion because the item number is applicable when the procedure is performed for intra-uterine fetal death.

The intent for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* is that it is not used exclusively for induced abortion. For example, it may also be used for molar pregnancy (a tumour that forms in the uterus) or missed abortion (an early fetal death with the retention of the dead fetus) (Senate Hansard 2005). It has also been suggested that this MBS item number may be used for spontaneous abortion (Bayly 2005). However, it is likely that the majority of services with this item number would be for induced abortion

For this report it is assumed that spontaneous abortion (including missed abortion) and molar pregnancy are more likely to be treated in a hospital than in a non-hospital setting, so it is also assumed that MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* is specific for induced abortion if carried out in a non-hospital setting. It may be used for other reasons in hospital settings.

Validating the Medicare data using the NHMD data

As noted above, the MBS items that could be used for induced abortion are not specific for it, and could be used for other purposes (such as spontaneous abortion). Theoretically, the NHMD data could be used to estimate the proportions of services with induced abortion-related MBS item numbers (Tables 2.7 and 2.8) that were for induced abortion in the Medicare data. This could be done by aligning the ICD-10-AM procedure codes for abortion-related procedures and the MBS item numbers for abortion-related procedures. The proportion of separations with the ICD-10-AM procedure codes that were for induced abortion (i.e. also had an induced abortion-related diagnosis code), could then be applied to the number of services with the induced abortion-related MBS-item numbers to determine how many were for induced abortion.

Private patients treated in hospitals are included in both data sets, so the validation could be done for these patients and then the proportions of separations with the procedures that were for induced abortion could be applied to the non-hospital Medicare services for MBS item numbers that may be related to induced abortion (Tables 2.7 and 2.8). However, to do this, it would have to be assumed that the reasons for undertaking induced abortion-related procedures are similar in- and out-of-hospital. However, the reasons for undertaking induced abortion-related procedures in-hospital and out-of-hospital are likely to be different.

For example, ectopic pregnancies and spontaneous abortions are likely to be more frequently managed in hospital than non-hospital settings. Therefore, it was not considered possible to validate the Medicare data using the NHMD data.

Estimating the number of induced abortions using the Medicare data and the NHMD data

As noted in Chapter 1, to achieve complete coverage for induced abortion in Australia, both the NHMD and the Medicare data sets are needed, because neither has complete coverage of induced abortion. It was proposed that an estimate of induced abortion in Australia could be determined, either by adding non-hospital services in the Medicare data to separations in the NHMD, or by adding public patient separations in the NHMD to hospital and non-hospital services in the Medicare data.

The latter method cannot be used because, as described above, induced abortion cannot be specifically identified in the Medicare data. Therefore the number of induced abortions would likely be over-estimated and the degree of this over-estimation cannot be determined using the available data.

The former method could be used for the estimate if the following assumptions are made:

- Services for MBS-item *16525 Management of second trimester labour*, *MBS-item 35639G/35640S Uterus, curettage of*, MBS-items *35653–35657* and *35661–35673 Hysterectomy*, MBS-items *35649 Hysterotomy or uterine myomectomy* and MBS-items *16519*, *16520* and *16522 Caesarean section* are only provided in a hospital.
- Services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* that are provided out-of-hospital are only for induced abortion.

If these assumptions are correct, then the number of induced abortions in Australia could be estimated by adding the number of non-hospital services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* in the Medicare data to the number of separations with induced abortion in the NHMD data.

The schedule fees for MBS items are determined by the Department of Health and Ageing in consultation with professional bodies. Medicare benefits for non-hospital services attract an 85% rebate, that is, Medicare pays 85% of the schedule fee for these services. For private in-hospital services, Medicare pays 75% of the schedule fee (HIC 2003).

An 85% rebate (for patients other than those admitted to hospital) is available for MBS-item *16525 Management of second trimester labour*, so this Medicare service could theoretically be provided out-of-hospital, if for example, it was not possible to reach a hospital before or during the labour. In 2003, less than 1% (5) of services for this MBS-item were categorised as non-hospital services in the Medicare data. Therefore, for the purposes of this report, it can be assumed that services for MBS-item *16525 Management of second trimester labour* are provided to patients admitted to hospitals, and would therefore be included in the NHMD.

An 85% rebate (for patients other than those admitted to hospital) is not available for MBS-items *35653–33657* and *35661–35673 Hysterectomy*, MBS-item *35649 Hysterotomy*, or MBS-items *16519*, *16520* and *16522 Caesarean section*. Therefore, for the purposes of this report, it can be assumed that services for these MBS items are provided to patients admitted to hospitals, and would therefore be included in the NHMD.

Rebates at 75% (for patients admitted to hospital) and 85% (for patients other than those admitted to hospital) are available for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage*. However, it is likely that if it is used for other types of

pregnancy with abortive outcomes (e.g. spontaneous abortion, molar pregnancy), for those cases, treatment would usually be in a hospital. Supporting this assumption, MBS-item *35639G/35640S Uterus curettage of*, which includes curettage for incomplete miscarriage (i.e spontaneous abortion), is only applicable for services undertaken in a hospital or approved day hospital facility.

Hospitals included in the NHMD and the Medicare data

Although the assumptions outlined above can be made, the hospitals included in the Medicare data differ from those in the NHMD data. That is, some service providers are regarded as hospitals in one data set but not in the other. Therefore, using the proposed method, the number of induced abortions could be over-estimated because data for service provider facilities that are included in the NHMD but are regarded as non-hospitals in the Medicare data would be included twice. Conversely, the proposed method may also under-estimate the number of induced abortions because data for service provider facilities that are not included in the NHMD but that are regarded as hospitals in the Medicare data would not be included.

Medicare data

For Medicare and health insurance purposes, public and private hospitals are declared as hospitals under the *Health Insurance Act 1973*. Day hospital facilities are declared as day hospital facilities under the *National Health Act 1953*. Medical practitioners are required to indicate on the account, receipt or bulk bill voucher submitted to Medicare that the service was provided in a hospital or day hospital facility. Therefore, services provided in hospitals and day hospital facilities that are declared as hospitals and day hospital facilities would be recorded as hospital services in the Medicare data.

However, some facilities, although licensed by the relevant state or territory health authority, are not declared for Medicare and health insurance purposes. The practical effect of this is that they are not approved for private health insurance purposes, so the gap between the Medicare rebate and the schedule fee for services provided in these facilities is not covered by private heath insurance funds. Medicare services in these facilities would be classified as non-hospital services in the Medicare data provided for this report (Peter Callanan, DoHA 2005, personal communication).

NHMD data

In the NHMD hospitals are generally included if they are licensed as hospitals by the relevant state or territory health authority. The coverage was essentially complete for public hospitals in both 2002–03 and 2003–04. The coverage of the NHMD for private hospitals is incomplete for some jurisdictions. In 2002–03 and 2003–04, the coverage of private free-standing day hospital facilities was incomplete for Victoria and no private free-standing day hospital facilities were included for the Australian Capital Territory or the Northern Territory. For other private hospitals, the coverage was incomplete for Victoria and Tasmania. It is estimated that for 2002–03 the number of private hospital separations reported to the NHMD was underestimated by 1.8% (AIHW 2005).

Comparison of hospitals in the NHMD and Medicare data

A comparison of the hospitals included in the NHMD and those regarded as hospitals for Medicare purposes was planned to estimate the extent of over- and under-enumeration of induced abortion attributable to differences in the hospitals included in the two data sets.

A list of the hospitals reporting to the NHMD is included in the AIHW's report *Australian Hospital Statistics* each year, up to 2003–04. The lists for 2002–03 and 2003–04 were used for this report (AIHW 2004, 2005).

The Department of Health and Ageing maintains a list of hospitals declared by the Commonwealth for Medicare purposes (i.e. those approved for health insurance purposes). This list of hospitals was provided by the Department of Health and Ageing for use in this comparison. However, the list of hospitals did not relate to the Medicare data provided for this report because it was current as at 5 May 2005, and it is possible that some hospitals may have been added or removed from the list since 2003. The date that a hospital was approved for health insurance purposes is not recorded because the effective date is back dated to when the hospital was licensed. Therefore, it was not possible to accurately compare the hospitals reporting to the NHMD for 2003 with those regarded as hospitals for Medicare in 2003.

The Department of Health and Ageing also produces Private Health Industry Circulars which provide information on hospitals which have been approved for health insurance purposes and are also a source of information on facilities that are regarded as hospitals for Medicare purposes. Some hospitals that provide abortion services (Childrenbychoice 2005) were identified as reporting to the NHMD for 2003, but as not being included in the circulars by 2003 (e.g. Tweed Heads Medical Centre, Marie Stopes International – Caboolture, Planned Parenthood – Rockhampton), suggesting that they were not declared as hospitals for Medicare in 2003. Data for these hospitals may therefore have been classified to the non-hospital category in the Medicare data provided for this report. If so, adding the data on induced abortions from the NHMD to the non-hospital services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* in the Medicare data would result in double counting of records for these hospitals.

However, it is not possible to determine the extent of such double counting, since private hospitals are not separately identified in the NHMD for most jurisdictions and hospitals are not separately identified in the Medicare data.

Hospital and non-hospital services – states and territories

Table 2.9 shows the number of induced abortions in the NHMD, for public and private patients, and the number of Medicare hospital and non-hospital services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage*, for each state and territory for 2003. The number of induced abortions in the NHMD is not presented for the Australian Capital Territory because ACT Health did not give permission for the release of data relating to Australian Capital Territory hospitalisations. The data for Tasmania and Victoria are not presented to maintain confidentiality for the Australian Capital Territory. The number of Medicare hospital and non-hospital services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* was not presented for South Australia, the Australian Capital Territory and the Northern Territory due to confidentiality restrictions for the Medicare data. The data for jurisdictions that were not presented were included in the totals.

Generally, if there were no facilities counted in both data sets, it would be expected that the number of separations in the NHMD for private patients would be about the same as the number of in-hospital claims for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* in the Medicare data because the separations would include those for which other MBS items were claimed, such as MBS-item *16525 Management of second trimester labour* and the in-hospital MBS-item counts could include treatment of conditions such as molar pregnancy.

Table 2.9: Number of separations with induced abortion[(a)] in the NHMD and number of services for MBS-item 35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage in the Medicare data, state and territory of service provider, 2003.

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
NHMD data[(a)]									
Public patients	1,216	n.p.	112	913	4,922	n.p.	n.p.	837	11,476
Private patients	8,168	n.p.	12,585	2,702	277	n.p.	n.p.	101	38,285
Total[(b)]	**9,384**	**n.p.**	**12,697**	**3,615**	**5,199**	**n.p.**	**n.p.**	**939**	**50,314**
Medicare data[(c)]									
In hospital	9,556	15,874	5,352	834	n.p.	88	n.p.	n.p.	32,504
Non-hospital	22,425	1,388	8,097	6,602	n.p.	895	n.p.	n.p.	40,510
Total	**31,981**	**17,262**	**13,449**	**7,436**	**643**	**983**	**1,148**	**112**	**73,014**
% non-hospital	70.1	8.0	60.2	88.8	n.p.	91.0	n.p.	n.p.	55.5

(a) Separations with a diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* and an abortion-related procedure. 445 separations with a diagnosis of *O06.5–O06.9 Unspecified abortion, complete or unspecified* from a private free-standing day hospital facility(ies) in Victoria were also included (see Chapter 2).

(b) Includes 544 separations in Victoria, 8 separations in Tasmania and 1 separation in the Northern Territory where admitted patient election status was not reported.

(c) Medicare claims processed for services provided in 2003 for MBS-item number *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage*.

n.p. Medicare data for SA, ACT and NT were not published for reasons of confidentiality. For ACT NHMD data, the data were not published because ACT Health did not give permission for release of data relating to ACT hospitalisations. Vic and Tas NHMD data were not published to maintain confidentiality for the ACT.

New South Wales

For New South Wales, 70.1% (22,425 services) of services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* were reported as being non-hospital services in the Medicare data (Table 2.9). This suggests that in New South Wales, most abortion services are provided out-of-hospital.

Overall, the number of separations reported to the NHMD for New South Wales (9,384, including 1,216 public patients) was lower than the number of in-hospital services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* in the Medicare data (9,556) (Table 2.9). As noted above, other MBS-items, for example, *16525 Management of second trimester labour* would also be applicable for in-hospital Medicare services for induced abortion, so this indicates that the in-hospital services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* were over-enumerated, or the hospital separations for private patients were under-enumerated, or both.

As noted above, some of the non-hospital services reported in the Medicare data may be for hospitals that are not regarded as hospitals for Medicare purposes and so may also be included in the NHMD data. For example, Tweed Heads Medical Centre, which provides abortion services (Childrenbychoice 2005) reported to the NHMD for 2003. However, no Private Health Industry Circulars were produced for this hospital, suggesting that it was not regarded as a hospital for Medicare purposes. Private hospitals are not separately identified in the NHMD for New South Wales. Therefore, it was not possible to determine the extent of double counting of these services if the NHMD and non-hospital Medicare data were combined. Therefore, combining the NHMD and non-hospital Medicare data may over-enumerate the number of induced abortions in New South Wales.

Victoria

Under legislation in Victoria, induced abortion is undertaken in both hospital and non-hospital facilities. The number of separations with induced abortion reported to the NHMD was not presented for this report (see above) (Table 2.9).

Comparison of the number of private patient separations with induced abortion reported to the NHMD (data not shown) and the number of in-hospital services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* in the Medicare data for Victoria (1,388 services) (Table 2.9) did not indicate that there was any inconsistency in the way hospitals were categorised in these data sets for Victoria.

There was no also evidence (from comparison of hospital lists) that services were provided in 'non-hospitals' that were regarded as hospitals in the NHMD, so there was no evidence of overlap in the coverage of the two data sets for Victoria.

However, there were some gaps in the coverage of the NHMD for Victoria. In 2003, the coverage of private free-standing day hospital facilities and other private hospitals was not complete in the NHMD for Victoria. The coverage of private hospitals was estimated to be under-enumerated by about 1.1% (AIHW 2005). Therefore the separations with induced abortion reported to the NHMD may under-estimate the number of induced abortions in Victorian hospitals.

Queensland

Legislation relating to private health facilities in Queensland indicates that private health facilities providing abortion services would be licensed as hospitals (due to the type of sedation that is required for these procedures) (Queensland Health 2005, personal communication). The practical effect of this legislation is that all abortion services would be provided in hospitals in Queensland.

The coverage of the NHMD is complete for Queensland so the number of induced abortions in Queensland could be determined using only the NHMD. In 2003, there were 12,697 separations with induced abortion reported to the NHMD for Queensland (Table 2.9).

In the Medicare data there were 13,449 claims processed for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage*. Of these 60.2% (8,097) were reported as non-hospital services (Table 2.9); this reflects the fact that some hospitals in Queensland were not declared as hospitals for Medicare purposes (Queensland Health 2005, personal communication). According to the Private Health Industry Circulars, some private free-standing day hospital facilities that provided abortion services (Childrenbychoice 2005), although licensed by Queensland Health during or prior to 2003, were not declared as hospitals for Medicare purposes until after 2003 (e.g. Marie Stopes International–Caboolture, Planned Parenthood–Rockhampton).

The total number of services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* in the Medicare data was markedly higher than the number of separations with induced abortion for private patients in the NHMD data, 13,449 services (including 8,097 in non-hospital facilities) and 12,585 separations respectively. This should not be the case because, as noted above, the practical effect of the legislation in Queensland is that all abortion services would be provided in hospitals.

Therefore, due to these apparent differences in definitions of hospitals between the NHMD and the Medicare data for Queensland, and the uncertainty surrounding the higher numbers in the Medicare data, the latter data cannot be used in the estimate of the number of induced abortions in Queensland for 2003. The number of induced abortions in Queensland can however, be estimated using the NHMD data.

Western Australia

As noted above, the number of induced abortions carried out in hospitals in Western Australia was similar for the NHMD and the WAANS in 2003 (3,615 and 3,820, respectively). However, the number of private patient separations with induced abortion reported to the NHMD for 2003 was markedly higher than the number of in-hospital services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* in the Medicare data (2,702 separations and 834 services, respectively). This indicates a relatively marked over-enumeration of private patient separations in hospital, or an under-enumeration of in-hospital Medicare services, or both.

There were 6,602 (88.8%) services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* that were reported as being non-hospital services in the Medicare data for 2003 (Table 2.9). However, the number of induced abortions reported to the WAANS as occurring out-of-hospital in 2003 was 4,113 (51.8%), a difference of 2,489 (37.7%). This suggests that some 'hospitals' in Western Australia may not be regarded as hospitals for Medicare purposes and are therefore classified as non-hospitals in the Medicare data.

If this is the case, the definition of these hospitals would be different in the Medicare data compared to the NHMD data. Adding the number of separations with induced abortion from the NHMD to the number of non-hospital services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* from the Medicare data would result in possible double counting of services provided in these hospitals.

It is not possible to identify the extent of the possible double counting because private hospitals are not separately identified in the NHMD for Western Australia and because hospitals are not separately identified in the Medicare data.

Because of the possibility of this marked double counting, to estimate the number of induced abortions in Western Australia, the age-specific rates of induced abortion were calculated for the other states and territories and applied to the female population of Western Australia as at 30 June 2003. This resulted in an estimate of 8,336 induced abortions (Table 3.1), 403 more than the number of induced abortions notified to the WAANS in 2003.

South Australia

For South Australia, the proportions of services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* that were classified as hospital and non-hospital services in the Medicare data were not presented in this report (see above) (Table 2.9). However, in South Australia, all induced abortions must by law be provided in a hospital. Because of this, the number of induced abortions in South Australia can be determined using the NHMD. As noted above, the number of separations with induced abortion in the NHMD was comparable to the number of induced abortions notified to the South Australian Abortion Statistics Collection (SAASC) for 2002 and 2003 (Table 2.5).

Tasmania

Under legislation in Tasmania, induced abortion is undertaken in both hospital and non-hospital facilities. The proportion of services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* that were classified as non-hospital services in the Medicare data was 91.0% (895 services).

The number of separations with induced abortion reported to the NHMD was not presented for this report (see above). There was no evidence of overlaps or gaps in coverage of 'hospitals' in Tasmania. However, in 2003, the number of private patient separations with

induced abortion reported to the NHMD (data not shown) was lower than the number of in-hospital services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* in the Medicare data for Tasmania, indicating an under-enumeration of private patient separations in hospital or an over-enumeration of MBS in-hospital services, or both. Hence, the number of induced abortions may be under-estimated.

Australian Capital Territory

Under legislation in the Australian Capital Territory, induced abortion is undertaken in both hospital and non-hospital facilities. The proportions of services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* that were classified as hospital or non-hospital services in the Medicare data were not presented in this report (see above). In addition, the number of separations with induced abortion reported to the NHMD was not presented for this report (see above). The number of private patient separations with induced abortion reported to the NHMD (data not shown) was lower than the number of in-hospital services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* in the Medicare data, indicating an under-enumeration of private patient separations in the hospital or am over-enumeration of MBS in-hospital services, or both. Hence, the number of induced abortions may be under-estimated.

Private free-standing day hospital facilities in the Australian Capital Territory were not included in the NHMD for 2003 (AIHW 2002). Therefore, adding the data on induced abortion from the NHMD to the non-hospital services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* in the Medicare data would under-estimate the number of induced abortions in the Australian Capital Territory if these hospitals provide abortion services.

Northern Territory

The proportion of services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* that was classified as non-hospital services in the Medicare data was not presented for this report (see above). However, by law, all induced abortions must be carried out in a hospital in the Northern Territory. There were 939 separations with induced abortion in the NHMD for 2003 (Table 2.9). This may be an under-estimate because the private free-standing day hospital facility in the Northern Territory is not included in the NHMD (AIHW 2005). Comparison of the number of private patient separations with induced abortion reported to the NHMD (data not shown) and the number of in-hospital services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* in the Medicare data for the Northern Territory (data not shown) did not indicate that there was any inconsistency in the way hospitals were categorised in these data sets for the Northern Territory.

Application of the estimation methodology by state and territory

An estimate of the number of induced abortions in Australia for 2003 could therefore be determined using:

- The number of separations with induced abortion from the NHMD only for Queensland, South Australia and the Northern Territory because induced abortion must be done in hospitals in these jurisdictions.

  For Queensland the number of induced abortions would likely be accurate.

  For South Australia, the number of induced abortions would likely be accurate. As noted above, the number of induced abortions in the NHMD was slightly higher than

the number of notifications of induced abortion to the SAASC in 2002 (0.2%) and slightly lower in 2003 (0.3%).

For the Northern Territory, the number of induced abortions may be under-estimated because the coverage of private free-standing day hospitals in the Northern Territory is incomplete in the NHMD.

- The number of separations with induced abortion from the NHMD and the number of non-hospital services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* for New South Wales, Victoria, Tasmania, and the Australian Capital Territory.

  Under state and territory legislation, induced abortion is undertaken in both hospitals and non-hospital facilities in these jurisdictions.

  For New South Wales, the number of induced abortions would likely be over-estimated because some hospitals which provide abortion services may be regarded as hospitals in one data set, but as non-hospitals in the other. The number of induced abortions may also be under-estimated because there were fewer separations with induced abortion reported to the NHMD than there were in-hospital services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* in the Medicare data.

  For Victoria, the number of induced abortions may be under-estimated because the coverage of private hospitals in Victoria is incomplete in the NHMD.

  For Tasmania, there is no information available that indicates that the method would not be accurate (i.e. there is no evidence of gaps or overlaps in coverage). However, the number of induced abortions may be under-estimated because there were fewer private patient separations with induced abortion reported to the NHMD than were in-hospital services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* in the Medicare data.

  For the Australian Capital Territory, the number of induced abortions may be under-estimated because the coverage of private free-standing day hospitals in the Australian Capital Territory is incomplete in the NHMD.

- The age-specific rates of induced abortion calculated for all states and territories except Western Australia and applied to the female population of Western Australia.

  This is because of possible marked differences in the definition of hospitals in the Medicare data and the NHMD, evidenced by the considerable discrepancy between private patient separations in the NHMD (2,702 separations) and the number of in-hospital services in the Medicare data (834 services). Adding the number of separations with induced abortion from the NHMD to the number of non-hospital services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* from the Medicare data would result in possible marked double counting of services provided in these hospitals.

Adjustment for non-claiming for MBS-items

In a survey conducted in Victoria between November 2002 and June 2003 (Nickson et al. 2004) it was estimated that approximately 13.1% of private patients who receive induced abortion services may not claim a Medicare benefit, either because they are not eligible for Medicare or because they do not intend to claim a Medicare benefit for this service. Such patients would not be included in this estimate. Therefore, the number of non-hospital services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* was increased by 13.1% for New South Wales, Victoria, Tasmania, and the

Australian Capital Territory (i.e. those jurisdictions for which non-hospital Medicare services were included for the estimate). Some of the patients included in the survey may have been treated in hospitals. Therefore, it is assumed that the proportion of non-hospital patients not claiming Medicare benefits would be the same as the proportion for all patients.

In the Victorian survey, intention to claim a Medicare benefit was not found to be different between women who lived in Victoria and those who lived interstate or between women who lived in the Melbourne Statistical Division and those who lived elsewhere in Victoria (Nickson et al. 2004). Therefore, it was assumed that the proportion of patients who did not intend to claim Medicare benefits for induced abortions carried out in Australia would be the same as the proportion who did not intend to claim Medicare benefits for induced abortions carried out in Victoria.

These findings were similar to those of a survey conducted in New South Wales in 1992 in which 14.8% of patients who responded could not or did not intend to claim a Medicare benefit (Adelson et al. 1995). The findings of this 1995 study were not used in this report because they were not considered to be current. The pattern of reproduction has changed since 1992, for example there has been a trend in delayed childbearing with maternal age increasing from an average of 28.1 years in 1992 to 29.4 years in 2002 (AIHW NPSU: Laws & Sullivan 2004a; AIHW NPSU: Laws & Sullivan 2004b) and the average age of first time mothers increasing from 26.0 years in 1992 (unpublished data) to 27.6 years in 2002 (AIHW NPSU: Laws & Sullivan 2004b).

3 Induced abortion estimate

This chapter presents summary statistics on induced abortion, estimated using the NHMD data and the Medicare data as described in Chapter 2 (Table 3.1).

Information on the characteristics of patients with induced abortion is also presented (Tables 3.2–3.4).

Estimated number of induced abortions

Overall, without adjusting for the estimated 13.1% of patients who receive induced abortion services as private patients but do not claim a Medicare benefit, the estimated number of induced abortions in Australia in 2003 was 80,467 (Table 3.1). After adjusting for these patients, the estimated number of induced abortions in Australia in 2003 was 84,218 (Table 3.1). This adjusted estimate will be used in the remainder of this chapter.

Table 3.1: Estimated number of induced abortions, state and territory of service provider, 2003

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Estimated number of induced abortions[(a)]	31,809	n.p.	12,697	7,965	5,199	n.p.	n.p.	939	80,467
Rate per 1,000 women (age-standardised)[(b)]	22.3	n.p.	15.4	18.8	16.9	n.p.	n.p.	19.7	18.8
Estimated number of induced abortions adjusted for patients who do not claim Medicare[(c)]	34,747	n.p.	12,697	8,336	5,199	n.p.	n.p.	939	84,218
Rate per 1,000 women (age-standardised)[(b)]	24.3	n.p.	15.4	19.7	16.9	n.p.	n.p.	19.7	19.7

(a) For induced abortions carried out in Qld, SA and the NT the data include separations with a diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* and an abortion-related procedure reported to the NHMD (see Chapter 2).

For induced abortions carried out in NSW, Vic, Tas and the ACT, the data include separations with a diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* and an abortion-related procedure reported to the NHMD (445 separations with a diagnosis of *O06.5–O06.9 Unspecified abortion, complete or unspecified* from a private free-standing day hospital facility(ies) in Victoria were also included) plus non-hospital Medicare services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* reported in the Medicare data.

For induced abortions carried out in WA the age-specific rates of induced abortion calculated for the other states and territories were applied to the female population of Western Australia as at 30 June 2003 (see Chapter 2).

(b) Directly age-standardised. The Australian female population aged 15–44 years for 30 June 2001 was used as the population for which expected rates were calculated. The Australian Bureau of Statistics population estimates for 30 June 2003 for females were used for the observed rates.

(c) For induced abortions carried out in NSW, Vic, Tas and the ACT the number of non-hospital Medicare services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* reported in the Medicare data was increased by 13.1% to adjust for patients who do not claim Medicare (see Chapter 2).

n.p. Not published.

State and territory of service provider

Data are not presented for Victoria, Tasmania and the Australian Capital Territory because of confidentiality restrictions for the Medicare data and because ACT Health did not give permission for the release of data relating to Australian Capital Territory hospitalisations from the NHMD (see Chapter 2). Therefore, an estimate of the number of induced abortions is not available for these jurisdictions from these routinely collected data sets. For the

jurisdictions for which data are presented, the estimated number of induced abortions ranged from 939 in the Northern Territory to 34,747 in New South Wales (Table 3.1).

Among the states and territories for which data are presented, New South Wales reported the highest age-standardised rate of induced abortion (24.3 per 1,000 women) and Queensland reported the lowest rate (15.4 per 1,000 women) (Table 3.1). These rates relate to resident populations, and therefore do not take into account interstate and overseas patient flows.

State and territory of usual residence

Data on the state and territory of the usual residence of the patient (from the NHMD and the Medicare data) are presented in Table 3.2. Data for induced abortions carried out in Western Australia were excluded due to data quality concerns, as explained in Chapter 2. Usual residents of New South Wales had the highest age-standardised induced abortion rate (23.2 per 1,000 women) and usual residents of Tasmania had the lowest age-standardised induced abortion rate (11.8 per 1,000 women). Usual residents of the Australian Capital Territory had the largest proportion of separations treated outside their state or territory of usual residence (32.5%) (Table 3.2).

Table 3.2: Estimated number of induced abortions[(a)], by state and territory of usual residence, 2003

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total[(b)]
Estimated number of induced abortions	33,088	19,896	14,041	108	5,274	1,116	1,335	938	75,801
% not within state of residence	2.5	1.7	11.5	n.a.	1.7	4.4	32.5	4.9	. .
Age-standardised rate per 1,000 females[(c)]	23.2	18.5	17.0	n.p.	17.1	11.8	17.2	19.7	17.7

(a) For induced abortions carried out in Qld, SA and the NT the data include separations with a diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* and an abortion-related procedure reported to the NHMD (see Chapter 2).

For induced abortions carried out in NSW, Vic, Tas and the ACT, the data include separations with a diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* and an abortion-related procedure reported to the NHMD (445 separations with a diagnosis of *O06.5–O06.9 Unspecified abortion, complete or unspecified* from a private free-standing day hospital facility(ies) in Victoria were also included) plus non-hospital Medicare services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* reported in the Medicare data. The number of non-hospital services was increased by 13.1% for these jurisdictions to adjust for patients who do not claim Medicare (see Chapter 2).

Induced abortions carried out in WA were not included due to data quality concerns, as explained in Chapter 2.

(b) Includes other territories and excludes overseas residents and unknown state of residence.

(c) Directly age-standardised. The Australian female population aged 15–44 years for 30 June 2001 was used as the population for which expected rates were calculated. The Australian Bureau of Statistics population estimates for 30 June 2003 for females were used for the observed rates. For the total, the numerator for the observed rates excluded induced abortions carried out in WA. The denominator for the observed and expected rates included the WA population.

. . Not applicable.

n.a. Not available.

n.p. Not published because induced abortions carried out in WA were not included, so the rate would only represent WA residents who underwent induced abortions in other jurisdictions.

Remoteness Areas

Data on the Remoteness Area of the usual residence of the patient are presented in Table 3.3. Data for induced abortions carried out in Western Australia were excluded because of data quality concerns, as explained in Chapter 2. In 2003, residents of Major cities accounted for the highest number of induced abortions (57,727, 76.1%) and residents of Very remote areas accounted for the lowest number of induced abortions (272, 0.4%) (Table 3.3).

The highest age-standardised induced abortion rate was for usual residents of Major cities (19.3 per 1,000 women). Usual residents of Very remote areas had the lowest age-standardised induced abortion rate (6.7 per 1,000 women) (Table 3.3).

Table 3.3: Estimated number of induced abortions[a], by Remoteness Area of usual residence[b], 2003

	Major cities	Inner Regional	Outer regional	Remote	Very remote	Total[c]
Estimated number of induced abortions	57,727	11,986	5,035	611	272	75,801
Age-standardised rate per 1,000 women[d]	19.3	15.2	13.2	9.6	6.7	17.7

(a) For induced abortions carried out in Qld, SA and the NT the data include separations with a diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* and an abortion-related procedure reported to the NHMD (see Chapter 2).

For induced abortions carried out in NSW, Vic, Tas and the ACT, the data include separations with a diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* and an abortion-related procedure reported to the NHMD (445 separations with a diagnosis of *O06.5–O06.9 Unspecified abortion, complete or unspecified* from a private free-standing day hospital facility(ies) in Victoria were also included) plus non-hospital Medicare services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* reported in the Medicare data. The number of non-hospital services was increased by 13.1% for these jurisdictions to adjust for patients who do not claim Medicare (see Chapter 2).

Induced abortions carried out in WA were not included due to data quality concerns, as explained in Chapter 2.

(b) For the Medicare data, Remoteness Area is based on postcode of enrolment in Medicare. This may differ from the postcode of usual residence.

(c) Includes induced abortion where Remoteness Area of usual residence was unknown or not reported. Excludes overseas residents and unknown state of residence.

(d) Directly age-standardised. The Australian female population aged 15–44 years for 30 June 2001 was used as the population for which expected rates were calculated. The Australian Bureau of Statistics population estimates for 30 June 2003 for females were used for the observed rates. The numerator for the observed rates excluded induced abortions carried out in WA. The denominator for the observed and expected rates included the WA population.

Age group

Data are presented for 5-year age groups from <15 years to >44 years in Table 3.4. The highest number of induced abortions in 2003 was in the 20–24 year age group (21,826, 25.9%) and the lowest was in the <15 year age group (306, 0.4%) (Table 3.4).

Data for the <15 year age group is included in the numerator for the age-specific induced abortion rate for the 15–19 year age group, and data for the >44 year age group is included in the numerator for the age specific induced abortion rate for the 40–44 year age group. This is because the denominator population was not defined for the <15 year age group or the >44 year age group. This would inflate the age specific rates for the 15–19 year and 40–44 year age groups. The age-specific induced abortion rate per 1,000 women was highest for the 20–24 year age group (32.7 induced abortions per 1,000 women aged 20–24 years) and lowest for the 40–44 year age group (6.7 induced abortions per 1,000 women aged 40–44 years).

Table 3.4: Estimated number of induced abortions[a], by 5-year age group, 2003

	<15	15-19	20-24	25-29	30-34	35-39	40-44	>44	Total
Estimated number of induced abortions	306	13,549	21,826	17,654	15,407	10,350	4,628	498	84,218
Rate per 1,000 women aged 15-44 years[b]	n.p.	20.8[c]	32.7	26.0	20.1	14.1	6.7[d]	n.p.	19.7

(a) For induced abortions carried out in Qld, SA and the NT the data include separations with a diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* and an abortion-related procedure reported to the NHMD (see Chapter 2).

For induced abortions carried out in NSW, Vic, Tas and the ACT, the data include separations with a diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* and an abortion-related procedure reported to the NHMD (445 separations with a diagnosis of *O06.5–O06.9 Unspecified abortion, complete or unspecified* from a private free-standing day hospital facility(ies) in Victoria were also included) plus non-hospital Medicare services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* reported in the Medicare data. The number of non-hospital services was increased by 13.1% for these jurisdictions to adjust for patients who do not claim Medicare (see Chapter 2).

For induced abortions carried out in WA the age-specific rates of induced abortion calculated for the other states and territories were applied to the female population of Western Australia as at 30 June 2003 (see Chapter 2).

(b) The Australian Bureau of Statistics population estimates for 30 June 2003 for women aged 15–44 years were used.

(c) Includes separations with induced abortion aged <15 years.

(d) Includes separations with induced abortion aged >44 years.

n.p. Not published because the denominator population is not defined for these age groups.

4 Induced abortion in the NHMD

This section presents summary statistics on induced abortion for admitted patients from the NHMD for 2003. Induced abortion is defined as separations with a diagnosis of *O04.5-O04.9 Medical abortion, complete or unspecified* and an abortion-related procedure (see Chapter 2). However, 445 separations with a diagnosis of *O06.5–O06.9 Unspecified abortion, complete or unspecified* and an abortion-related procedure from a Victorian private free-standing day hospital facility(ies) were also included (see Chapter 2).

Information is included on the number of separations for patients with induced abortion and their aggregated and average length of stay, presented on the basis of the sector of the hospital and the type of hospital within the sector (Table 4.1). Information on the basis of the characteristics of these admitted patients is also presented (Tables 4.2–4.7). Statistics on separations are presented for the years 2000 to 2003 (Table 4.8).

The hospital sectors and types reported in this chapter are public, private free-standing day hospital facilities and other private hospitals. Data are also presented for all private hospitals and all hospitals. Private free-standing day hospital facilities were not separately identified for Tasmania. Therefore, data for Tasmania are included in the total for Australia for private hospitals, but have been apportioned to the private free-standing day hospital facilities and other private hospitals categories based on the proportions in the other states and territories.

The data on separation rates are presented per 1,000 women aged 15–44 years. However, separations with induced abortion aged <15 years are included in the 15–19 year age group and separations with induced abortion aged >44 years are included in the 40–44 year age group. This is because the denominator populations for the <15 year age group and the <44 year age group were not defined. This would inflate the separation rates for the 15–19 year and 40–44 year age groups. Age-standardised rates are also presented, standardised to the Australian female population aged 15–44 years as at 30 June 2001. Males were not included in the standard population because induced abortion is female specific.

Hospital sector

Separations

Overall, there were 50,314 separations with induced abortion in 2003, 13,268 (26.4%) in public hospitals and 37,046 (73.6%) in private hospitals (Table 4.1).

Same day separations

Induced abortion is mainly undertaken on a same day basis. The proportion of patients with induced abortion treated on a same day basis, that is admitted and separated on the same date, was 97.7% (49,147 separations) in 2003. A higher proportion of patients with induced

abortion were treated on a same day basis in private hospitals compared to public hospitals (99.3% and 93.1% respectively) (Table 4.1).

Separation rates

The separation rate for induced abortion per 1,000 women aged 15–44 years was 11.8 (Table 4.1). For public hospitals the rate was 3.1 per 1,000 women aged 15–44 years and for private hospitals it was 8.7 per 1,000 women aged 15–44 years. Separations for patients who were aged <15 years and >44 years were included in the numerator.

Table 4.1: Summary of separation, patient day and average length of stay statistics for separations with induced abortion[(a)], by hospital sector/type, 2003

	Hospital sector/type				
Statistics	Public	Private total[(b)]	Private free-standing day hospital facility[(b)]	Other private[(b)]	Total
Separations	13,268	37,046	34,739	2,307	50,314
Same day separations	12,354	36,793	34,728	2,065	49,147
Same day separations as % of total	93.1	99.3	100.0	89.5	97.7
Separations per 1,000 women aged 15–44 years[(c)]	3.1	8.7	8.1	0.5	11.8
Patient days	14,036	37,234	34,749	2,485	51,270
Patient days per 1,000 women aged 15–44 years[(c)]	3.3	8.7	8.1	0.6	12.0
Average length of stay (days)	1.1	1.0	1.0	1.1	1.0
Average length of stay excluding same day separations (days)[(d)]	1.8	1.7	. .	1.7	1.8

(a) Separations with a diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* and an abortion-related procedure. 445 separations with a diagnosis of *O06.5–O06.9 Unspecified abortion, complete or unspecified* and an abortion-related procedure from a private free-standing day hospital facility(ies) in Victoria were also included (see Chapter 2).

(b) The hospital type was not specified for Tasmanian private hospitals reporting to the NHMD. Thus, data for Tasmania are included in the total for private hospitals but have been apportioned to the private hospital subcategories based on the proportions in the other states and territories.

(c) The Australian Bureau of Statistics population estimates for 30 June 2003 for women aged 15–44 years were used.

(d) There were 155 separations with >2 patient days. The maximum number of patient days was 64 days.

. . Not applicable.

Patient days

Patient days represent the number of full or partial days stay for patients who separated from hospital during the reporting period, and represent the aggregate length of stay for all patients (see Glossary). A total of 51,270 patient days were reported for patients with induced abortion in 2003, 27.4% (14,036 patient days) in the public sector and 72.6% (37,234 patient days) in the private sector (Table 4.1). Overall, the rate was 12.0 patient days per 1,000 women aged 15–44 years. Patient days for separations with induced abortion who were aged <15 years and >44 years were included in the numerator.

Average length of stay

The average length of stay for patients with induced abortion was 1.0 day in 2003. The average length of stay was slightly longer in public hospitals than in private hospitals (1.1

days and 1.0 day respectively). Excluding same day separations, the average length of stay for patients with induced abortion was 1.8 days (Table 4.1).

Patient characteristics

Patient election status and funding source

Table 4.2 presents data hierarchically using the data element 'Admitted patient election status' and selected funding source categories. The data element 'Funding source for hospital patient' (National Health Data Dictionary version 12.0 (NHDC 2003)) provides information about the principal source of funds for an admitted patient episode. Private patients who are eligible for Medicare may claim benefits from Medicare for costs related to their medical practitioner. In the NHMD, these would include private patients reported with a funding source of private health insurance or self-funded. Further information on these data elements in the NHMD is available in *Australian Hospital Statistics 2003–04* (AIHW 2005).

Table 4.2: Separations with induced abortion[(a)] by admitted patient election status and funding source, 2003

Admitted patient election status and funding source	Public hospitals	Private hospitals	All hospitals
Public[(b)]	11,060	416	11,476
Public[(c)]	11,021	415	11,436
Private	2,158	36,127	38,285
Private health insurance	329	5,962	6,291
Self-funded[(d)]	1,800	30,072	31,872
Other[(e)]	29	93	122
Patient election status not reported	50	503	553
Total	**13,268**	**37,046**	**50,314**

(a) Separations with a diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* and an abortion-related procedure. 445 separations with a diagnosis of *O06.5–O06.9 Unspecified abortion, complete or unspecified* and an abortion-related procedure from a private free-standing day hospital facility(ies) in Victoria were also included (see Chapter 2).

(b) Includes separations whose patient election status was Public and whose funding source was reported as Australian Health Care Agreements, Reciprocal health care agreements, Other hospital or public authority, Other or Not reported.

(c) Includes patients whose funding source was reported as Australian Health Care Agreements, Other hospital or public authority.

(d) Some states and territories were unable to identify all patients whose funding source may have been Self-funded, therefore the number of separations in this category may be under-estimated and others may be over-estimated.

(e) Includes patients whose patient election status was Private and whose funding source was reported as Workers compensation, Motor vehicle third party personal claim, Department of Veterans' Affairs, Other compensation, Department of Defence, Correctional Facilities, Other hospital or public authority, Other and Unknown.

Overall, private patient separations accounted for 76.1% (38,285 separations) of all separations with induced abortion, 5.6% (2,158 separations) in public hospitals and 94.4% (36,127 separations) in private hospitals (Table 4.2).

Patients whose funding source was recorded as *Self-funded* made up 83.4% (1,800 separations) of private patients in public hospitals, 83.2% (30,072 separations) of private patients in private hospitals and 83.2% (31,872 separations) of private patients in all

hospitals. In both sectors combined, 16.4% (6,291) of private patients with induced abortion were reported to be funded by *Private health insurance* (Table 4.2).

Demographic profile

Age group

Data are presented for 5-year age groups from <15 years to >44 years. The highest number of separations with induced abortion in 2003 was in the 20–24 year age group (13,316 separations, 26.5%) and the lowest was in the <15 year age group (192 separations, 0.4%) (Table 4.3). The age-specific separation rates per 1,000 women were highest for the 20–24 year age group (19.9 per 1,000 women aged 20–24 years) and lowest for the 40–44 year age group (3.9 per 1,000 women aged 40–44 years).

The proportions of separations with induced abortion that were in private hospitals increased with increasing age from 60.4% in the <15 year age group to 78.0% in the 40–44 year age group and 77.7% in the >44 year age group (Table 4.3).

Table 4.3: Separations with induced abortion[(a)] by 5-year age group and hospital sector, 2003

	Separations			
Age group (years)	Public hospitals	Private hospitals	All hospitals	Separations per 1,000 women[(b)]
<15	76	116	192	n.p.
15–19	2,682	5,674	8,356	12.8[(c)]
20–24	3,434	9,882	13,316	19.9
25–29	2,663	7,749	10,412	15.4
30–34	2,252	6,779	9,031	11.8
35–39	1,503	4,515	6,018	8.2
40–44	599	2,125	2,724	3.9[(d)]
>44	59	206	265	n.p.
Total	**13,268**	**37,046**	**50,314**	**11.8**

(a) Separations with a diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* and an abortion-related procedure. 445 separations with a diagnosis of *O06.5–O05.9 Unspecified abortion, complete or unspecified* and an abortion-related procedure from a private free-standing day hospital facility(ies) in Victoria were also included (see Chapter 2).

(b) The Australian Bureau of Statistics population estimates for 30 June 2003 for women aged 15–44 years were used.

(c) Includes separations with induced abortion aged <15 years.

(d) Includes separations with induced abortion aged >44 years.

n.p. Not published because the denominator population is not defined for these age groups.

Country of birth

In 2003, all states and territories supplied country of birth details coded to the ABS's Standard Australian Classification of Countries as specified in the National Health Data Dictionary version 12 (NHDC 2003).

Australian-born patients accounted for 73.5% (36,957 separations) of separations with induced abortion, 79.1% (10,499) in the public sector and 71.4% (26,458) in the private sector (Table 4.4).

Table 4.4: Separations with induced abortion[a] by selected country/region of birth and hospital sector, 2003

Country of birth	Public hospitals	Private hospitals	All hospitals	Separations per 1,000 women (age-standardised)[b]
Australia	10,499	26,458	36,957	10.9
New Zealand	265	1,259	1524	14.5
Oceania (incl. Australia) (total)	10,882	28,334	39,216	11.1
United Kingdom	358	945	1,303	10.2
Former Yugoslavia Republic of Macedonia	40	85	125	14.0
Other Europe and former USSR	375	940	1,315	11.6
Europe (total)	778	1,978	2,756	10.9
Lebanon	36	108	144	6.6
Other Middle East and North Africa	159	285	444	11.0
Middle East and North Africa (total)	195	393	588	9.6
China	201	1,283	1,484	34.6
Hong Kong and Macau	31	254	285	11.5
India	81	337	418	14.4
Philippines	112	355	467	11.7
Vietnam	238	764	1,002	18.5
Other Asia	355	1,578	1,933	11.8
Asia (total)	1,018	4,571	5,589	15.8
Canada	15	79	94	11.1
USA	35	107	142	10.1
North America (total)	50	186	236	10.4
South America, Central America and the Caribbean (total)	71	213	284	12.4
Africa (excluding North Africa) total	130	373	503	11.1
Overseas total	2,625	9,590	12,215	13.5
Not stated or inadequately described	144	998	1,142	. .
Total	**13,268**	**37,046**	**50,314**	**11.8**

(a) Separations with a diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* and an abortion-related procedure. 445 separations with a diagnosis of *O06.5–O06.9 Unspecified abortion, complete or unspecified* and an abortion-related procedure from a private free-standing day hospital facility(ies) in Victoria were also included (see Chapter 2).

(b) Directly age-standardised. The Australian female population aged 15–44 years for 30 June 2001 was used as the population for which expected rates were calculated. The Australian Bureau of Statistics population estimates for 30 June 2003 for females were used for the observed rates.

. . Not applicable.

The age-standardised rate for Australian-born patients with induced abortion was 10.9 per 1,000 women. For overseas-born women, the age-standardised separations rate was higher than for Australian-born women at 13.5 per 1,000 women (Table 4.4).

Remoteness Area

Data on the geographical location of the usual residence of the patient are provided as Statistical Local Area (a small unit within the Australian Bureau of Statistic's Australian Standard Geographical Classification) and/or postcode. These data have been aggregated to Remoteness Area. Details of the data provided by the states and territories and the mapping process conducted by the AIHW to assign Remoteness Area categories to separation records can be found in Appendix 3 of *Australian Hospital Statistics 2003–04* (AIHW 2005).

In 2003, residents of Major cities accounted for the highest number of separations with induced abortion (36,709 separations, 73.0%). However, the age-standardised separation rate was highest for women usually resident in Remote areas (13.5). This compares to 11.7 separations with induced abortion per 1,000 women nationwide (Table 4.5). In public hospitals, the rate was highest for women usually resident in Remote areas (9.3) and lowest for women usually resident in Inner regional areas (2.4). In private hospitals the rate was highest for women usually resident in Major cities (9.3) and decreased with remoteness to 3.1 for Very remote areas (Table 4.5).

Table 4.5: Separations with induced abortion[(a)] by Remoteness Area of usual residence, 2003

	Public hospitals		Private hospitals		All hospitals	
Remoteness Area	Separations	Rate per 1,000 women (age-standardised)[(b)]	Separations	Rate per 1,000 women (age-standardised)[(b)]	Separations	Rate per 1,000 women (age-standardised)[(b)]
Major cities	8,713	2.9	27,996	9.3	36,709	12.2
Inner regional	1,899	2.4	5,967	7.6	7,866	10.0
Outer regional	1,790	4.7	2,602	6.8	4,392	11.5
Remote	589	9.3	266	4.2	855	13.5
Very remote	244	5.9	127	3.1	371	9.0
Not reported	12	. .	19	. .	31	. .
Total[(c)]	**13,247**	**3.1**	**36,977**	**8.6**	**50,224**	**11.7**

(a) Separations with a diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* and an abortion-related procedure. 445 separations with a diagnosis of *O06.5–O06.9 Unspecified abortion, complete or unspecified* and an abortion-related procedure from a private free-standing day hospital facility(ies) in Victoria were also included (see Chapter 2).

(b) Directly age-standardised. The Australian female population aged 15–44 years for 30 June 2001 was used as the population for which expected rates were calculated. The Australian Bureau of Statistics population estimates for 30 June 2003 for females were used for the observed rates.

(c) Includes induced abortion where Remoteness Area of usual residence was unknown or not reported. Excludes overseas residents and unknown state of residence.

. . Not applicable.

Diagnoses

Diagnoses recorded include the principal diagnosis which is the diagnosis established after study to be chiefly responsible for occasioning the admitted patient's episode of care in hospital, and additional diagnoses which are conditions or complaints either coexisting with the principal diagnosis or arising during the episode of care. Information on duration of pregnancy and on maternal care is recorded as diagnoses.

Principal diagnosis

In 2003, the principal diagnosis with the highest number of separations with induced abortion was *O04.9 Medical abortion, complete or unspecified, without complication*

(49,485 separations, 98.4%). The next highest (445 separations) was *O06.9 Unspecified abortion, complete or unspecified, without complication* (from the private free-standing day hospital facility(ies) in Victoria, and included in the criteria for this report only) (Table 4.6). Principal diagnoses other than *O04.5–O04.9 Medical abortion, complete or unspecified* and *O06.5–O06.9 Unspecified abortion, complete or unspecified* were reported for relatively small numbers of separations.

Table 4.6: Separations for the 20 principal diagnoses with the highest number of separations with induced abortion[(a)], 2003

Principal diagnosis	Separations	Per cent
O04.9 Medical abortion, complete or unspecified, without complication	49,485	98.4
O06.9 Unspecified abortion, complete or unspecified, without complication	445	0.9
O04.8 Medical abortion, complete or unspecified, with other and unspecified complications	119	0.2
O04.6 Medical abortion, complete or unspecified, complicated by delayed or excessive haemorrhage	50	0.1
O35.8 Maternal care for other (suspected) fetal abnormality and damage	41	0.1
Z30.2 Sterilisation	24	0.0
O35.1 Maternal care for (suspected) chromosomal abnormality in fetus	19	0.0
O35.0 Maternal care for (suspected) central nervous system malformation in fetus	11	0.0
O02.1 Missed abortion	8	0.0
O04.5 Medical abortion, complete or unspecified, complicated by genital tract and pelvic infection	6	0.0
O21.0 Mild hyperemesis gravidarum	5	0.0
D27 Benign neoplasm of ovary	4	0.0
N83.1 Corpus luteum cyst	4	0.0
O21.1 Hyperemesis gravidarum with metabolic disturbance	4	0.0
O04.7 Medical abortion, complete or unspecified, complicated by embolism	3	0.0
O20.0 Threatened abortion	3	0.0
O6.0 Preterm delivery	3	0.0
Z63.8 Other specified problems related to primary support group	3	0.0
D06.9 Carcinoma in situ of cervix, unspecified	2	0.0
N80.3 Endometriosis of pelvic peritoneum	2	0.0
Other	73	0.1
Total	**50,314**	**100.0**

(a) Separations with a diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* and an abortion-related procedure. 445 separations with a diagnosis of *O06.5.–O06.9 Unspecified abortion, complete or unspecified* and an abortion-related procedure from a private free-standing day hospital facility(ies) in Victoria were also included (see Chapter 2).

Duration of pregnancy

The ICD-10-AM category *O09 Duration of pregnancy* was developed to record the duration of pregnancy for a specific group of high risk pregnancies, including abortion (ICD-10-AM codes *O00–O07 Pregnancy with abortive outcomes*) (see ACS *1518 Duration of pregnancy* in NCCH 2002). Duration can be recorded using codes that indicate ranges of completed weeks of pregnancy (e.g. 5–13 weeks) (Table 4.7).

In 2003 there were 2,679 separations (5.3%) with induced abortion for which the duration of pregnancy was either unspecified or not reported, with most of these (82.1%, 2,200 separations) in the private sector. Excluding these separations, the most common duration of

pregnancy was 5–13 completed weeks (44,909 separations, 94.3%), followed by 14–19 completed weeks (2,242 separations, 4.7%) (Table 4.7).

Induced abortion was most common in the first trimester of pregnancy. There were 45,068 separations (94.6%) with induced abortion and duration of pregnancy ≤ 13 completed weeks. There were 325 separations (0.7%) with induced abortion and duration of pregnancy ≥ 20 completed weeks (Table 4.7). This may be an under-estimate because *O04.5–O04.9 Medical abortion, complete or unspecified* may not always be coded for induced abortion after 20 weeks gestation because of known or suspected fetal abnormality or damage (see Chapter 2).

Table 4.7: Separations with induced abortion[(a)] by duration of pregnancy, 2003

Duration of pregnancy	Public hospitals	Private hospitals	All hospitals
O09.0 < 5 completed weeks[(b)]	15	144	159
O09.1 5–13 completed weeks	11,640	33,269	44,909
O09.2 14–19 completed weeks	988	1,254	2,242
O09.3 20–25 completed weeks	130	170	300
O09.4 26–33 completed weeks	16	9	25
O09.5 34–37 completed weeks	0	0	0
O09.9 Unspecified or not reported duration of pregnancy	479	2,200	2,679
Total	**13,268**	**37,046**	**50,314**

(a) Separations with a diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* and an abortion-related procedure. 445 separations with a diagnosis of *O06.5–O06.9 Unspecified abortion, complete or unspecified* and an abortion-related procedure from a private free-standing day hospital facility(ies) in Victoria were also included (see Chapter 2).

(b) Induced abortion would not be undertaken at <5 completed weeks. There may be errors in the coding of duration of pregnancy or of induced abortion-related diagnoses or procedures for these separations.

Maternal care for known or suspected fetal abnormality or damage

The indication for induced abortion is not usually coded. However if there is known or suspected fetal abnormality or damage, a code from the ICD-10-AM category *O35 Maternal care for known or suspected fetal abnormality or damage* may be assigned. Not all separations with a diagnosis code in the category *O35 Maternal care for known or suspected fetal abnormality or damage* are for induced abortion.

As noted in Chapter 2, if the induced abortion was for known or suspected fetal abnormality or damage and occurred at or after 20 weeks gestation, a code from the ICD-10-AM diagnosis category *O35 Maternal care for known or suspected fetal abnormality or damage* would be assigned as the principal diagnosis. In such cases a diagnosis code for induced abortion may or may not be assigned (see Chapter 2) and only those with diagnosis and procedure codes for induced abortion are included here.

In 2003, there were 73 separations with an induced abortion diagnosis and procedure and a principal diagnosis from the ICD-10-AM diagnosis category *O35 Maternal care for known or suspected fetal abnormality or damage* (Table 4.8). Of these, 72 separations had duration of pregnancy recorded and 64 (88.9%) had duration of pregnancy of 20 completed weeks or more recorded.

If the induced abortion was for known or suspected fetal abnormality or damage and it occurred before 20 weeks gestation a code from the ICD-10-AM diagnosis category *O04 Medical abortion* would be assigned as the principal diagnosis and a code from the ICD-10-AM diagnosis category *O35 Maternal care for known or suspected fetal abnormality or*

damage may be assigned as an additional diagnosis. Such separations for which an induced abortion-related procedure was also reported are included here.

In 2003, there were 1,116 separations with a diagnosis and procedure of induced abortion and an additional diagnosis in the ICD-10-AM diagnosis category *O35 Maternal care for known or suspected fetal abnormality or damage* (Table 4.8). Of these, 1,025 had duration of pregnancy recorded and 961 separations (93.8%) had duration of pregnancy of less than 20 completed weeks recorded.

Overall in 2003, there were 1,187 separations with a diagnosis and procedure for induced abortion recorded and any diagnosis in the ICD-10-AM diagnosis category *O35 Maternal care for known or suspected fetal abnormality or damage* (Table 4.8), 2.4% of the separations for induced abortion. *O35.1 Maternal care for (suspected) chromosomal abnormality in fetus* was the most common diagnosis within this group (589 separations), followed by *O35.8 Maternal care of other (suspected) fetal abnormality or damage* (325 separations) (Table 4.8).

Table 4.8: Separations with induced abortion[(a)] and a diagnosis of Maternal care for known or suspected fetal abnormality or damage, 2003

ICD-10-AM Diagnosis codes	Separations with induced abortion[(a)] and O35 as the principal diagnosis	Separations with induced abortion[(a)] and O35 as an additional diagnosis	Separations with induced abortion[(a)] and O35 as any diagnosis
O35.0 Maternal care for (suspected) central nervous system malformation in fetus	11	191	202
O35.1 Maternal care for (suspected) chromosomal abnormality in fetus	19	570	589
O35.2 Maternal care for (suspected) hereditary disease in fetus	0	20	20
O35.3 Maternal care for (suspected) damage to fetus from viral disease in mother	0	5	5
O35.4 Maternal care for (suspected) damage to fetus from alcohol	0	0	0
O35.5 Maternal care for (suspected) damage to fetus by drugs	0	8	8
O35.6 Maternal care for (suspected) damage to fetus by radiation	0	1	1
O35.7 Maternal care for (suspected) damage to fetus by other medical procedures	0	4	4
O35.8 Maternal care for other (suspected) fetal abnormality and damage	41	284	325
O35.9 Maternal care for (suspected) fetal abnormality and damage, unspecified	2	58	60
Total[(b)]	**73**	**1,116**	**1,187**

(a) Separations with a diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* and an abortion-related procedure. Separations with a diagnosis of *O06.5–O06.9 Unspecified abortion, complete or unspecified* and an abortion-related procedure from a private free-standing day hospital facility(ies) in Victoria were also included (see Chapter 2).

(b) More than one diagnosis may be reported for each separation, so the total does not add to the sum of the rows.

Procedures

In 2003, the total number of procedures reported for separations with induced abortion was 114,038 (Table 4.9). This represents an average of 2.3 procedures reported for each separation.

The procedures reported included both abortion-related procedures (Table 2.3) and other procedures, such as anaesthetics. In 2003, the most commonly reported procedure for separations with induced abortion was *[1267] 35643-01 Suction curettage of uterus* (43,109 separations), followed by *[1910] 92514-19 General anaesthesia, ASA 19* (17,415 separations) (Table 4.9) (ASA refers to the American Society of Anesthesiologists Physical Status Classification). For separations with these procedures a total of 43,130 procedures and 17,540 procedures were reported respectively.

Table 4.9: Separation and procedure statistics for the 20 procedures with the highest number of separations with induced abortion[(a)], 2003

Procedure		Separations	Total procedures reported
[1267] 35643-01	Suction curettage of uterus	43,109	43,130
[1910] 92514-19	General anaesthesia, ASA 19	17,415	17,540
[1910] 92514-99	General anaesthesia, ASA 99	12,023	12,031
[1910] 92515-19	Sedation, ASA 19	11,308	11,362
[1267] 35643-00	Dilation and curettage [D&C] following abortion or for termination of pregnancy	6,447	6,450
[1867] 96080-00	Counselling or education on preparing for parenthood, parenting skills or family planning	3,994	3,995
[1943] 55700-01	Ultrasound for fetal growth measurement	3,271	3,272
[1910] 92515-99	Sedation, ASA 99	2,419	2,423
[1910] 92514-29	General anaesthesia, ASA 29	1,737	1,737
[1884] 92173-00	Passive immunisation with Rh(D) immunoglobulin	1,454	1,455
[1906] 14203-00	Direct subdermal hormone implantation	1,432	1,432
[1862] 92130-00	Papanicolaou smear study	1,091	1,091
[1334] 90465-01	Medical induction of labour, prostaglandin	760	761
[1257] 35688-00	Laparoscopic sterilisation	715	715
[1909] 92513-19	Infiltration of local anaesthetic, ASA 19	712	713
[1910] 92514-10	General anaesthesia, ASA 10	650	650
[1916] 95550-01	Allied health intervention, social work	643	643
[1260] 35503-00	Insertion of intrauterine device [IUD]	639	639
[1277] 35640-02	Dilation of cervix	431	431
[1910] 92515-29	Sedation, ASA 29	426	434
Other		141	3,134
Total[(b)]		**50,314**	**114,038**

(a) Separations with a diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* and an abortion-related procedure. 445 separations with a diagnosis of *O06.5–O06.9 Unspecified abortion, complete or unspecified* and an abortion-related procedure from a private free-standing day hospital facility(ies) in Victoria were also included (see Chapter 2).

(b) More than one procedure may be reported for each separation, so the total does not add to the sum of the rows.

The most commonly reported abortion-related procedures in 2003 were *[1267] 35643-01 Suction curettage* (43,109 separations, 85.7%), and *[1267] 35643-00 Dilation and curettage [D&C] following abortion or for termination of pregnancy* (6,447 separations, 12.8%). For the other

abortion-related procedures, the number of separations ranged from zero for *[1330] 90463-00 Fetal reduction* and *[1334] 90465-04 Other surgical induction of labour* to 760 for *[1334] 90465–01 Medical induction of labour, prostaglandin* (1.5%) (Table 4.10).

Table 4.10: Number of separations with induced abortion[(a)] by abortion-related procedure, 2003

ICD-10-AM procedure code	Separations	Per cent
[1256] 35640-00 Dilation and curettage [D&C]	56	0.1
[1256] 35640-01 Curettage of uterus without dilation	12	0.0
[1267] 35643-00 Dilation and curettage [D&C] following abortion or for termination of pregnancy	6,447	12.8
[1267] 35643-01 Suction curettage of uterus	43,109	85.7
[1267] 35643-02 Dilation and evacuation of uterus [D&E]	376	0.7
[1330] 90461-00 Intra-amniotic injection for abortion	12	0.0
[1330] 90462-00 Insertion of prostaglandin suppository for induction of abortion	370	0.7
[1330] 90463-00 Fetal reduction	0	. .
[1334] 90465-00 Medical induction of labour, oxytocin	21	0.0
[1334] 90465-01 Medical induction of labour, prostaglandin	760	1.5
[1334] 90465-02 Other medical induction of labour	91	0.2
[1334] 90465-03 Surgical induction of labour by artificial rupture of membranes [ARM]	1	0.0
[1334] 90465-04 Other surgical induction of labour	0	. .
[1334] 90465-05 Medical and surgical induction of labour	22	0.0
[1340] 16520-00, 16520-01, 16520-02, 16520-03 Caesarean section	1	0.0
[1343] 90476-00 Procedures on fetus to facilitate delivery	1	0.0
[1262] 35649-00 Hysterotomy	17	0.0
[1268], [1269], [989] 90450-00, 90450-01, 90450-02, [1270] 90443-00 Hysterectomy	6	0.0
Total[(b)]	**50,314**	**100.0**

(a) Separations with a diagnosis of *O04.5–O04.9 Medical abortion, complete or unspecified* and an abortion-related procedure. 445 separations with a diagnosis of *O06.5–O06.9 Unspecified abortion, complete or unspecified* and an abortion-related procedure from a private free-standing day hospital facility(ies) in Victoria were also included (see Chapter 2).

(b) More than one procedure may be reported for each separation, so the total does not add to the sum of the rows.

. . Not applicable.

Changes between 2000 and 2003

The number of separations with induced abortion is presented by sector for the years 2000 to 2003 in Table 4.11. Overall, the number of separations with induced abortion increased by

52.8% over this period, from 32,918 separations in 2000 to 50,314 separations in 2003. There was a decrease in the number of separations with induced abortion in public hospitals of 14.1% from 15,439 in 2000 to 13,268 in 2003. In private hospitals, the number of separations with induced abortion increased markedly over this period, from 17,479 in 2000 to 37,046 in 2003, an increase of 111.9%. Private free-standing day hospital facilities accounted for most of this increase, with the number of separations with induced abortion increasing by 149.3% between 2000 and 2003 from 13,935 separations in 2000 to 34,739 separations in 2003 (Table 4.11).

This marked increase can be explained by changes in the coverage of the NHMD over time, (with reporting for private hospitals that had not previously reported), and with the designation as private hospitals of some day facilities that had not previously been designated as hospitals.

Between 1999–00 and 2003–04, there was increasing coverage of private hospitals (from about 94% to about 98%), although the coverage in 2001–02 was estimated to have been lower than in 2000–01 (AIHW 2005).

The apparently marked increase in the number of separations with induced abortion between 2000 and 2003 in the private sector would have been affected by the registration of relevant facilities as hospitals for the first time in Queensland in 2001 and in Victoria in 2002–03. These facilities had previously been categorised as non-hospital facilities and were therefore out of scope for the NHMD.

Changes in the coverage of the NHMD, and in what is regarded as a hospital, particularly for private hospitals, mean that it is not possible to compare the number of in-hospital induced abortions over time. Private hospitals are not separately identified in the NHMD for most states and territories. Therefore, it is not possible to determine what proportion of the change in the number of separations over time is attributable to these changes in coverage.

The coverage of public hospitals in the NHMD has not changed over time, being essentially complete each year (AIHW 2005).

Table 4.11: Separations with induced abortion[(a)] by hospital sector, 2000–2003

Hospital sector	2000	2001	2002	2003	% difference[(b)]
Public	15,439	15,038	14,274	13,268	–14.1
Private[(c)]	17,479	21,317	33,570	37,046	111.9
Private free-standing day hospital facility[(c)]	13,935	16,822	29,454	34,739	149.3
Private other[(c)]	3,544	4,495	4,116	2,307	–34.9
Total	32,918	36,355	47,844	50,314	**52.8**
Rate per 1,000 women (age-standardised)[(d)]	**7.8**	**8.6**	**11.2**	**11.8**	**50.9**

(a) Separations with a diagnosis of O04.5–O04.9 *Medical abortion, complete or unspecified* and an abortion-related procedure. Separations with a diagnosis of O06.5–O06.9 *Unspecified abortion, complete or unspecified* and an abortion-related procedure from a private free-standing day hospital facility(ies) in Victoria in 2002 and 2003 are also included (see Chapter 2).

(b) There were changes in the coverage of the NHMD over this period, particularly for private free-standing day hospital facilities.

(c) The hospital type was not specified for Tasmanian private hospitals reporting to the NHMD for 2000–01, 2001–02, 2002–03 and 2003–04. Thus, for 2001 to 2003 and for June to December 2000, data for Tasmania are included in the total for private hospitals but have been apportioned to the private hospital subcategories based on the proportions in the other states and territories.

(d) Directly age-standardised. The Australian female population aged 15–44 years for 30 June 2001 was used as the population for which expected rates were calculated. The Australian Bureau of Statistics population estimates for 30 June 2003 for females were used for the observed rates.

5 Medicare data

This section presents summary statistics on services provided in 2003 for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* for which Medicare claims were presented and processed.

Information is included on the demographic characteristics of women who claimed Medicare benefits for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* (Table 5.1 and 5.2). This information is presented by the type of service (in-hospital or non-hospital). For this report, non-hospital services for this item were assumed to be specific for induced abortion; It is likely that not all in-hospital services would have related to induced abortion. The definition of hospitals or admitted patient status differs between the Medicare data and the NHMD, so the data presented here for in-hospital services is not comparable to the data presented in Chapter 4 from the NHMD. Information is also included on the type of medical practitioner who provided the service (Table 5.3) and on the number of services provided per patient in 2003 (Table 5.4). For these, information on whether the service was provided in-hospital was not available.

As with the data presented on admitted patients from the NHMD, the data on rates are presented per 1,000 women aged 15–44 years. However, services provided for women aged <15 years are included in the 15–19 year age group and services provided for women aged >44 years are included in the 40–44 year age group. This is because the denominator populations for the <15 year age group and the <44 year age group were not defined. This would inflate the rates for the 15–19 year and 40–44 year age groups. Age-standardised rates are also presented, standardised to the Australian female population aged 15–44 years as at 30 June 2001. Males were not included in the standard population because this MBS-item only relates to females.

Data for other MBS items related to abortion are not presented here. This is because, as explained in Chapter 2, induced abortion for which other MBS items are claimed are likely to have been included in the NHMD, and will therefore be included in Chapter 4. In addition, as detailed in Chapter 2, other MBS items are not regarded as specific for induced abortion.

Services claimed for MBS-item 35643

Overall, in 2003 there were 73,014 services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage*, 32,504 in-hospital services and 40,510 non-hospital services (Table 5.1). There were 17.1 services per 1,000 women aged 15–44 years for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage*. There were 7.6 in-hospital services per 1,000 women aged 15–44 years and 9.5 non-hospital services per 1,000 women aged 15–44 years (Table 5.1).

Demographic profile

Age group

Data are presented for 5-year age groups from <15 years to >44 years for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* (Table 5.1). The highest number of services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* were for women in the 20–24 year age group (16,934 services) and the lowest was for women in the <15 year age group (206 services) (Table 5.1). The highest number of in-hospital services was for women in the 30–34 year age group (7,643 services) and the highest number of non-hospital services was for women in the 20–24 year age group (10,525 services) (Table 5.1).

The age-specific rate of services per 1,000 women in each age group was highest for the 20–24 year age group (25.4 per 1,000 women aged 20–24 years) and lowest for the 40–44 year age group (6.8 per 1,000 women aged 40–44 years).

Table 5.1: Number of Medicare services for MBS-item 35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage, by service type and 5-year age group, 2003

	In-hospital		Non-hospital		Total	
Age group	Services	Services per 1,000 women[(a)]	Services	Services per 1,000 women[(a)]	Services	Services per 1,000 women[(a)]
<15	68	n.p.	138	n.p.	206	n.p.
15–19	3,455	5.3[(b)]	6,875	10.5[(b)]	10,330	15.8[(b)]
20–24	6,409	9.6	10,525	15.8	16,934	25.4
25–29	6,450	9.5	8,602	12.7	15,052	22.2
30–34	7,643	10.0	7,271	9.5	14,914	19.5
35–39	5,572	7.6	4,751	6.5	10,323	14.0
40–44	2,601	3.8[(c)]	2,109	3.0[(c)]	4,710	6.8[(c)]
>44	306	n.p.	239	n.p.	545	n.p.
Total	**32,504**	**7.6**	**40,510**	**9.5**	**73,014**	**17.1**

(a) The Australian Bureau of Statistics population estimates for 30 June 2003 for women aged 15–44 years were used.

(b) Includes separations with induced abortion aged <15 years.

(c) Includes separations with induced abortion aged >44 years.

n.p. Not published because the denominator population is not defined for these age groups.

Remoteness Area

Data on the geographical location of the patient are recorded as the postcode of the address at which the patient is enrolled for Medicare. This may be different to the postcode of the patient's usual residence. These data were aggregated (by DoHA) to Remoteness Area using ABS concordance information describing the distribution of the population by postcode and Remoteness Area.

In 2003, the highest number of services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* was for residents of Major cities (56,328 services, 77.2%) and the lowest was for residents of Very remote areas (212 services, 0.3%). The age-standardised rate of services per 1,000 women ranged from 4.3 for women usually resident in Very remote areas to 18.8 for women usually resident in Major cities (Table 5.2).

Table 5.2: Number of Medicare services for MBS-item 35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage, by service type and Remoteness Area of usual residence[a], 2003

	In hospital		Non-hospital		Total	
Remoteness Area	Services	Services per 1,000 women (age-standardised)[b]	Services	Services per 1,000 women (age-standardised)[b]	Services	Services per 1,000 women (age-standardised)[b]
Major cities	25,606	8.6	30,722	10.2	56,328	18.8
Inner regional	5,010	6.4	6,492	8.2	11,502	14.6
Outer regional	1,482	3.8	2,501	6.6	3,983	10.4
Remote	121	1.9	367	5.8	488	7.7
Very remote	67	1.5	145	2.8	212	4.3
Not reported	216	. .	282	. .	498	. .
Total[c]	**32,502**	**7.6**	**40,509**	**9.5**	**73,011**	**17.1**

(a) Remoteness Area is based on postcode of enrolment in Medicare. This may differ from the postcode of usual residence.

(b) Directly age-standardised. The Australian female population aged 15–44 years for 30 June 2001 was used as the population for which expected rates were calculated. The Australian Bureau of Statistics population estimates for 30 June 2003 for females were used for the observed rates.

(c) Excludes 3 services that were removed when the concordance was applied.

. . Not applicable.

Type of medical practitioner

The type of medical practitioner is determined by the Department of Health and Ageing using the proportion of schedule fee income generated from non-referred (i.e. general practitioner) attendances by the medical practitioner in the last quarter of the year in question. If more than 50% of schedule fee income was from non-referred attendances, then the type of medical practitioner recorded was general practitioner. If it was less than 50% then the type of medical practitioner was recorded as specialist practitioner (DoHA 2005, personal communication).

In 2003, medical practitioners recorded as specialist practitioners provided 96.5% (70,453 services) of services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* (Table 5.3).

Table 5.3: Number of Medicare services for MBS-item 35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage, by type of medical practitioner, 2003

Type of medical practitioner	MBS-item 35643
General	2,561
Specialist	70,453
Total	**73,014**

Medicare services per patient

A patient may have received the same service more than once in a year. In 2003, 69,653 patients received 73,014 services for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage*. There were 66,391 patients who received one service for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* and 3,169 patients who received two services. Three or more services were received by 93 patients. These patients received an average of 3.1 services each for MBS-item *35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage* (Table 5.4).

Table 5.4: Number of Medicare services provided per patient for MBS-item 35643 Evacuation of the contents of the gravid uterus by curettage or suction curettage, 2003

	MBS-item 35643	
Medicare services	**Number of patients**	**Number of services**
One service	66,391	66,391
Two services	3,169	6,338
More than two services	93	285
Total	**69,653**	**73,014**

6 Induced abortion at or after 20 weeks gestation

This chapter examines the identification of induced abortion at or after 20 weeks gestation in national routinely collected data sets, including the NHMD, Medicare data, National Perinatal Data Collection and ABS Perinatal Mortality Data, and in state-based data collections.

Identification of induced abortion at or after 20 weeks gestation is limited in the National Hospital Morbidity Database and Medicare data. Other national routinely collected data sets and state-based collections were therefore accessed as sources of data on these induced abortions. Reporting of induced abortions occurring at or after 20 weeks is also limited in the other nationally collected data sets and varies among the state-based collections.

National routinely collected data sets

National Hospital Morbidity Database

As noted in Chapter 4, the ICD-10-AM category *O09 Duration of pregnancy* was developed to record the duration of pregnancy for a specific group of high-risk pregnancies, including abortion (*ACS 1518 Duration of pregnancy*). In 2003, for 5.3% (2,679 separations) of separations with induced abortion, duration of pregnancy was either unspecified or not reported. There were 325 separations (0.7%) with induced abortion and duration of pregnancy of 20 completed weeks or more (Table 4.7).

The number of induced abortions at or after 20 weeks gestation is likely under-estimated in the NHMD because some induced abortions for known or suspected fetal abnormality or damage at or after 20 weeks gestation may not be identifiable in the NHMD. This is because it is not clear from the coding instructions (ACS *1511 Termination of pregnancy*) that a diagnosis of *O04 Medical abortion* is required in these cases. However, the validation of the criteria used to identify induced abortion in the NHMD against the SAASC indicates that the criteria do not under-enumerate induced abortions overall and therefore may not under-enumerate induced abortions at or after 20 weeks gestation, at least in South Australia.

In 2003, 38.5% (125 separations) of separations with induced abortion and duration of pregnancy of 20 or more completed weeks also had a diagnosis of *O35 Maternal care for known or suspected fetal abnormality and damage* (data not shown).

Medicare data

MBS-item *16525 Management of second trimester labour* may be applicable for some induced abortion services at or after 20 weeks gestation. However, as discussed in Chapter 2, this MBS-item is not specific for induced abortion. Also, this MBS-item would be used for

induced abortions carried out in the 14th–19th weeks, but not for those in the third trimester of pregnancy. In 2003 there were 629 services claimed for MBS-item *16525 Management of second trimester labour* (data not shown).

National Perinatal Data Collection

The National Perinatal Data Collection (NPDC) comprises data from state- and territory-based midwives or perinatal data collections. It contains data on pregnancies resulting in a live birth or stillbirth (20 weeks or more gestational age or 400 grams or more birthweight); childbirth; and the puerperium. The core data elements in the NPDC are specified in the Perinatal National Minimum Data Set (NMDS). Induced abortions occurring at 20 weeks gestation or more are in scope but cannot be separately identified from stillbirths and live births. Data from the NPDC are published annually in the *Australia's mothers and babies* reports (AIHW NPSU: Laws & Sullivan 2004a AIHW NPSU: Laws & Sullivan 2004b).

Information on the cause of death is included in the NPDC for perinatal deaths classified using the International Statistical Classification of Diseases and Related Health Problems, 10th Revision (ICD-10) (WHO 1993) and the Perinatal Society of Australia and New Zealand Perinatal Death Classification (PSANZ PDC). However, the ICD-10 coded data have not been validated or reported in the *Australia's mothers and babies* reports and the PSANZ PDC data is only reported at the highest level of the classification and is not available for all states and territories.

The ICD-10 code *P96.4 Termination of pregnancy, fetus and newborn* may be coded as the main condition in the fetus/newborn if the perinatal death is the result of an induced abortion. However, in 2003 this code was only recorded for a small number of perinatal deaths in Queensland. This code was not assigned as an 'other condition' in the fetus/newborn (i.e. not the main condition). This code was not reported by any other jurisdiction, indicating variation in the way in which induced abortion is recorded as a main condition in this collection. None of the other ICD-10 codes are specific for induced abortion as a cause of perinatal death.

The categories in the PSANZ PDC that relate to induced abortion are *Category 1: Congenital abnormality (including terminations for congenital abnormalities)* and *Category 5.1 Maternal conditions: Termination of pregnancy for maternal psychosocial indications*. Category 1 is not specific for induced abortion because it includes all deaths from congenital abnormalities.

The data on perinatal deaths provided to the NPDC were classified using the PSANZ PDC. However, the highest level of the classification was used, so *Category 5.1 Maternal conditions: Termination of pregnancy for maternal psychosocial indications* was combined with the other codes in *Category 5 Maternal conditions*.

Therefore, this data set cannot be used to identify induced abortions at or after 20 weeks gestation.

ABS Perinatal Mortality Data

The Australian Bureau of Statistics (ABS) Perinatal mortality data collection is an ongoing administrative by-product collection based on data supplied by the state and territory Registrars of Births Deaths and Marriages. In Australia, the legal requirement for registering a perinatal death is for a child not born alive (stillbirth) to be of at least 20 weeks gestation or of a weight of at least 400 grams, or a child born alive and dying within 28 days of birth

(neonatal death). In some instances, deaths are registered that do not meet these criteria and these are included in the ABS perinatal mortality data set.

However, in publishing data the ABS applies a birthweight/gestation criteria based on recommendations from the World Health Organization (WHO), and from users of perinatal data. Data reported in ABS publications is based on the fetus/infant weighing at least 400 grams or if birthweight is unknown, on the fetus/infant being of at least 20 weeks gestation.

The data set includes demographic information (e.g. the baby's sex, and the mother's age and place of usual residence), birthweight, gestational age, date of death and the cause of death which may be recorded as a condition in the fetus/infant, the mother, or in both.

Conditions in the fetus/infant and in the mother are classified using ICD-10. Induced abortions are included and the condition in the mother or in the fetus/infant that lead to the abortion may be coded. If no condition in the mother is indicated then ICD-10 code *P03.8 Fetus or newborn affected by other specified complications of labour and delivery* may be used. None of the available codes (i.e. *P03.8 Fetus or newborn affected by other specified complications of labour and delivery*) for conditions in the mother are specific for induced abortion. If no condition in the fetus/infant (e.g. congenital anomaly) is indicated, then ICD-10 code *P96.4 Termination of pregnancy*, *fetus and newborn* may be coded. The other codes for condition in the fetus/infant are not specific for induced abortion (Health and Vitals Statistics Unit, Australian Bureau of Statistics Queensland 2005, personal communication). Hence, it is only if there is no condition specified in the mother and no condition specified in the fetus/infant that *P03.8 Fetus or newborn affected by other specified complications of labour and delivery* and *P96.4 Termination of pregnancy*, *fetus and newborn* are used. If there is any other indication in either the mother or the baby, that indication(s) is coded in preference.

Analysis of the ABS Perinatal mortality data showed that *P96.4 Termination of pregnancy*, *fetus and newborn* was recorded as the main condition in the fetus/infant for 93 perinatal deaths that occurred in 2003. However, this code was essentially only assigned for perinatal deaths in Victoria, with 90 perinatal deaths with this code assigned in that state. Perinatal mortality data are coded centrally by the ABS, so there are no state-specific differences in coding practices that could explain why this code was only assigned for perinatal deaths in Victoria. However, it may be due to possible variation in certification practices among the states and territories. This code was not assigned as an other condition in the fetus/newborn (i.e. not the main condition).

This data set does not include data that can be used to identify all induced abortions that may be associated with fetal deaths.

State-based data collections

Induced abortions at or after 20 weeks gestation are included in various state-based data collections, including from perinatal mortality committees, which review perinatal deaths, induced abortion notification collections in Western Australia and South Australia, and congenital anomalies data collections. The extent to which induced abortions at or after 20 weeks can be identified varies among the collections, and among the states and territories.

New South Wales

In New South Wales, perinatal deaths occurring among fetuses and infants of at least 22 weeks gestation or 500 grams birthweight are reviewed by the NSW Maternal and Perinatal Committee and published in the *NSW Mothers and babies* report (NSW DoH 2004).

However, induced abortions are not identified separately from other perinatal deaths in this report.

The cause of death is classified using the PSANZ PDC. In 2003, the cause of death was reported as PSANZ PDC *Category 5.1 Maternal conditions: Termination of pregnancy for maternal psychosocial indications* for five perinatal deaths (NSW DoH 2004). Induced abortions at or after 20 weeks gestation for congenital anomalies were included but were not reported separately from other perinatal deaths from congenital anomalies in the report, because as noted above, the PSANZ PDC *Category 1: Congenital abnormality (including terminations for congenital abnormalities)* is not specific for induced abortions.

Induced abortions at or after 20 weeks gestation are also reported to the NSW Birth Defects Register. Data on congenital anomalies are published in the *NSW Mothers and babies* report (NSW DoH 2004), however, induced abortions at or after 20 weeks gestation with congenital anomalies are not separately identified from stillbirths and live births in this report.

Victoria

In Victoria, the Consultative Council on Obstetrics and Paediatric Mortality and Morbidity (CCOPMM) compiles data on perinatal deaths (CCOPMM 2004). In 2003, this committee reported that there were 219 perinatal deaths as a result of induced abortion. The cause of death for these deaths was classified using the PSANZ PDC. The committee reported that in 2003, 116 of the 219 induced abortions were for congenital anomalies (PSANZ PDC Category 1) and 103 were for maternal psychosocial indications (PSANZ PDC Category 5.1). Approximately half of the induced abortions for maternal psychosocial reasons were undertaken for non-residents of Victoria (CCOPMM 2004).

The 219 perinatal deaths as a result of induced abortion in 2003 reported by the CCOPMM is more than the number of perinatal deaths recorded in the ABS Perinatal mortality data for Victoria in 2003 (90 deaths, see above). This may be because some of these deaths may not have been registered in 2003, or because the main condition in the fetus/infant may not have been recorded/coded as *P96.4 Termination of pregnancy, fetus and newborn* for some of them.

Induced abortions with congenital anomalies are reported by the Victorian Birth Defects Register (Vic DHS 2005), which was established under the auspices of the CCOPMM. In 2003, there were 129 induced abortions at or after 20 weeks gestation with a congenital anomaly reported. This is more than the 116 induced abortions for congenital abnormalities reported by the CCOPMM. This may be because the Birth Defects Register includes induced abortions with congenital anomalies while the data on deaths only relate to induced abortions for congenital anomalies. It may also be because of possible differences in the classification of congenital anomalies or differences in the notification/ascertainment periods between the two collections.

Queensland

The Queensland Maternal and Perinatal Quality Council compiles data on perinatal deaths (QMPQC 2004). In this report, the cause of death for perinatal deaths was classified using the Australian and New Zealand Antecedent Classification of Perinatal Mortality (ANZACPM), which was the predecessor to the PSANZ PDC. In 2001, the cause of death was reported as ANZACPM *Category 5.1 Maternal conditions: Termination of pregnancy for maternal psychosocial indications* for 30 perinatal deaths. As with the PSANZ classification, this category excludes terminations of pregnancy for congenital abnormalities. Induced abortions at or after 20 weeks gestation for congenital anomalies were included but were not reported separately from other perinatal deaths from congenital anomalies in the report, because as with the

PSANZ PDC, *Category 1: Congenital abnormality (including terminations for congenital abnormalities)* is not specific for induced abortions.

Western Australia

In Western Australia, induced abortions at or after 20 weeks gestations are notified to the WAANS. In 2003, there were 31 induced abortions at or after 20 weeks gestation notified to the WAANS and in 2004 there were 38 (Straton et al. 2005). Information on whether the induced abortion was carried out for suspected or known congenital anomalies or for selective reduction of multiple pregnancy is included in the WAANS, but this information was not reported separately for induced abortions at or after 20 weeks gestation (Straton et al. 2005).

The Perinatal and Infant Mortality Committee of Western Australia also collates information on perinatal deaths, however, induced abortions at or after 20 weeks gestation were not separately identified in the latest report of this committee (PIMCWA 2005). Causes of perinatal deaths were reported using the PSANZ PDC. In 2000–01 there were 2 perinatal deaths with a cause of death of *Category 5.1 Maternal conditions: Termination of pregnancy (other than for congenital abnormality)* reported. Induced abortions for congenital anomalies were not separately identified from other perinatal deaths from congenital anomalies in the PSANZ PDC *Category 1: Congenital abnormality (including terminations for congenital abnormalities)* in this report (PIMCWA 2005).

Information on induced abortions at or after 20 weeks gestation with congenital anomalies is reported by the Western Australian Birth Defects Registry (Bower et al. 2004). However, these induced abortions are not presented separately from induced abortions at earlier gestations.

South Australia

In South Australia, induced abortions at or after 20 weeks gestation are notified to the SAASC. These data are published in the *Pregnancy Outcome in South Australia* reports (Chan et al. 2002, Chan et al. 2003, Chan et al. 2005). However, induced abortions at or after 20 weeks gestation were not presented separately from induced abortions at earlier gestations in this report. The number of induced abortions at or after 20 weeks notified to the SAASC was reported in parliament. There were 77 for 2001–02 and 58 for 2002–03 (Senate Hansard 2005).

Information on induced abortions at or after 20 weeks is reported by the South Australian Abortion Reporting Committee which superseded the Committee appointed to examine and report on abortions notified in South Australia (South Australian Abortion Reporting Committee 2005). In 2003, there were 49 induced abortions at or after 20 weeks gestation reported. The reason for the induced abortion was reported as specified medical condition (2), abnormality of the fetus (21), or mental health of the woman (26) (South Australian Abortion Reporting Committee 2005). In 2002 there were 68 induced abortions at or after 20 weeks gestation. The reason for the induced abortion was reported as specified medical condition (3), abnormality of fetus (23), and mental health of woman (42) (Committee appointed to examine and report on abortions notified in South Australia 2003).

Information on induced abortions at or after 20 weeks gestation is also collated by the Maternal, Perinatal and Infant Mortality Committee in South Australia and reported using the PSANZ PDC. The number of perinatal deaths from congenital anomalies that were the result of induced abortion was reported as a subset of all perinatal deaths from congenital anomalies. In 2002 there were 25 perinatal deaths reported as induced abortions for

congenital anomalies. There were no perinatal deaths reported as induced abortions for PSANZ PDC *Category 5.1 Maternal conditions: Termination of pregnancy (other than for congenital abnormality)* (SA DHS 2003).

Induced abortions at or after 20 weeks gestation are reported by the South Australian Birth Defects Register. In 2002 there were 22 induced abortions at or after 20 weeks gestation with a congenital anomaly reported (SABDR 2005).

The differences in the numbers of induced abortions at or after 20 weeks among these reports could be because the definition of an induced abortion may be different between these data sources or the notification/ascertainment period may be different. In the case of congenital anomalies, the classification of congenital anomalies or the scope of the collections may be different. For example, the birth defects register includes induced abortions with congenital anomalies while the data on perinatal deaths relate to induced abortions for congenital anomalies.

Tasmania

The Council of Obstetric and Paediatric Mortality and Morbidity collate information on perinatal deaths, including induced abortions at or after 20 weeks gestation. The cause of death is reported using the PSANZ PDC. However, the highest level of the classification was used, so *Category 5.1 Maternal conditions: Termination of pregnancy for maternal psychosocial indications* was combined with the other codes in *Category 5 Maternal conditions*. Therefore, induced abortions at or after 20 weeks could not be identified. However, commentary was provided on the perinatal deaths in each category. There was one death after termination of pregnancy which was reported in *Category 1 Congenital abnormality* (COPMM 2005).

Australian Capital Territory

The ACT Maternal Perinatal Information Network (ACT MPIN) collaborates with the Population Health Research Centre to publish ACT perinatal deaths data in the *Maternal and Perinatal Health in the ACT* reports. Induced abortion at or after 20 weeks gestation are included, but are not identified separately from stillbirths in the report because of small numbers. The cause of death is not reported using the PSANZ PDC in this report.

Northern Territory

No information was available for the Northern Territory.

7 Other national routinely collected data sets

There are a number of national routinely collected data sets other than the NHMD and the Medicare data that include data relating to conception, pregnancy, childbirth and the puerperium. The extent to which they include information relating to induced abortion is very limited. Hence, they are described here briefly, but are not considered further in this report. The National Perinatal Data Collection and the ABS Perinatal mortality data are discussed in Chapter 6, so they are not included here.

National Maternal Mortality Database

The National Maternal Mortality Database (NMMD) comprises data from State and Territory Maternal Mortality Committees. It includes data on demographics, maternal characteristics (e.g. parity, gestational age), labour and delivery characteristics, maternal medical conditions and pregnancy-related conditions, the outcome of the baby and detailed information on the circumstances of the maternal death. Deaths associated with induced abortions would be included. No deaths associated with induced abortion were reported in the 1997–1999 triennium (AIHW NPSU: Slaytor et al. 2004).

Australian and New Zealand Assisted Reproduction Database

The Australian and New Zealand Assisted Reproduction Database (ANZARD) comprises data from all fertility centres operating in Australia and New Zealand. It includes data on the treatment methods of in-vitro fertilisation, intracytoplasmic sperm injection and gamete intrafallopian transfer. It includes details of all pregnancy and birth outcomes including mode of delivery (caesarean section and other), birth status, birthweight, gestational age, and plurality. It also contains limited information in perinatal mortality, congenital anomaly and maternal morbidity. Information is included on induced abortion (including fetal reduction). In Australia and New Zealand, 0.8% (58) of pregnancies conceived using Assisted Reproductive Technology (ART) in 2002 resulted in fetal reduction or termination (AIHW NPSU: Bryant et al. 2004). However, these induced abortions only relate to pregnancies that have resulted from ART, which is a small proportion of total births in Australia (2.3%), so have not been included in this report (AIHW NPSU: Laws & Sullivan 2004b).

Australian Congenital Anomalies System

The Australian Congenital Anomalies System (ACAS) includes data on congenital anomalies notified at or after birth reported from state and territory birth defects registers or perinatal data systems. It includes data on demographics, diagnosis, birth outcome, plurality and birth order, birthweight, and source of notification. An NMDS for congenital anomalies is being developed and will include congenital anomalies associated with induced abortions.

Other data sources

Information on induced abortion in Australia is also available from sources other than routinely collected data sets. For example, two Australian population-based surveys include some questions on induced abortion. These are the Australian Longitudinal Study on Women's Health and the Australian Study of Health and Relationships (ASHR). However as these data sources do not constitute routinely collected data, they are not considered in scope for this report.

Australian Longitudinal Study on Women's Health

The Australian Longitudinal Study on Women's Health is a longitudinal population-based survey which includes data on women's physical and emotional health, use of health services, health behaviours and risk factors, time use, sociodemographic factors, and life stages and key events. A question on the number of times a woman had a termination of pregnancy was included in the baseline survey for the younger (18–35 years) and mid-age (45–50 years) age cohorts. For the younger age cohort, 7.4% of women reported that they had had one or more abortions (WHA 1997a). For the mid-age age cohort, 19.8% of women reported that they had had one or more abortions (WHA 1997b).

Australian Study of Health and Relationships

The Australian Study of Health and Relationships (ASHR) provides estimates of women's reproductive experiences using data derived from computer-assisted telephone interviews completed between May 2001 and June 2002 by a representative sample of men and women aged 16–59 years from all states and territories (Smith et al. 2003). Information on women's reproductive history was sought, including whether a woman had ever had an abortion, and if so, how many. Sociodemographic information was also included. Of the women who reported that they had ever been pregnant, 22.6% reported at least one abortion (Smith et al. 2003).

8 Data development

This report has demonstrated that the NHMD and Medicare data can be used to estimate the number of induced abortions in Australia and can provide a range of information about the provision of induced abortion services in Australia.

However, these data sets do not include a wider range of information on the circumstances around induced abortions and on aspects such as clinical outcomes.

The existing national routinely collected data sets do not uniformly include information on the diagnosis, reason/indication for the induced abortion, complications, gestation, anaesthetics, socioeconomic characteristics, or category of medical practitioner undertaking the procedure. They also do not include comprehensive information on pre- and post-abortion services, such as counselling and contraception, or on risk factors.

Their usefulness is also limited by some uncertainty as to how induced abortion is recorded in these data sets (for example due to complex coding instructions in the NHMD).

This chapter outlines data development work that could enhance reporting of induced abortion in national data sets.

However, routine data collection may not be a suitable vehicle for comprehensive collection of detailed information on all circumstances relating to abortion service provision; specifically designed research projects may be more suitable for some aspects, such as risk factors.

Essential components for enhanced routine reporting would be national agreement on the aims and objectives of the collection, the scope (e.g. whether induced abortions at or after 20 weeks gestation are included); the data elements to be collected; process and outcome measures; and the definition of induced abortion. This would require a program of data development which would ideally occur under the auspices of the National Health Information Agreement governance arrangements to ensure national standardisation of the data. The involvement of government, service providers, relevant medical colleges and professional bodies and information experts would be important for the development of any enhanced data collection arrangements.

Privacy considerations (for both patients and providers) would also need to be addressed as a high priority as part of any data development work.

National Hospital Morbidity Database

Australian Coding Standards

A total of nine Australian Coding Standards relate to the coding of induced abortion using ICD-10-AM (ACS 0011, 1503, 1504, 1510, 1511, 1513, 1518, 1536 and 1544) (NCCH 2002). It is possible that this relatively large number of ACSs may contribute to misclassification of induced abortion in the NHMD data. It may also affect the accuracy of analyses, both because of initial misclassification and because the appropriate ICD-10-AM codes may not be identified and used in the analysis.

For example, an unknown number of induced abortions at or after 20 weeks gestation cannot be identified in the NHMD data. They may not be identifiable because the coding instructions are not clear about whether a diagnosis code for induced abortion is required in these cases (see Chapters 2 and 6).

Consideration could be given to simplifying the ACSs related to induced abortion and/or providing specific information and education regarding the coding of induced abortion. Some information on the coding of abortion has been developed by the Victorian ICD Coding Committee (Victorian ICD Coding Committee 2003) and could be used to inform national guidelines.

Additional items

The information available on induced abortion could be enhanced by the voluntary reporting of additional items as part of the NHMD for hospitals in all states and territories. Such additional items would need to be developed with stakeholders such as RANZCOG, public and private hospitals, and governments.

Hospital identifiers

In the NHMD, an identifier for the establishment at which the episode of care occurred is provided by the states and territories using the *Establishment identifier* data element (NHDC 2003). This is a unique identifier at the national level. However, although public hospitals are identified separately in the NHMD for all states and territories, private hospitals are not identified separately for most jurisdictions.

The analysis of data on induced abortion using the Medicare data and the NHMD data is affected by the lack of hospital identifiers in the NHMD. As noted in Chapter 2, some hospitals that are included in the NHMD are not regarded as hospitals in the Medicare data, and are not identifiable in the data sets. This may lead to an over-estimation of induced abortion.

Analysis that accounted for facilities that were included as hospitals in the NHMD and as non-hospitals in the Medicare data could be undertaken if there was complete identification of hospitals in the NHMD (i.e. separate identification of private hospitals using unique identifiers and names). This would enable comparison of hospitals reporting to the NHMD with hospitals in the Medicare listings (e.g. the Private Health Industry Circulars which are a source of information on facilities that are regarded as hospitals for Medicare purposes) to identify facilities that were included in both data sets. This would allow improved analysis of data on induced abortion and also on other procedures that are undertaken on both an admitted patient basis, and non-admitted patient basis.

Access to and use of such data would require consideration of data confidentiality.

Medicare data

Arranging for separate data on Medicare items claimed with a 75% rebate and with an 85% rebate to be routinely available would facilitate analysis of data on induced abortions and other procedures that are undertaken in hospitals (for which a 75% rebate is available) and in non-hospital settings (for which an 85% rebate is available). This disaggregation would need to be undertaken within confidentialisation arrangements that apply to Medicare data.

ABS perinatal mortality data

Induced abortions at or after 20 weeks gestation are included in the ABS Perinatal mortality data. However, they are not generally identified separately from stillbirths and live births in these data. Data for this collection are based on information in the perinatal death certificate and medical records. As noted in Chapter 6, induced abortions may be identifiable if the main condition in the fetus/infant is recorded as ICD-10 code *P96.4 Termination of pregnancy, fetus and newborn*. However, this code was mainly used for Victoria in 2003 (90 of 93 cases), indicating that, at a national level, there may be some variation in certification practices.

Consideration could be given to investigating whether there is variation in certification practices and if so, whether standardisation should be sought.

Australian Congenital Anomalies System

National data on induced abortions with congenital anomalies is important for monitoring the prevalence of congenital anomalies; evaluating population-based interventions for reducing congenital anomalies; and for planning services.

Induced abortions with congenital anomalies at or after 20 weeks gestation are in scope to be collected in perinatal or congenital anomaly data systems in all states and territories. Information on induced abortions with congenital anomalies before 20 weeks gestation is only collected in New South Wales, Victoria, Western Australia and South Australia.

The prevalence of some congenital anomalies is affected by whether induced abortions with congenital anomalies are included or not. For example, in 2001, for Victoria, Western Australia and South Australia (the three states for which information on induced abortion with congenital anomalies was available and for which the notification period was similar), the reported rate of neural tube defects, excluding induced abortions was 0.6 per 1,000 births and the rate, including induced abortions was 2.3 times higher at 1.4 per 1,000 births (AIHW NPSU 2004). Information on the total prevalence of neural tube defects is required, for example, to evaluate primary prevention strategies, such as the effect or fortification of food with folate. Information on congenital anomalies would be greatly enhanced if data on induced abortions with congenital anomalies were routinely available in all states and territories. This was a recommendation arising from the Review of the National Congenital Malformations and Birth Defects Data Collection in 2004 and is part of the work program for the National Birth Anomalies Steering Committee.

Non-hospital facilities

By law, all induced abortions in Queensland, South Australia and the Northern Territory are carried out in hospitals, so induced abortions in these states are included in the NHMD.

For non-hospital facilities (for which Medicare data are the only data source), consideration could be given to a system of voluntary reporting of induced abortions by service providers. Engagement with organisations such as the RANZCOG and the Abortion Providers Federation of Australia (APFA) could assist with this. The voluntary nature would mean that ascertainment would likely be incomplete.

South Australia and Western Australia are the only Australian jurisdictions in which notification of induced abortions is mandatory. A wider range of information is available from the notification collections in Western Australia and South Australia compared to the

information available in the NHMD and the Medicare data. For example, they include information on the indication for the induced abortion (although this information is different for each of these states). If there were to be extension of similar arrangements in other states and territories this could lead to improved data in the future.

Glossary

Additional diagnosis	Conditions or complaints either coexisting with the principal diagnosis or arising during the episode of care. METeOR identifier: 270189
Admitted patient	A patient who undergoes a hospital's formal admission process to receive treatment and/or care. This treatment and/or care is provided over a period of time and can occur in hospital and/or in the person's home (for hospital-in-the-home patients). METeOR identifier: 268957
Age standardisation	A set of techniques used to remove as far as possible the effects of differences in age when comparing two or more populations.
Average length of stay	The average number of patient days for admitted patient episodes. Patients admitted and separated on the same day are allocated a length of stay of 1 day.
Birthweight	The first weight of the baby (stillborn or liveborn) obtained after birth (usually measured to the nearest 5 grams and obtained within 1 hour of birth). METeOR identifier: 269938
Blighted ovum	A fertilised egg which does not develop or stops developing at an early stage. See also spontaneous abortion.
Care type	The care type defines the overall nature of a clinical service provided to an admitted patient during an episode of care (admitted care), or the type of service provided by the hospital for boarders or posthumous organ procurement (other care). *Admitted patient care* consists of the following categories: • Acute care • Rehabilitation care • Palliative care • Geriatric evaluation and management • Psychogeriatric care • Maintenance care • Newborn care. *Other care* Other care is where the principal clinical intent does not meet the criteria for any of the above. Other care can be one of the following: • Organ procurement—posthumous • Hospital boarder. METeOR identifier: 270174
Ectopic pregnancy	A pregnancy which is located outside the lining of the uterus, usually in the fallopian tubes.
Episode of care	The period of admitted patient care between a formal or statistical admission and a formal or statistical separation, characterised by only one care type (see *Care type* and *Separation*). METeOR identifier: 270174 (Care type)

	METeOR identifier: 268956 (Episode of admitted patient care)
Failed attempted abortion	Where the pregnancy continues after an induced abortion has been attempted. This can occur following surgical or medical methods of induced abortion.
Fetal death (stillbirth)	Death prior to the complete expulsion or extraction from its mother of a product of conception of 20 or more completed weeks or of 400 grams or more birthweight. The death is indicated by the fact that after such separation the fetus does not breathe or show any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles. METeOR identifier: 270624 (Birth status)
Fetal reduction	Reduction in the number of intrauterine fetuses.
Funding source for hospital patient	Expected principal source of funds for an admitted patient episode or non-admitted patient service event. METeOR identifier: 270103
Gestational age	The duration of pregnancy in completed weeks calculated from the date of the first day of the woman's last menstrual period, or derived via ultrasound, or from clinical assessment during the pregnancy.
Gravid	Pregnant.
Hospital	A health care facility established under Commonwealth, state or territory legislation as a hospital or a free-standing day procedure unit and authorised to provide treatment and/or care to patients. METeOR identifier: 268971
Hydatidiform mole	See Molar pregnancy.
Indigenous status	Indigenous status is a measure of whether a person identifies as being of Aboriginal or Torres Strait Islander origin. This is in accord with the first two of three components of the Commonwealth definition below: An Aboriginal or Torres Strait Islander is a person of Aboriginal or Torres Strait Islander descent who identifies as an Aboriginal or Torres Strait Islander and is accepted as such by the community in which he or she lives. METeOR identifier: 270157
Induced abortion	Termination of pregnancy through a medical or surgical intervention.
Inpatient	Another term for admitted patient. METeOR identifier: 268957
International Classification of Diseases (ICD)	The World Health Organization's internationally accepted classification of diseases and related health conditions. The 10th Revision (ICD-10) is currently in use in Australia for mortality coding. The 10th Revision, Australian Modification (ICD-10-AM) is currently in use in Australian hospitals for admitted patient coding.
Length of stay	The length of stay of an overnight patient is calculated by subtracting the date the patient is admitted from the date of separation and deducting days the patient was on leave. A same day patient is allocated a length of stay of one day. METeOR identifier: 269982
Miscarriage	See Spontaneous abortion.
Missed abortion	An early fetal death with the retention of the dead fetus. See also

	Spontaneous abortion.
Molar pregnancy	A tumour that forms in the uterus.
National Health Data Dictionary (NHDD)	A publication that contains a core set of uniform definitions relating to the full range of health services and a range of population parameters.
Nulliparous	A woman who has never borne a child.
Overnight-stay patients	A patient who, following a clinical decision, receives hospital treatment for a minimum of one night, i.e. who is admitted to and separated from the hospital on different dates.
Patient days	The total number of days for patients who were admitted for an episode of care and who separated during a specified reference period. A patient who is admitted and separated on the same day is allocated one patient day. METeOR identifier: 270045
Patient election status	Accommodation chargeable status elected by patient on admission. The categories are: ● Public (receives public hospital services free of charge) ● Private (does not receive hospital services free of charge). METeOR identifier: 270044
Principal diagnosis	The diagnosis established after study to be chiefly responsible for occasioning an episode of admitted patient care. METeOR identifier: 270187
Private hospital	A privately owned and operated institution, catering for patients who are treated by a doctor of their own choice. Patients are charged fees for accommodation and other services provided by the hospital and relevant medical and paramedical practitioners. Acute care and psychiatric hospitals are included, as are private free-standing day hospital facilities. See also *Establishment type*.
Private patient	A patient admitted to a hospital who decides to choose the doctor(s) who will treat them and/or to have private ward accommodation. They are charged for medical services, food and accommodation.
Procedure	A clinical intervention that is surgical in nature, carries a procedural risk, carries an anaesthetic risk, requires specialised training and/or requires special facilities or equipment only available in the acute care setting. METeOR identifier: 269932
Products of conception	Fetal and placental tissue.
Public hospital	A hospital controlled by a state or territory health authority. Public hospitals offer free diagnostic services, treatment, care and accommodation to all eligible patients.
Public patient	A patient admitted to a hospital who has agreed to be treated by doctors of the hospital's choice and to accept shared accommodation. This means the patient is not charged.
Remoteness Area	A classification of the remoteness of a location using the Australian Standard Geographical Classification Remoteness Structure, based on the Accessibility/Remoteness Index of Australia which measures the remoteness of a point based on the physical road distance to the nearest urban centre.

	The categories are: • Major cities • Inner regional • Outer regional • Remote • Very remote • Migratory.
Same day patients	Same day patients are admitted patients who are admitted and separate on the same date.
Separation	The term used to refer to an episode of care for an admitted patient, which can be a total hospital stay (from admission to discharge, transfer or death), or a portion of a hospital stay beginning or ending in a change of type of care (for example, from acute to rehabilitation). Separation also means the process by which an admitted patient completes an episode of care either by being discharged, dying, transferring to another hospital or changing type of care.
Separations	The total number of episodes of care for admitted patients, which can be total hospital stays (from admission to discharge, transfer or death), or portions of hospital stays beginning or ending in a change of type of care (for example, from acute to rehabilitation) that cease during a reference period. METeOR identifier: 270407
Spontaneous abortion	Spontaneous loss of a clinical pregnancy before 20 completed weeks of gestation or if gestational age is unknown, a weight of 400 grams or less.

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