

National clinical guidelines for the management of drug use during pregnancy, birth and the early development years of the newborn

Commissioned by the Ministerial Council on Drug Strategy
under the Cost Shared Funding Model



NSW DEPARTMENT OF HEALTH

73 Miller Street
NORTH SYDNEY NSW 2060
Tel. (02) 9391 9000
Fax. (02) 9391 9101
TTY. (02) 9391 9900

www.health.nsw.gov.au

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www.nationaldrugstrategy.gov.au

Further copies of this document can be downloaded from the
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March 2006

Steering committee

Chair: Associate Professor James Bell

Co-chair: Associate Professor Robert Ali

Name	Representing
Associate Professor Robert Ali	Australian Government Department of Health and Ageing & Drug and Alcohol Services, South Australia
Ms Antoinette Aloï	Secretariat, NSW Health
Professor Anne Bartu	Drug and Alcohol Office, WA Health & Drug and Alcohol Nurses Association (DANA)
Associate Professor James Bell	The Langton Centre, Sydney & NSW Health
Dr Kate Burgess	National Aboriginal Community Controlled Health Organisation (NACCHO)
Dr Lucy Burns	National Drug and Alcohol Research Centre (NDARC)
Mr Alwin Chong	National Aboriginal Community Controlled Health Organisation (NACCHO)
Ms Helen Cooke	Australian College of Midwives
Dr Lynette Cusack	Royal College of Nursing Australia
Dr Adrian Dunlop	Turning Point Alcohol and Drug Centre, VIC
Ms Sue Henry-Edwards	Drug and Alcohol Services Council, SA
Ms Robyn Hopkins	NT Alcohol and Other Drugs Program
Dr David Jackson	Alcohol and Drug Service, Department of Health and Human Services, Tasmania
Dr Sheila Knowlden	Royal Australian College of General Practitioners
Ms Veronica Love	The Victorian Department of Human Services
Dr Joanne Ludlow	Royal Prince Alfred Hospital, Sydney
Dr Kei Lui	Perinatal Society of Australia & New Zealand
Ms Tanya Merinda	Secretariat, NSW Health
Dr Jill Molan	Project Officer, National Clinical Guidelines for the Management of Drug Use during Pregnancy, Birth and the Early Development Years of the Newborn
Dr Mark Montebello	Langton Centre, Sydney
Dr Henry Murray	Royal Australian and New Zealand College of Obstetricians and Gynaecologists
Mr Chris Shipway	Secretariat, NSW Health
Ms Sharyn Stonely	Antenatal Chemical Dependency Clinic, Womens and Childrens Health Service, Perth
Professor David Tudehope	Drug and Alcohol Office, QLD Health

Workshop participants

Associate Professor Robert Ali

Director, Clinical Policy and Research, Drug and Alcohol Services SA (DASSA)

Professor Anne Bartu

Principal Research Officer, Drug and Alcohol Office WA

Associate Professor James Bell

Director of the Langton Clinic, Langton Centre NSW

Dr Lucy Burns

Lecturer, National Drug and Alcohol Research Centre (NDARC), NSW

Alwin Chong

Senior Research & Ethics Officer, Aboriginal Health Council of SA Inc.

Miss Helen Cooke

(unable to attend)
Clinical Midwifery Consultant, Nepean Hospital NSW

Dr Lynette Cusack

(unable to attend)
Director of Community Services and Nursing, Drug and Alcohol Services SA

Ms Anne Devlin

Clinical Psychologist, Research Team Langton Centre NSW

Dr Adrian Dunlop

Head of Medical Services, Turning Point Alcohol and Drug Centre; Senior Fellow, University of Melbourne VIC

Ms Ann Fisk

Community Health Clinical Nurse, Warinilla Clinic, Drug and Alcohol Services SA

Dr Dale Hamilton

Clinical Staff Specialist, Obstetrics and Gynaecology, King Edward Memorial Hospital WA

Dr Ross Haslam

Director of Neonatology, Women's and Children's Hospital Adelaide SA

Dr Joanne Ludlow

Senior Staff Specialist in Obstetrics and Gynaecology, Royal Prince Alfred Women and Babies, Sydney

Dr Kei Lui

Director, Department Newborn Care, Royal Hospital for Women Randwick NSW

Ms Catherine Maher

Australian College Midwives (for Helen Cooke); Clinical Midwife Consultant, High Risk Pregnancy, MFMU, RNSH, Sydney NSW

Ms Tanya Merinda

Project Officer, Equity and Service Delivery, Centre for Drug and Alcohol, NSW Health

Ms Elayne Mitchell

Senior Policy Analyst Cessation, Tobacco and Health Branch, Centre for Chronic Disease Prevention and Health Advancement, NSW Health

Dr Jill Molan

Project Officer, National Guidelines for Drug Dependency during Pregnancy, Delivery and Early Development

Dr Mark Montebello

Staff Specialist in Addiction Psychiatry, Langton Centre NSW

Dr Henry Murray

Perinatologist, Obstetrics and Gynaecology, Nepean Hospital NSW

Dr Clare Nourse

(unable to attend)
Paediatric Infectious Disease Specialist; Associate Professor University of Queensland; Women's and Childrens Health Services, Mater Hospital Brisbane QLD

Dr Ju Lee Oei

Neonatologist, Department of Newborn Care, Royal Hospital for Women, Sydney NSW

Ms Sue Henry-Edwards

Principal Advisor AOD / HHP, NSW Department of Corrective Services

Dr Phil Henschke

Neonatologist, Women's Alcohol and Drug Service, Royal Women's Hospital, Melbourne VIC

Ms Robyn Hopkins

Senior Policy Officer, NT Alcohol and Other Drugs Program, Darwin NT

Ms Libby Hotham

Ph D candidate, WHO Collaborating Centre, University of Adelaide
Lecturer in Pharmacy Practice, University of South Australia

Dr David Jackson

Clinical Director, Tasmania Drug and Alcohol

Dr Jenni James

Clinical Nurse Consultant – Lactation, Breastfeeding Education and Support Services (BESS), Royal Women's Hospital Melbourne VIC

Ms Ann Kingsbury

Project Coordinator, Mater Mothers' Hospital, National Illicit Drug Strategy NIDS Project QLD

Dr Sheila Knowlden

General Practitioner, Methadone Prescriber, Sydney NSW

Ms Veronica Love

Manager, Women's Alcohol and Drug Service, Royal Women's Hospital, Melbourne VIC

Dr Gillian Opie

Staff Neonatologist IBCLC, Mercy Hospital for Women, Heidelberg, VIC

Dr David Osborn

Staff Neonatologist, RPA Newborn Care, Royal Prince Alfred Hospital NSW

Dr Katie Panaretto

Medical Policy Advisor, Queensland Aboriginal and Islander Health Council

Ms Jayne Rickard

Senior Social Worker, Women's and Children's Hospital, Adelaide SA

Mr Chris Shipway

Manager, Equity and Service Delivery, Centre for Drug and Alcohol, NSW Health

Ms Jodie Shoebridge

Royal College of Nursing, Australia (for Lynette Cusack); President, Drug and Alcohol Nurses of Australasia; Snr Project Officer, DASSA

Ms Christine Stephens

Clinical Nurse Consultant, Coordinator Perinatal and Family Drug Health, Sydney South West Area Health Service—Eastern Zone, Sydney NSW

Ms Sharyn Stonely

Midwife Coordinator, Western Australia Antenatal Chemical Dependency Unit, Women and Children's Health Service WA

Dr John Svigos

(unable to attend)

Senior Visiting Obstetrician & Gynaecologist, Head of Obstetric Unit 2, Adelaide Womens and Childrens Hospital SA

Professor David Tudehope

Director of Neonatology, Mater Mothers' Hospital, Brisbane QLD

Professor Graham Vimpani

Clinical Chair, Kaleidoscope - Hunter Children's Health Network; Head of the Discipline of Paediatrics and Child Health, University of Newcastle NSW

Ms Jan Wheeler

Clinical Midwifery Consultant, Maternity Services, Liverpool Hospital, Sydney South West Area Health Service, NSW

Ms Jill Western

Royal College of Nursing, Australia (for Lynette Cusack); Drug and Alcohol Services SA (DASSA)

Dr Anna Woods

Senior Medical Officer, Drug and Alcohol Services SA (DASSA)

International Delegate

Professor Karol Kaltenbach

Clinical Associate Professor of Paediatrics, Psychiatry and Human Development ; Director, Maternal Addiction Treatment Education and Research, Thomas Jefferson University, Philadelphia

Facilitator

Associate Professor Alison Ritter

Head of Research, Turning Point Alcohol and Drug Centre; Principal Fellow, The University of Melbourne

Aboriginal and Torres Strait Islander Issues Working Group

Dr Kate Burgess

Medical Officer, Aboriginal Medical Service, Redfern NSW

Mr Alwin Chong

Senior Research & Ethics Officer, Aboriginal Health Council of SA Inc

Ms Elaine Gordon

Daruk Aboriginal Medical Service, Blacktown, NSW

Dr Heather Hancock

Special Projects Manager, Community Health, Department of Health and Community Services, Northern Territory

Ms Terori Hareko-Samios

Aboriginal Women's Support Worker, Aboriginal Women's Health Business Unit, Royal Women's Hospital, Melbourne VIC

Ms Robyn Hopkins

Senior Policy Officer, Alcohol and Other Drug Program, Northern Territory Government Darwin

Ms Marika Kalargyros

Aboriginal Women's Support worker, Aboriginal Women's Health Business Unit, Royal Women's Hospital, Melbourne VIC

Ms. Helen Makregiorgos

Manager, CASA, AWHBU & FARREP, Royal Women's Hospital, Melbourne VIC

Dr Jill Molan

Project Officer, National Guidelines for Drug Dependency during Pregnancy, Delivery and Early Development

Dr Katie Panaretto

Medical Policy Advisor, Queensland Aboriginal and Islander Health Council

Ms Helane Rigby

Aboriginal Health Worker, Maternal and Child Health Educator, Royal Darwin Hospital, Darwin NT

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Who should use these guidelines?

These guidelines are intended for use by all health care practitioners working with pregnant women experiencing a drug or alcohol use problem, particularly drug dependency, but including other drug uses such as bingeing.

Those practitioners include (but are not limited to) general practitioners, midwives, obstetricians, paediatricians, nurses, early childhood workers, lactation consultants, dieticians, social workers, drug and alcohol specialist doctors, drug and alcohol workers, Aboriginal health workers, accident and emergency staff, psychologists, psychiatrists and mental health workers. Child protection workers and probation and parole officers will also find the guidelines helpful.

Introduction

The adverse effects on fetal development of alcohol and other drugs such as tobacco, psychostimulants and opioids are well known. Women who are pregnant or who may become pregnant are therefore a high priority for interventions to reduce drug use. There has, however, up to now been limited information to guide clinicians in the care of these women and infants.

These nationally agreed clinical guidelines are intended to support a range of health care workers who care for pregnant women with drug and alcohol use issues, and their infants and families. The guidelines are based on the best currently available evidence, developed through a rigorous process in which international and Australian research literature was reviewed by experts and consensus achieved.

Substances discussed in these guidelines include the licit substances alcohol and tobacco; illicit substances opioids, amphetamines, cocaine, cannabis and inhalants; and prescription medication known for its misuse, benzodiazepines. Other topics covered include breastfeeding, vertical transmission of blood-borne viruses, obstetric implications, pain management during labour, psychosocial issues, the management of neonatal abstinence syndrome and early childhood development. In addition, where relevant, specific guideline statements identifying the needs and care of Aboriginal and Torres Strait Islander women with drug and alcohol use issues are also included.

The evidence reviews on these topics have been published as a monograph 'Background Papers to the National Clinical Guidelines for the Management of Drug Use during Pregnancy, Birth and the Early Development Years of the Newborn' and are also available through the National Drug Strategy website www.nationaldrugstrategy.gov.au/publications/index.htm and through the NSW Health website www.health.nsw.gov.au/ These papers provide both detailed analyses of the available evidence and extensive reference lists that are not included with the guidelines.

This book is organised in four sections. The first describes some general principles of management and care. The second focuses on the progression of the pregnancy, so that care is described in the antenatal, birthing and postnatal periods, as well as the early childhood years. The third section is organised according to each drug group, while the fourth attends to the care of the neonate.

The guidelines emphasise the importance of establishing a sound therapeutic relationship with the woman based on respect and non-judgmental attitudes; of engaging the woman into adequate antenatal care through this relationship; and of maintaining continuity of care, and of carers, throughout the pregnancy and postnatal period.

The guidelines recommend that pregnant women with significant problematic drug or alcohol use will benefit from appropriate referral for specialist drug and alcohol assessment (in addition to midwifery and obstetric care); appointment of a consistent and continuous case manager and care team who use effective communication systems; and specific treatments for their drug use, which may include counselling, pharmacotherapies and relapse prevention strategies.

Levels of evidence

The quality of scientific evidence supporting these guidelines is indicated throughout by quoting a 'level of evidence' for each statement.

I	Evidence obtained from a systematic review of all relevant randomised controlled trials.
II	Evidence obtained from at least one properly designed randomised controlled trial.
III-1	Evidence obtained from well-designed pseudo randomised controlled trials (alternate allocation or some other method).
III-2	Evidence obtained from comparative studies (including systematic reviews of such studies) with concurrent controls and allocation not randomised (cohort studies), case control studies, or interrupted time series with a control group.
III-3	Evidence obtained from comparative studies with historical control, two or more single arm studies, or interrupted time series without parallel control group.
IV	Evidence obtained from case series, either post-test or pre-test and post-test.
CONSENSUS	In the absence of scientific evidence and where the executive committee, steering committee and workshop group are in agreement, the term 'consensus' has been applied.
CONSENSUS IN [REFERENCE]	Evidence obtained from a published extensive review of the literature that is not a systematic review or meta analysis.

This definition of levels of evidence is adapted from:

National Health and Medical Research Council of Australia. A guide to the development, implementation and evaluation of clinical practice guidelines. Canberra: NH&MRC, 1999. www.nhmrc.gov.au/publications/synopses/cp65syn.htm

The 1999 levels of evidence were developed primarily to describe evidence gathered from intervention studies and did not include the level 'Consensus', which was added in 2003 in the document 'Evidence-based management of acute musculoskeletal pain' (2003, p. 184) www.nhmrc.gov.au/publications/synopses/cp94syn.htm.

The level 'Consensus in [reference]' was added in these guidelines, and is only used in the section on tobacco.

Where the evidence is based on a systematic review, a meta analysis or other extensive review, a citation has been included after the level of evidence. Otherwise, no citations have been included.

1.1 Drug use information for all women of child bearing age

The adverse effects on fetal development of alcohol and other drugs such as tobacco, psychostimulants and opioids are well known. Women who are pregnant or who may become pregnant are therefore a high priority for interventions to reduce drug use. It is also possible that women may be more prepared to change drug using behaviour if they are pregnant or may become pregnant, which can improve the success of appropriate interventions.

Prevention programs should target all women of child-bearing age, including those still at school. All women need to know the risks associated with drug use.

In assessing a young, pregnant woman, where episodic binge use or regular drug use may be an issue, it is important to consider the woman's social supports and emotional well-being as well as drug use.

Information about drug use and its effects may be provided by a range of services, including general practitioners, women's health providers, maternity services, Aboriginal health services, public health information services or schools.

Level of evidence: Consensus

1.2 Care of all drug-dependent women of child bearing age

These guidelines are intended for use by all health care practitioners working with pregnant women who have a drug or alcohol use problem, particularly drug dependency, but including other drug uses such as bingeing.

The guidelines recommend that pregnant women with problematic drug or alcohol use will benefit from:

- appropriate referral to specialist assessment and help, such as a drug and alcohol specialist, in addition to midwifery and obstetric care
- appointment of a case manager and care team who remain consistent throughout the pregnancy
- specific treatments for their drug use, which may include counselling, pharmacotherapies and relapse prevention.

1.2.1 Contraception

Exposure to drugs and alcohol may have a serious effect on the fetus in the very early stages of pregnancy, particularly before the first missed period. Therefore, all women with problematic drug or alcohol use should be provided with advice on contraception. This will facilitate planned rather than unplanned pregnancies, and reduce harm to the unborn child.

1.2.2 Vertical transmission of blood-borne viruses

Before pregnancy it is important that all drug-dependent women of child-bearing age receive information about vertical transmission of blood-borne viruses, specifically:

- preventing transmission
- management after infection
- implications for pregnancy
- implications for breastfeeding.

1.2.3 Mental health issues

Mental health in women who use drugs or alcohol is important at all stages of pregnancy. The two most important responses from health care workers are to:

- recognise signs of mental illness (particularly psychosis, suicide risk, risk of harm to fetus or baby, postnatal depression) and
- refer appropriately to specialist services.

See section 2.2.9, Coexisting mental health and drug and alcohol use issues.

1.2.4 Confidentiality

Confidentiality is a fundamental right of all people using health care services. In all communications it is important to work within the privacy legislation and local guidelines to ensure privacy and confidentiality are maintained. In regard to people who use drugs or who have infectious diseases (especially blood-borne viruses), confidentiality takes on a particular significance because of the social stigma attached to these conditions.

1.2.5 Pregnancy care facilities

Pregnancy care facilities should have information about which services have the capacity to support their staff by secondary consultation, mentoring and training. Professionals with the requisite knowledge and supervised experience in this work may include social workers, psychologists, drug and alcohol clinicians and counsellors, Aboriginal health workers, child protection workers, medical staff, nurses and midwives who work in specialist maternity units of drug treatment services. The contact details of specialist support services should be readily available for pregnancy care providers, including after hours contact details, especially where multidisciplinary pregnancy care is not available. Refer to section 2.2.12, Multi-agency collaboration.

1.2.6 Child protection

All State and Territory jurisdictions have specific legislation with regard to child protection. Although drug and alcohol use alone may not be an indicator for a child protection report or notification, child protection is a consideration in all drug and alcohol interventions for pregnant women. Legislation requires that the safety and well-being of the child is a paramount consideration. Refer to section 2.2.20, Child protection issues.

Continuity of care for drug-dependent pregnant women 2

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2.1 Continuity of care and of carers

Continuity of care and of carers is now accepted in Australia as best practice for all pregnant women. All pregnancy care providers and maternity services should be aiming to provide continuity of care for all pregnant women, regardless of their background. Multidisciplinary teams working collaboratively can achieve optimal pregnancy, birth and parenting outcomes for each woman and her family. A multidisciplinary team can include midwife, obstetrician, neonatologist, community health care worker, Aboriginal health worker, drug and alcohol counsellor and others as required in each case.

The case manager, midwife or team should ensure that continuity of care is maintained into the postnatal period regardless of the venue for providing this care.

Continuity of care, and of caregivers, takes on added importance for vulnerable groups, such as women with drug and alcohol use issues. Continuity of care is established by:

- effective engagement skills, including cultural awareness skills
- an effective system which clearly identifies the main case worker/case manager
- individualised care planning made in consultation with the woman
- timely and accurate documentation and communication
- a seamless referral system.

Level of evidence: Consensus

Comment: Pregnant women with drug and alcohol use issues do not always engage easily with mainstream health care. Continuity of care and of carers during and after pregnancy will assist in ensuring adequate care. This will minimise the number of women and infants being lost to follow up within complex health services.

Aboriginal and Torres Strait Islander women

Effective partnerships between mainstream services and Aboriginal Community Controlled Health Services must be developed to improve communication, integrate service delivery and provide continuity of care.

Level of evidence: Consensus

It is recommended that clinical interventions with Aboriginal and Torres Strait Islander pregnant women be guided by the six common principles identified by the Ministerial Council on Drugs Strategy (2003–2006) for addressing substance use by Aboriginal and Torres Strait Islander peoples. These are:

- The use of alcohol, tobacco and other drugs must be addressed as part of a comprehensive, holistic approach to health that includes physical, spiritual, cultural, emotional and social wellbeing, community development and capacity building.
- Local planning is required to develop responses to needs and priorities set by local Aboriginal and Torres Strait Islander communities.
- Culturally valid strategies that are effective for Aboriginal and Torres Strait Islander peoples must be developed, implemented and evaluated.
- Aboriginal and Torres Strait Islander peoples must be centrally involved in planning and implementing strategies to address use of alcohol, tobacco and other drugs in their communities.
- Aboriginal and Torres Strait Islander communities should have control over their health, drug and alcohol and related services.
- Resources to address use of alcohol, tobacco and other drugs must be available at the level needed to reduce disproportionate levels of drug-related harm among Aboriginal and Torres Strait Islander peoples. (Ministerial Council on Drugs Strategy 2003–2006)

Level of evidence: Consensus

2.2 Antenatal care

2.2.1 Engagement

The first antenatal presentation, wherever and whenever that may occur (including in Accident and Emergency after hours, or presenting for the first time in labour), is an opportunity to engage the pregnant woman and her family in pregnancy care that will ideally continue through the birth to postnatal and early childhood care.

Level of evidence: Consensus

Comment: Drug-dependent pregnant women, like other vulnerable populations, may be difficult to engage and maintain in pregnancy care. Each presentation of a drug-dependent pregnant woman to a health care service, including after hours presentations, is an opportunity to engage the woman effectively in care.

The aim of engagement is to establish a professional, trusting and empathetic relationship in which the woman will feel encouraged to continue pregnancy care. Successful engagement may rest on the quality of the relationship established with the woman by the health care providers she meets.

Level of evidence: Consensus

Comment: The aim of this relationship is for the woman to feel safe, to build trust in the health care providers, and to empower her to seek what is best for her health and the health of her unborn baby.

The maxim to 'inform and advise about risks' may not be a sufficient intervention for a drug-dependent pregnant woman. The quality of the relationship between the woman and the health care provider is a very significant factor in maintaining the woman in care. While information must still be provided, a 'partnership model' is considered more appropriate in the relationship between a drug-dependent pregnant woman and her health care providers.

Level of evidence: Consensus

Engagement is a prerequisite to care being provided. Failure of engagement may result in loss of that woman to follow-up, with less than optimal outcomes for the woman and infant. Engagement of vulnerable groups into care requires specific skills and experience of clinicians. All clinicians need training in the specific skills required to engage vulnerable groups in care.

Level of evidence: Consensus

2.2.2 Engagement skills

Engagement skills include:

- An understanding of one's own values and beliefs in a way that results in non-judgemental attitudes to people in care.
- An awareness that drug and alcohol use is not isolated from other psychosocial and cultural factors.
- Commitment to providing optimal and timely health care for every individual.
- An understanding of addiction as a health care issue and not an issue for moral, social or other judgements.
- An ability to create an environment that is safe and ensures privacy and confidentiality.
- An understanding of potential barriers to the woman accepting pregnancy care, and strategies for overcoming them.
- Acknowledgement of the woman's feelings and perceptions.
- An understanding that disclosing drug and alcohol use in pregnancy is difficult.
- An understanding of the significance of establishing and sustaining a sound and trusting professional relationship with women with drug and alcohol issues.
- Awareness that women with drug and alcohol issues often have a number of service providers involved in their lives.

2.2.3 Aboriginal and Torres Strait Islander women

Priority should be given to providing Aboriginal and Torres Strait Islander cultural awareness training to all maternal and child health care providers and drug and alcohol service providers. This is fundamental to the delivery of respectful and effective health care and should address the impact of colonisation and dispossession on the health status of Aboriginal and Torres Strait Islander people.

Level of evidence: Consensus

Comment: Cultural sensitivity and awareness are key skills of engagement, particularly when engaging Aboriginal and Torres Strait Islander Peoples in care. Training is required to develop these skills in the health care workforce.

2.2.4 Literacy

Health care workers need to be aware that low literacy reduces access to health information and this in turn affects people's ability to practise a healthy lifestyle. Many (although by no means all) women with drug or alcohol use issues have other social disadvantages, and this may include low literacy. Therefore all information should be provided verbally as well as in writing, and discussed with the woman (and her partner) to ensure understanding.

Level of evidence: Consensus

Women from culturally and linguistically diverse (CALD) backgrounds are not necessarily literate in their first language. The extent to which a woman received school education may depend on the country of origin and the age at which she emigrated. Therefore it is not enough to provide information brochures in the spoken language. A professional health care interpreter should also be used.

Level of evidence: Consensus

2.2.5 Screening

General screening for drug and alcohol use

Screening for drug and alcohol use should be included in the usual antenatal history. All pregnant women should be asked for their current and previous history of drug and alcohol use at initial assessment (time of confirmation of pregnancy, at first booking-in visit, or first presentation), to help decide the appropriate model of pregnancy care or provider. This screening should be repeated at periodic re-assessment. Simple questions about what drugs have been used from the time of conception (or earlier if possible) are appropriate for screening. Ask specifically about:

- prescribed medications (including opioid replacement therapies)
- over the counter medications eg paracetamol
- alcohol
- tobacco
- other substance use (this may include cannabis, stimulants (speed, ecstasy, cocaine), opioids, inhalants and unprescribed use of benzodiazepines).

It is important to establish the pattern and frequency of use, determining whether each substance is used occasionally, on a regular recreational or non-dependent basis or whether there is habitual, regular or dependent use. From a child protection perspective, regular, daily or near daily use and binge use are of most concern

(see section 2.2.20, Child protection issues). It is also important to establish whether there are patterns of concurrent or serial use of different substances. In this interaction with the woman, clinicians should avoid expressions that may be interpreted as judgemental, such as 'addict', as these may undermine the trust and openness crucial to obtaining an accurate history and for retaining the woman in continuing care.

Level of evidence: Consensus

Comment: The information provided about drug and alcohol use as much as three months before conception provides insight in regards to the maternal drug use at conception, and is particularly relevant in the development of fetal alcohol syndrome.

Information about most prescribed medications may be obtained from designated agencies in each State or Territory (see Appendix 2: Advice for consumers on drugs, alcohol and medications)

Screening for alcohol

All pregnant women should be asked about their level of alcohol consumption. If women are drinking over the recommended NH&MRC levels during pregnancy, then a full assessment of alcohol intake should be undertaken and appropriate referrals should be made. A validated screening tool such as T-ACE, TWEAK or AUDIT should be used.

Level of evidence: Consensus

Comment: Incorporating a validated alcohol screening tool into antenatal assessment is likely to substantially increase the detection rate of women using excessive amounts of alcohol. No specific screening tool is recommended, but if one is used, it should be a validated and reliable tool. T-ACE and TWEAK are validated and reliable tools that have been developed for use with pregnant women. However, they may not be useful with lower levels of drinking that may still be risky in pregnancy (as defined in the Australian Alcohol Guidelines). AUDIT is a validated tool, but is not designed specifically for use during pregnancy. The relationship established between the pregnant woman and the health care worker may influence the woman's willingness to disclose alcohol use and hence health care workers should seek this information in a sensitive and empathetic manner.

Screening for tobacco

The first step in treating tobacco use and dependence is to identify tobacco users and recent quitters. Identifying smokers itself increases rates of clinical intervention. Effective identification of smoking status guides clinicians

to identify appropriate interventions based on the individual's current tobacco use and willingness to quit.

Level of evidence: Consensus in Fiore et al 2000

All pregnant women should be asked at their first antenatal assessment about smoking status to identify those who need further support to stop smoking.

Level of evidence: I (Cochrane review: Lumley et al 2001)

Comment: Smoking during pregnancy carries a social stigma, and clinicians must bear this in mind when asking pregnant women about smoking. Effective engagement skills and sensitive questioning by the health care worker are believed to facilitate accurate disclosure by pregnant women.

There is strong evidence that written questionnaires that provide the opportunity for multiple-choice responses to the question about smoking status, rather than simple yes/no options, including the options 'I used to smoke' and 'I have cut down', are more likely to provoke accurate disclosure of smoking status.

Level of evidence: II (Melvin et al 1994)

Screening for inhalants

Routine screening for inhalant use is recommended for all pregnant women identified as being at risk of inhalant use. Risk level varies between urban, rural and remote communities. Health care workers undertaking antenatal screening must be aware of the risk level in their local community, and screen accordingly.

Level of evidence: Consensus

Urine drug screening for illicit drugs

Pregnant women should have urine drug screens no less often than other women in similar circumstances (eg when in an opioid treatment program).

Level of evidence: Consensus

Comment: The efficacy of urine drug testing for pregnant women is unclear. There is some evidence that within a trusting professional relationship, self-disclosure of drug use may be reliable.

Screening for blood-borne viruses

It is cost effective to screen all drug-dependent pregnant women for blood-borne viral infections early in pregnancy, particularly where evidence supports the benefits of interventions to reduce the risk of vertical transmission to the newborn.

Level of evidence: Consensus

All screening for blood-borne viruses must be conducted with the informed consent of the woman, and with appropriate pre-test and post-test counselling.

Level of evidence: Consensus

Screening for human immunodeficiency virus (HIV)

It is cost effective to screen for HIV infections, even in a low prevalence population such as Australia's.

Level of evidence: III-3

Screening for hepatitis C virus (HCV)

Routine testing for blood-borne viruses including HCV is recommended for all pregnant women identified as having been at risk of transmission. The main risk factor is a history of injecting drug use, even when this has been infrequent or a long time in the past. Other risk factors include being born or raised in countries with high prevalence of HCV, blood transfusion before 1990, tattooing, and occupational exposure.

Level of evidence: IV

Comment: HCV may be transmitted from mother to baby during childbirth. No strategies have yet been shown to reduce this risk. The risk is increased by HIV co-infection, although HIV antiretroviral therapy can mitigate this effect. At the present time, HCV cannot be treated during pregnancy. Accordingly, the benefits of identifying this infection during pregnancy are indirect. Pregnancy is a point of contact with the health care system, during which women receive blood tests and medical review. If an HCV antibody test is positive, further investigation is required to determine viral status (eg HCV PCR test). Liver function tests should also be conducted.

Screening for hepatitis B virus (HBV)

Irrespective of drug history, all pregnant women should be tested for hepatitis B surface antigen. Passive immunisation of the infant is particularly effective in reducing the risk of vertical transmission.

Level of evidence: Consensus

Clinical considerations

Liver disease and cirrhosis place severe stress on mother and baby. Regardless of viral hepatitis status, patients with clinically evident liver disease should be referred to an appropriate liver specialist or centre for management.

Level of evidence: Consensus

2.2.6 Comprehensive drug use assessment and treatment planning

If there is a history of drug use, referral to a skilled provider may be required for a comprehensive assessment to:

- Ascertain whether the woman is or may be drug dependent.
- Inform the woman of the known risks in pregnancy of the particular drug(s) used, emphasising the potential for harm.
- Inform the woman about her options for specialist care, drug and alcohol counselling and treatment options. Initiate referrals according to her decision.

Level of evidence: Consensus

Comment: If it is possible and will not compromise engagement, these issues can be discussed at the first presentation. If it is not possible at that visit — for example, if the woman is intoxicated or distressed by symptoms of withdrawal — a full assessment of drug use must be undertaken early in the pregnancy, over the next one or two visits. Clinicians will use their skills and experience in making decisions about the most appropriate timing for gathering this information.

See Appendix 3: Examples of drug use assessment tool.

2.2.7 Partner/support person

From the first visit the partner (or support person and family if relevant) will be included in all stages of care, including discussions about drug use, provided that the woman's informed consent has been obtained before any discussions in front of others. Informed consent requires full disclosure of what will be discussed with others.

Level of evidence: Consensus

Comment: It is appropriate to offer interventions to the woman's partner if that person has problematic drug or alcohol use. A partner's drug use increases the woman's risk of continuing or relapsing to drug use.

2.2.8 Psychosocial assessment

Planning for discharge should commence at the first antenatal visit. Psychosocial assessment for discharge planning should consider:

- financial issues and poverty
- inadequate or inappropriate housing (or homelessness)
- domestic and intimate partner violence
- sexual abuse and assault
- relationship issues

- legal issues
- previous history of child protection issues
- a history of mental illness.

The woman must be supported to address psychosocial issues that may affect outcomes of the pregnancy or result in an avoidable separation of mother and baby due to child protection requirements. Support needs are likely to vary according to the stage of pregnancy or parenting and may include material assistance, practical support, emotional support and support to establish non-drug using networks, as well as drug use interventions. Counselling and other support should be initiated early in pregnancy.

Level of evidence: Consensus

2.2.9 Coexisting mental health and drug and alcohol use issues

All health care workers involved in pregnancy care must be able to recognise signs of serious mental health problems, specifically:

- anxiety and depression
- psychosis (including delusions and hallucinations)
- suicidal or self-harming ideation or planning
- unsafe ideas, plans or behaviour towards the fetus, infant or other person.

In such cases, the health care worker must

- Refer urgently to a specialist psychiatric service for assessment and advice (for example, a liaison psychiatry team).
- Where urgent referral is not an available option (such as in remote areas), seek expert advice from a specialist psychiatric service. Such services are available in each State and Territory by telephone.
- Ensure that the woman is safe while awaiting consultation. This may include a staff member remaining with the woman to ensure her safety and the safety of the fetus or infant.

Health care services should ensure that these procedures are familiar to all clinicians working with pregnant women.

Level of evidence: Consensus

Comment: Ongoing care of a woman with mental health problems requires consultation with her mental health case worker, or other clinician as available, and a plan for the birth and after the birth. It may require drug information be included in the woman's medical chart (especially for women who are on antipsychotic, mood stabilising or antidepressant medications). Symptoms of mental health problems may not be obvious without a mental health assessment or questioning, in which not

all midwives may be skilled. (This is an area suitable for workforce development.)

2.2.10 Ongoing assessment and treatment planning at each visit

As the pregnancy progresses, the following issues must be reviewed at each appointment:

- compliance with care and counselling
- maternal and fetal wellbeing
- drug, alcohol and tobacco use
- drug, alcohol and tobacco use of partner and others in the same house
- socioeconomic circumstances and psychosocial issues (poverty, homelessness, domestic violence)
- mental health
- (if relevant:) withdrawal symptoms and dose of pharmacotherapy.

Level of evidence: Consensus

Comment: The quality of antenatal care may significantly affect neonatal outcomes. Refer to Part 4, Management of neonatal abstinence syndrome (NAS).

2.2.11 Multidisciplinary team

A skilled multidisciplinary team is ideal to provide care for the drug-dependent pregnant woman. Such a team consists of specialists and generalists relevant to each woman's situation. These might include (but are not limited to) a general practitioner, midwife, obstetrician, social worker, drug and alcohol specialist doctor, psychologist, psychiatrist, mental health worker, drug and alcohol worker, dietician, Aboriginal health worker, paediatrician, early childhood worker, lactation consultant, or probation and parole officer. Where such multidisciplinary care is not available, women with complex drug and alcohol use issues will require transfer to a centre able to provide such care or liaison with a specialist under a shared care arrangement.

Level of evidence: Consensus

Aboriginal and Torres Strait Islander women

In both urban and remote areas, Aboriginal health workers, Aboriginal liaison officers and Aboriginal health education officers are integral members of the primary health care team providing clinical care, health education and liaison services between Aboriginal women, hospital services and community-based services.

Level of evidence: Consensus

2.2.12 Multi-agency collaboration

In some circumstances, a collaborative response from more than one agency may be of benefit to mother and family. The multi-agency response may include drug and alcohol services, family support services, child protection services, Aboriginal medical services, general practitioners, probation and parole services, and community welfare organisations.

Level of evidence: Consensus

Comment: Such an approach requires coordination which can be undertaken by the case manager.

Aboriginal and Torres Strait Islander women

Wherever possible, Aboriginal and Torres Strait Islander pregnant women with drug dependencies should be referred to an Aboriginal Medical Service (AMS), or a primary health care service which provides culturally appropriate care. This will assist in ensuring that multidisciplinary care is provided before, during and after pregnancy, and during the early childhood years. Where women choose care or require care in a maternity service or tertiary centre, shared care should be considered, with referral to an Aboriginal support worker.

Level of evidence: Consensus

2.2.13 Allocating case manager or care coordinator

To ensure continuity of care and adequate risk management, a case manager should be appointed to oversee the woman's care and liaise with other members of her care team. There must be absolute clarity about who is the primary case manager. It must be clear to the woman, to the rest of the team, and to the case manager. The woman must be provided with contact details for the case manager and care team. Refer to section 2.2.15, Communication.

Level of evidence: Consensus

Comment: Without a definite case manager, continuity and consistency of care is difficult to achieve. Variations occur in different State and Territory jurisdictions with regard to the discipline of the case manager, who may be a midwife, nurse, general practitioner, Aboriginal health worker, psychologist, social worker, or private obstetrician. Variations also occur in how the case manager is allocated. The case manager should be proactive in the care of the woman, for example, following her up assertively (but respectfully) if she does not attend appointments. The case manager participates in regular team meetings and case conferences and

provides a formal hand-over to those caring for the woman and infant during the birth and postnatal period. If the woman is in an opioid treatment program, there should be close liaison with the pharmacotherapy prescriber and/or dosing point.

2.2.14 Written care plan

A plan of care will be formulated in conjunction with the woman (and partner or support person if relevant). The plan should be written and readily available to other health workers (such as in the case notes), particularly if the woman presents out of hours. The plan must be reviewed regularly with mother, who should have a copy.

Level of evidence: Consensus

Comment: The woman must be involved in formulating and reviewing the plan for it to be meaningful to her, and for her to be committed to participate in it.

2.2.15 Communication

Pregnant women who engage in risky drug or alcohol use may access pregnancy care only intermittently. To support the woman to remain in care, systematic communication strategies and protocols should be established between members of the pregnancy care team. The woman and all the team members need to know each person's role and contact details. The case manager will play a key role in keeping everyone informed (see section 2.2.13, Allocating case manager or care coordinator).

Level of evidence: Consensus

Comment: Regular case conferences are an example of a systematic communication strategy.

2.2.16 Preparation for discharge

Discharge planning with the woman and her identified support people must begin at the first antenatal presentation. Involving the woman and the family in the care plan will facilitate progress in the postnatal period. The potential need for postnatal residential care for some mothers and babies should be considered and planned before the birth as residential care places may be in short supply.

Level of evidence: Consensus

Comment: Some pregnant drug-dependent women may have immediate issues or a chaotic lifestyle that make discharge planning seem irrelevant. In these situations the priority must be to help such women stabilise their lives to enable planning for the future.

2.2.17 Preparation for the birth and the postnatal period

Preparing for the birth and the postnatal period will include the usual antenatal preparations and childbirth education, with particular consideration of the following issues:

Birth

- options for pain relief, particularly for opioid-dependent women (see section 2.3, Labour and birth)
- timing and mode of birth, taking account of the risk indicators present, such as presence of HIV (see section 2.6, Vertical transmission of blood-borne viruses)
- advisability of presenting early in labour to minimise the need for self medication and to monitor drug use.

Postnatal period

- choices for infant feeding
- risks and benefits of breastfeeding, taking into account drug and alcohol use, medications, and the presence of blood-borne viruses (refer to section 2.5, Breastfeeding)
- neonatal abstinence syndrome and treatment options (particularly for the opioid-dependent mother)
- possibility of extended hospital stay for the infant and mother
- safe sleeping practices and risk factors for sudden infant death
- the effects of environmental tobacco smoke (refer to section 3.2.9, Environmental tobacco smoke and section 2.5, Breastfeeding)
- parenting education, and the option of participating in classes tailored for drug-dependent women
- issues around the safety of the home environment, particularly with regard to safe storage of any medications kept in the home, including methadone take away doses.

Level of evidence: Consensus

2.2.18 Late presentations

Women who present for the first time in the third trimester, or in labour, have a high risk of pregnancy complications as a result of inadequate antenatal care. Although each individual's situation is unique, and may not include drug or alcohol use, if possible the preferred management is:

- Admit to hospital (regardless of drugs used).
- Undertake comprehensive assessment, including history of drug and alcohol use.
- Develop a detailed management plan including liaison with the general practitioner or community health professional and plans for discharge.
- If indicated by the woman's history (such as dependence or binge use), initiate or refer for drug and alcohol treatment (including pharmacotherapy) or counselling (according to the woman's wishes).

Opioid-using women presenting for the first time in labour require an urgent assessment of their level of opioid tolerance and dependence, as this will have immediate significance for managing analgesia during labour and for managing neonatal withdrawal syndrome. Reassuring the woman that she will be treated in a non-judgemental, compassionate manner is of great importance and may assist in securing her willing participation in antenatal care.

Level of evidence: Consensus

Comment: There is a relationship between antenatal care and infant well-being. Late presentation in pregnancy may indicate an infant at risk of neonatal abstinence syndrome (see section 4, Management of neonatal abstinence syndrome (NAS)).

2.2.19 Oral health and risk of preterm birth

There is some evidence that periodontal disease may increase the risk of preterm birth. For this reason, and until conclusive evidence becomes available, pregnant women should be given priority access to dental care. Dental infections during pregnancy should be treated aggressively by the health service dental health team. Routine dental scraping is not recommended as this may release bacteria into the circulation.

Level of evidence: Consensus

Comment: Opioid-dependent pregnant women may be unaware of pain associated with caries or infection and hence not present for treatment of dental problems until infection is established.

2.2.20 Child protection issues

Child protection is governed by the States and Territories, not the Commonwealth. Health professionals in each jurisdiction are advised to consult their relevant local legislation.

Assessing infant safety

An assessment of risk to the fetus or infant should be made by the health care professional working with the family, according to the mandated notification system in each State or Territory. This assessment should be made early in the pregnancy and continue throughout the pregnancy and postnatally.

Level of evidence: Consensus

Comment: While operating within the statutory framework of each State or Territory jurisdiction, clinicians should bear in mind that fear of possible intervention by child protection authorities can be a significant obstacle to the willing participation in antenatal and postnatal care of women with a history of drug use. Whatever reassurances and involvement can be honestly given to the woman will be useful in maintaining trust and in alleviating anxiety.

Reasons to notify

Child protection agencies are notified when there is considered to be risk of harm or neglect to a fetus (in jurisdictions where legislation supports reporting before birth) or infant. Reasons for notification will be itemised in the legislation and protocols in each jurisdiction, but generally include one or more of the following:

- late presentation for antenatal care
- polydrug use (including women not using any illicit drugs, but risky levels of tobacco and alcohol)
- ongoing drug and alcohol use with severe mental illness
- unstable living arrangements or homelessness
- suspected abuse
- suspected domestic violence
- concerns regarding parenting practices such as being in care of an infant when substantially affected by drugs or alcohol.

Level of evidence: Consensus

Comment: All health and service providers should be alert to the need for intervention, including possible child protection notification, if the baby or developing child is considered to be at risk of harm. Risk may become more evident after discharge from hospital. Providers also need to consider the wellbeing of other children of the mother and her partner.

If the statutory child protection agency is notified of a child at risk, the health care team should liaise closely with the agency throughout the pregnancy and the postnatal period. The mother should be informed of the notification unless doing so would increase the risk of harm to the infant. At appropriate points (such as before discharge), case meetings should be conducted. These meetings will aim to establish an agreed plan of care for the infant, and will include the mother/parents and their advocates (such as an Aboriginal health worker), as well as the child protection worker, health care providers, and representatives of all agencies involved in the care of the family. At each meeting, a time frame for review of the plan should be determined.

Level of evidence: Consensus

Families about whom no notification has been made will be followed up as usual by the early childhood services in each State or Territory.

Level of evidence: Consensus

2.3 Labour and birth

Obstetric care for women with drug and alcohol use issues is provided by midwives and obstetricians who are part of the multidisciplinary team providing overall pregnancy care.

2.3.1 Early admission in labour

It is suggested that women be advised to attend early once they go into spontaneous labour. If elective induction of labour or caesarean section is planned and the woman has complex or unstable drug or alcohol use, the time of admission will need to allow for assessment and stabilisation before the surgery or induction.

Level of evidence: Consensus

Comment: Early admission limits the woman's need to self-medicate at home during labour, and makes it easier to monitor her drug use. It is suggested as a proactive management strategy.

2.3.2 Monitoring fetal growth

There is an increased risk of reduced fetal growth (intrauterine growth restriction) in women who use drugs and alcohol. Standard assessment by measuring symphysis fundal height in centimetres is an adequate measure of fetal growth. If that measure indicates inadequate fetal growth, then the usual obstetric protocols for biophysical monitoring of reduced fetal growth should be followed.

Level of evidence: Consensus

2.3.3 Out of hours emergency presentations

It is not unusual for pregnant women who use drugs or alcohol to present in crisis to emergency services after hours, either intoxicated, or in withdrawal, or for social reasons such as homelessness or violence.

Each health care service requires clear protocols to manage these situations so that women are not lost to follow-up. The protocols should include which practitioner is to be notified, and clear guidelines on stabilisation and psychosocial management. Jurisdictional legislation and guidelines to ensure safety must be adhered to.

Level of evidence: Consensus

The comments below on managing withdrawal and intoxication in pregnancy should guide protocol development. They are also intended to guide practitioners in the absence of local protocols.

Withdrawal

In the event that the woman is withdrawing from drugs, the protocol should specify the following steps:

- Admit the woman as an inpatient .
- Undertake thorough assessment, including drug use history and physical signs and symptoms of withdrawal.
- If the woman is withdrawing from heroin or other opioid drugs, a thorough recent drug use history must be taken because of the risk of overestimating or underestimating opioid tolerance. The history taken also informs decisions about opioid replacement therapy (if indicated).
- Ascertain whether the woman is in an opioid treatment program. If so, contact the prescriber, clinic or dosing point to find out:
 - the woman's current dose
 - whether she has had her dose that day yet
 - whether she has received takeaway doses.
- If it is confirmed that the woman is opioid dependent but not in an opioid treatment program, and if, after discussion, she gives her informed consent, she should be inducted into methadone maintenance according to the local State or Territory policy for inpatient induction. This protocol should allow for more rapid induction than outpatient induction, but with close monitoring.
- Legislation and protocols of the local State or Territory must be followed.
- Commencing the woman onto methadone maintenance should be done in consultation with a drug and alcohol medical specialist.
- Methadone is always administered in liquid when treating addiction.
- The dose of methadone should be titrated to the woman's symptoms with rapid increases. The starting dose (inpatient) should be 20mg, reviewed at 4 hourly intervals. At each review, if the woman has objective signs of withdrawal (eg pupils big, restless; see *Appendix 4: Examples of assessment scales for opioid withdrawal in adults*), then give an additional 10mg. If there are no signs of withdrawal, no extra dose is given until the next scheduled review. The maximum dose in the first 24 hours should not exceed 50mg. Thirty (30) mg should be more than enough for most women, but rarely higher doses will be necessary, and up to 40mg or even 50mg could

be required in exceptional cases on day 1. Extreme caution should be exercised when assessing the patient's requirements on subsequent days if a dose of over 30mg is used on day 1, in order to prevent accumulation and possible toxicity from methadone on subsequent days, when this is most likely to occur.

- The same process should be repeated on Day 2 (when the woman will almost certainly require less methadone), commencing again with 20mg in the morning, and giving additional aliquots of 10mg as required up to a maximum of 50mg. If at any time the woman becomes sedated (small pupils, drowsiness), increase frequency of observation and ensure that no methadone is administered until sedation is reversed. By Day 3, a reasonable idea of the required total daily dose will have been established. If prescribing the dose as a split dose, give 2/3 in morning, 1/3 in afternoon.
- Depending on local protocols, the assessment of opioid withdrawal may be undertaken by a specialist, a nurse, or a junior medical officer. Health care staff without experience in assessing opioid withdrawal should, in the first instance, seek expert advice, including telephone advice. Staff who are unable in the short term to access expert assistance should refer to *Appendix 4: Examples of assessment scales for opioid withdrawal in adults*.
- In rural areas, rapid inpatient induction to methadone treatment as described above should be used as an acute measure until a review can be arranged by the local drug and alcohol unit. Ideally this should take no longer than 3 days. When the delay in full assessment will be longer than 3 days, services should consider transporting the woman to a unit with the appropriate expertise to provide this care.

Intoxication

In the event that the woman is intoxicated, the progress of the pregnancy and the condition of the fetus should be assessed by the obstetric team. If possible, initial assessment of the fetus should be by auscultation of the fetal heart and cardiotocograph (CTG), with follow-up ultrasound as considered appropriate. A decision to admit will depend on circumstances, including the gestation (how late in the pregnancy it is), whether there has been any antenatal care or investigations, potential domestic violence, homelessness, concurrent health issues and other risk factors. If the service cannot assess and manage the woman, she should be transferred to a centre which can. If the woman is not admitted, appropriate support services and referrals, including

pregnancy care follow-up, should be arranged.

Level of evidence: Consensus

2.3.4 Women on an opioid treatment program

When a woman on a methadone (or buprenorphine) program presents to give birth, local State or Territory laws with regard to prescribing and administering the drugs must be met. Some jurisdictions may require transfer of the permit to prescribe opioids from the usual prescriber to the hospital. It is important that the labour unit (or other relevant staff) know the correct protocol, which must include the following:

- Inform the usual dosing point (whether clinic or pharmacy) that the woman is an inpatient and will not be attending the clinic for dosing.
- Ascertain whether the woman has had her dose for that day or is in possession of take-away doses. If not, arrangements should be made for her to be given her usual daily dose.
- Obtain faxed copies of
 - Confirmation of identity (birth date, address, photo, etc)
 - Confirmation of last dose (time and size of dose)
 - Copy of current prescription for reference by hospital prescriber.
- Observe for signs of withdrawal or overdose.
- Before administering the dose, exclude recent opioid use by taking a recent drug use history.

On discharge, the unit/prescriber and pharmacy should be informed by hospital staff of the date of the woman's discharge, and the date and size of the last dose given. This is particularly important on discharge if the dose has been adjusted and is different to the dose on admission. In some jurisdictions, the permit to prescribe opioids must be transferred on discharge.

Level of evidence: Consensus

2.3.5 Induction of labour

There is no indication for an induction of labour if the baby is showing normal growth. Induction of labour is indicated for the normal obstetric and social indications (including remoteness and access to transport). If induction of labour is planned, preferably arrange for this to occur early in the week. This will ensure the infant is observed closely for signs of neonatal abstinence syndrome during the week, rather than on the weekend, when experienced staff and neonatal specialists may not be readily available.

Level of evidence: Consensus

2.3.6 Anaesthetic assessment

Consider anaesthetic review in the third trimester to discuss venous access and optimum modes of analgesia for labour, birth and the postpartum period.

Level of evidence: Consensus

Comment: Both analgesic requirements and potential crisis situations need to be assessed and anticipated. The quality of the relationship already established with antenatal staff may influence the extent to which the woman will engage with the anaesthetist.

2.3.7 Appropriate forms of pain relief

All forms of pain relief, including non-pharmacological means, should be offered in labour. If all options have been discussed early in pregnancy, informed choices can be made at this time. Options may include TENS machine, water, paracetamol, regional anaesthesia and epidural, with regard to the usual obstetric contraindications for each. All forms of pain relief should be escalated as required.

Level of evidence: Consensus

Comment: There is a tendency to underestimate the amount of pain relief needed by drug-dependent women during labour. Total analgesic requirements may be increased in women with a history of drug use. Analgesic doses should be individually titrated. Carefully assessing the woman's needs and providing adequate and appropriate pain relief is essential. Continuity of midwife care and particularly of a known carer has been shown to reduce interventions and improve birthing outcomes for all women.

2.3.8 Women on a methadone program in labour

For women in methadone maintenance, the usual methadone dose will not relieve the pain of labour. Women must receive their methadone dose on time (in liquid, not tablet form), but pain must be assessed as a separate issue. Dose of analgesic drugs should be titrated to response, bearing in mind the tolerance to opioids developed during methadone maintenance treatment. Pethidine may be ineffective in women who are opioid or cocaine dependent, due to changes in the opiate receptors. Therefore, if non-pharmacological means of analgesia, or Entonox gas, have been ineffective, regional anaesthesia may be more appropriate and should be discussed with the anaesthetic team on call for labour ward.

Level of evidence: Consensus

Comment: The woman's methadone dose merely inhibits the onset of opioid withdrawal symptoms; it is not sufficient to alleviate the pain of child birth.

2.3.9 Women on a buprenorphine program in labour

There are no distinctive issues in relation to buprenorphine in comparison with methadone. Women receiving buprenorphine maintenance should be managed as for those on methadone maintenance — that is, continue the buprenorphine, and give other analgesia (including simple analgesics such as paracetamol, and opioids, if indicated) to manage pain. Full opioid agonists (eg pethidine) may be less effective due to the pharmacology of buprenorphine. The use of regional anaesthesia should be considered for the management of pain in labour. For further details on managing pain in labour, see the *Revised National Clinical Guidelines and Procedures for the Use of Buprenorphine in the Treatment of Heroin Dependence*. www.nationaldrugstrategy.gov.au/publications/illicit.htm.

Level of evidence: Consensus

2.3.10 Intractable pain

Women in whom pain is difficult to control should have pathological causes of pain excluded by well-directed investigations.

Level of evidence: Consensus

Comment: Pain caused by an unknown pathology may be masked by drug use. Both common (eg pyelonephritis) and uncommon (eg sacroiliac joint abscess) conditions should be considered when the woman's pain cannot be controlled.

2.3.11 Specific anaesthetic agents to avoid

Among women using, or suspected of using, psychostimulants, ketamine should be avoided where possible because of its catecholamine-related effects (such as hypertension and tachycardia).

Level of evidence: IV (Murphy 1993)

Comment: Long term psychostimulant use is associated with cardiovascular and cerebrovascular complications which can be exacerbated by the use of anaesthetic agents.

2.3.12 Difficulty with venous access

Some drug-dependent women have damaged veins, making venous access difficult. This may be an indication for the use of a central venous line. See section 2.3.6.

Level of evidence: Consensus

2.3.13 Postpartum pain

Pain after surgery such as caesarean section or tubal ligation (after vaginal birth) may be difficult to control and should be assessed in consultation with the drug and alcohol team.

Level of evidence: Consensus

2.4 Postnatal care

2.4.1 Timing of discharge

Early discharge is not usually appropriate for drug-dependent women. Opioid and sedative-dependent women should be prepared for a postnatal stay of five or more days to allow assessment of neonatal abstinence syndrome. See also section 4.15.1, Criteria for safe discharge of infants home.

Level of evidence: Consensus

2.4.2 Contraception

As for all women, options for contraception should be discussed before discharge and information should be provided. It is suggested that the means of contraception be reliable and easy to use.

Level of evidence: Consensus

2.4.3 Sudden unexpected deaths in infancy

Sudden unexpected deaths in infancy (SUDI) is the death of an infant less than 12 months of age, where the death was sudden, and was unexpected at the time. The term 'unexpected' indicates that the cause of death was not recognised before the event, although it may be diagnosed at autopsy. SUDI usually includes death due to SIDS and to other ill-defined causes (such as sleeping accidents).

SIDS and tobacco

Both maternal smoking during pregnancy and environmental exposure of the infant to tobacco smoke (ETS) are associated with an increased risk of sudden infant death syndrome (SIDS).

All parents should be advised of the association between environmental tobacco smoke and SIDS. Mothers who smoke tobacco (or cannabis mixed with tobacco), or who live with smokers, should be advised of these risks, and specifically:

- not to smoke during feeding (whether breastfeeding or bottle feeding)
- not to smoke in the house or the car with the baby
- that partners, family and friends should not smoke in the house or the car.

In addition, mothers should be offered support with smoking cessation.

Level of evidence: Consensus

An infant's most harmful exposure to tobacco is through environmental tobacco smoke. Smoking

outside the home and away from the infant reduces the infant's exposure. Contamination by environmental tobacco smoke is not limited to the indoor air, it includes surfaces and dust in living rooms and bedrooms and on skin. Infants are at risk of exposure to the toxic components of environmental tobacco smoke through these sources, so it is important that parents are given this information. Refer to section 3.2.9, Environmental tobacco smoke.

Level of evidence: IV

Sleeping practices

Cosleeping, or 'bed-sharing' refers to the infant sleeping in the same space as an adult — whether bed, lounge or floor. There is a risk of

- accidental smothering of the infant
- injury to the infant
- the adult not waking if the infant becomes distressed.

All women should be informed of these risks and about safe sleeping practices before discharge.

Level of evidence: Consensus

Aboriginal and Torres Strait Islander women

All health care workers should be aware that mothers or other family members sleeping with infants is a common practice in Aboriginal and Torres Strait Islander communities. Culturally appropriate education should be provided in relation to the risks. *Sids and Kids* provide an Indigenous brochure on safe sleeping practices at http://www.sidsandkids.org/safe_sleeping_parents.html

Level of evidence: Consensus

Sedating substances and sleeping accidents

In particular, if an adult has used any form of sedating substance which might result in them sleeping heavily (including prescription medications, methadone and alcohol), there is an increased risk to the infant. A woman who drinks alcohol or takes sedating substances before sleeping should be advised

- not to have the baby sleep with her
- that if she is heavily sedated, she may not wake for the baby's next feed, or if the baby becomes distressed
- to consider arranging a 'safety plan'. That is, to have another responsible adult to take care of the infant if the mother decides to use drugs or alcohol.

Any other person responsible for caring for the baby should also be informed about these risks and about safe sleeping practices.

Level of evidence: Consensus

Comment: Information will ideally be given both verbally and in writing. For an example of a parent education brochure on safe sleeping practices for women using drugs, alcohol or sedating medication, see Appendix 5: Examples of safe sleeping practices information. Refer also to section 3.2.9, Environmental tobacco smoke.

Safe sleeping practices

All women should be provided with a general SIDS brochure as well as information related to drug and alcohol use and sleeping practices. More detailed information on safe sleeping practices can be found on the *Sids and Kids* website at http://www.sidsandkids.org/safe_sleeping-parents.html Advice to parents should include the following:

- Put baby on the back to sleep.
- Sleep baby with face uncovered.
- Baby sleeps in own sleeping space, not an adult bed.
- Baby should have a safe cot, safe mattress, and safe bedding.
- Put baby's feet at the bottom of the cot, tuck bedclothes in firmly.
- Tobacco smoke is bad for baby.

Level of evidence: Consensus

2.4.4 Preparation for discharge

A timely and thorough written discharge plan, initiated during pregnancy, must be reviewed with the woman and care providers before discharge. The plan must take into account assessments commenced in the antenatal period:

- parenting ability
- stability and psychosocial issues
- mental health
- environmental issues including safe storage of medications in the home
- material goods and preparation for the baby
- child protection issues.

Copies of the plan are placed in the mother's notes, the infant's notes and given to the mother. The plan needs to include appointment dates and contact details, which are given to the mother and forwarded to community providers.

Level of evidence: Consensus

For examples of two discharge checklists, see *Appendix 6: Examples of discharge assessment checklist.*

2.4.5 Assertive follow-up

Inpatient services

Babies of mothers with a history of problematic drug or alcohol use need the same support and follow-up as other babies. The mother may require support to access appointments with the baby, such as help with transport or finances. At the time of discharge, there must be a formal transfer of responsibilities from the hospital to the community services that will be continuing care, and referrals and supports must be in place. The provider who is referring should actively follow up with community services to ensure that the woman has engaged with the service. Where engagement has not occurred, the referring provider should follow up with the woman/family.

Level of evidence: Consensus

Community services

In accepting the referral, the community provider/service should be aware that families with drug and alcohol use issues may be difficult to engage in care. Community services must be active in engaging these families and ensuring arrangements are followed up. These arrangements might include appropriate assessment, care and support services to ensure the wellbeing of the mother and baby, and to identify ongoing developmental issues.

Level of evidence: Consensus

Comment: At all points of contact, there should be ongoing risk assessment regarding the wellbeing and safety of the infant and/or other children. This may involve referral to child protection services (see section 2.2.20, Child protection issues).

2.4.6 Home visiting

An in-home assessment may be required before discharge, but most families will not receive home visiting on an ongoing basis. Families should be assessed individually as to the appropriateness and likely benefits of in-home visits.

Level of evidence: Consensus

Comment: Although there is currently insufficient evidence regarding the efficacy of sustained home visiting in women with serious substance misuse, in-home visits are one method of providing care and support to mothers and families, particularly those who do not engage well with community and hospital services.

2.4.7 Early intervention programs

It may be important to intervene early for children affected by parental drug and alcohol use, particularly children diagnosed with fetal alcohol syndrome.

There is insufficient evidence at this point to draw firm conclusions, but it is important that parents are supported to engage with their children in ways that promote all aspects of the child's development.

Level of evidence: Consensus

2.5 Breastfeeding

2.5.1 General principles

Mothers who are drug dependent should be encouraged to breastfeed with appropriate support and precautions. In addition, it is now recognised that skin-to-skin contact is important regardless of feeding choice and needs to be actively encouraged for the mother who is fully conscious and aware and able to respond to her baby's needs.

Level of evidence: Consensus

Comment: Breastfeeding is recognised as the best nutrition for the infant. It is also inexpensive and easier to prepare and deliver than other options. As with all mothers of newborns, breastfeeding is recommended, where possible, for drug-dependent mothers, with the cautions described in the following statements.

A harm minimisation approach to breastfeeding is recommended in these guidelines. Encouraging breastfeeding is preferred to avoiding breastfeeding, provided that:

- the woman is informed about the likely effects on the infant of the drugs she is using (or may use) and
- the woman is assisted to plan minimum exposure of the infant to the effects of these drugs.

Level of evidence: Consensus

Comment: In these guidelines, a 'harm minimisation approach' does not mean that the woman should be advised against breastfeeding.

In advising drug-dependent women with regard to breastfeeding, the specific potential risks in each woman's individual circumstances should be weighed against the benefits of breastfeeding, and she should be informed of them.

Level of evidence: Consensus

Comment: There is very little evidence about the effects of most drugs, prescription and licit as well as illicit, when administered to an infant through breastfeeding. Much more evidence is needed.

Hale (2004) provides a rating system for categorising the risk posed by drugs when administered to an infant through breastfeeding (See Appendix 7: Categorisation of drug risks in pregnancy and breastfeeding).

As with all breastfeeding women, drug-dependent women should not wean rapidly.

Level of evidence: Consensus

Comment: The level of methadone in breastmilk is low when the mother is on a methadone maintenance program, and does not affect the infant's blood level of methadone.

2.5.2 Breastfeeding and tobacco

Minimal amounts of nicotine are excreted into breast milk and absorption of nicotine through the infant's gut is minimal, but tobacco smoking can have other effects on breastfeeding that might indirectly affect the baby. Women should be informed that:

- milk production may be reduced by as much as 250 mL per day in mothers who smoke
- mothers who smoke are less likely to start breastfeeding than non-smokers
- that mothers who smoke tend to breastfeed for a shorter time.

Level of evidence: Consensus in British Medical Association 2004.

Comment: This information must be given to the woman in the context of discussing the substantial benefits to both the infant and mother of breastfeeding. There may be broader psychosocial issues affecting the woman's ability to breastfeed, and it would be helpful to assist the woman to identify and address these.

2.5.3 Breastfeeding and nicotine replacement therapy (NRT)

Women who wish to breastfeed while continuing to use nicotine replacement therapy should be advised to use one of the intermittent delivery methods of NRT (inhaler, gum, lozenge or sublingual tablet). This will maximise the time between use of NRT and the next feed, and reduce the baby's exposure to nicotine.

Level of Evidence: Consensus

Comment: Nicotine is both water and lipid soluble and distributes rapidly to and from breast milk, but little is likely to be absorbed by the infant. As maternal plasma nicotine concentration rises and falls, the same occurs in breast milk. The mean elimination half-life of nicotine in breast milk is 95 minutes. Even if the mother is using a high level of NRT, the infant's daily exposure (normalised for the weight of the infant) is less than 2 per cent of the exposure of the mother. It is unlikely that such low levels of exposure are harmful to the infant. In contrast, there is good evidence that exposure to environmental tobacco smoke is harmful to the infant. Therefore,

providing NRT to the mother, if this results in her not smoking, is of great potential benefit to the baby.

The formulation of NRT used may affect the level of nicotine in breast milk. The nicotine transdermal patch provides a steady level of nicotine in plasma and therefore in breast milk and the mother has no control over the level of nicotine in the milk. Mothers who use intermittent delivery systems of NRT may be able to minimise the nicotine in their milk by prolonging the duration between nicotine administration and breastfeeding. (Level of Evidence to support Comment: III-2 Dempsey and Benowitz 2001)

2.5.4 Breastfeeding and alcohol

The Australian Alcohol Guidelines recommend a prudent approach to breastfeeding if alcohol is consumed www.alcoholguidelines.gov.au/index.htm:

Women who are breastfeeding are advised not to exceed the levels of drinking recommended during pregnancy, and may consider not drinking at all.

If a breastfeeding mother wants to drink alcohol, it is suggested that she breastfeed before drinking alcohol, then wait a minimum of three to four hours after the last drink before breastfeeding again. In the event that the woman exceeds the recommended levels of drinking, it is suggested that she wait approximately three hours per standard drink consumed before breastfeeding again. She may consider expressing and storing breastmilk prior to drinking.

Comment: Metabolism of alcohol varies with individual differences, such as weight and liver function, making it difficult to be prescriptive about the amount of time needed for the mother's blood alcohol to return to zero. Alcohol does not remain in breastmilk, but diffuses back into the mother's circulation as her blood level drops. Consequently there is no need for her to express and discard milk as long as she waits until her blood alcohol returns to zero to breastfeed her baby again. Although there is very little research evidence about the effect of alcohol on the infant, there are reports that even low levels may reduce the supply of milk and cause poor feeding with irritability and sleep disturbance in the infant. See also Appendix 8: Australian Alcohol Guidelines: pregnancy and breastfeeding for more information.

2.5.5 Breastfeeding and opioids

Mothers who are stable on methadone treatment programs should be supported if they choose to breastfeed.

Level of evidence: Consensus

Comment: Women who are stable on methadone, but may occasionally use heroin, in a 'one-off' pattern, should be advised to express and discard breastmilk for a 24 hour period afterwards, then return to breastfeeding. This is not an indication for ceasing breastfeeding. The mother should consider having a 'safety plan' for the infant on such an occasion. This may include expressing and storing breastmilk in advance, or preparing formula, as well as having a responsible adult care for the infant.

Mothers who are unstable, continuing to use short acting opioids such as heroin, or using multiple drugs, should be encouraged not to breastfeed, and attention should be paid to assisting them to stabilise their lifestyle.

Level of evidence: Consensus

Comment: An unstable pattern of drug use may raise child protection concerns (see section 2.2.20, Child protection issues).

The safety of buprenorphine is not yet established for breastfeeding. Women who choose to breastfeed while taking buprenorphine, and can make an informed decision, should be informed of the risks and supported in their decision. The amount of buprenorphine in breastmilk is small and considered to be clinically insignificant.

Level of evidence: Consensus

2.5.6 Breastfeeding and benzodiazepines

Potential risks should be weighed up against benefits of breastfeeding when the mother is using benzodiazepines. If a woman taking benzodiazepines wishes to breastfeed, she should be advised that she should not stop taking the benzodiazepines abruptly, but should undergo supervised gradual withdrawal if she wishes to cease use.

Women on short-acting benzodiazepines should be advised not to breastfeed immediately after taking a dose because of the dual risk of her falling asleep, potentially smothering the infant, and of the infant receiving a maximum dose and becoming excessively drowsy. If the mother does breastfeed while she is drowsy, she should be sure she is securely seated in a chair (not lying down), with the baby also well supported, so that if she falls asleep the baby will be safe (see section 2.4.3, Sudden unexpected deaths in infancy (SUDI)).

Level of evidence: Consensus

Comment: The safety of benzodiazepines in breast milk is not known. Ideally, pregnant women will

have undergone progressive supervised withdrawal throughout the pregnancy (see section 3.8, Benzodiazepines) and will not be taking benzodiazepines while breastfeeding.

2.5.7 Breastfeeding and psychostimulants

Potential risks should be weighed against the benefits of breastfeeding when the mother is using psychostimulants. A mother who wishes to breastfeed should be supported in that decision, unless she is a regular user and is unstable, in which case she should be advised against breastfeeding. Breastfeeding mothers who use psychostimulants rarely or in binges, must be:

- informed of the risks
- educated in how to avoid the harmful effects to the baby, that is:
 - to express and discard the breast milk after psychostimulant use (not to simply stop breastfeeding)
 - to have a supplementary feeding plan ready for such eventualities
 - advised not to breastfeed for 24 hours after the use of amphetamines, ecstasy or cocaine. Although cocaine has a shorter duration of action than amphetamines, the illicit drug may be mixed with other unknown substances, so a 24-hour delay is recommended.

Level of evidence: Consensus

Comment: Ecstasy is an amphetamine derivative. The half life is likely to be brief, less than eight hours, but dependent on dose. Because the structure is similar to methamphetamines it is likely that it is transmitted via breastmilk. It is not known when it is safe to reinstate breastfeeding after use but 24 hours should be sufficient.

2.5.8 Breastfeeding and cannabis

Potential risks should be weighed up against the benefits of breastfeeding. There is insufficient evidence to make an evidence-based recommendation about cannabis and breastfeeding. There is some evidence that cannabis is excreted in breast milk, but the effects on the infant are unknown.

Cannabis is a long acting drug, so advice to take the drug after breastfeeding (as for alcohol) is not useful. Current advice given to women ranges from supporting the decision to breastfeed to advising against it. Heavy use of cannabis may pose a greater risk of transmission in breast milk, but this is not known.

Level of evidence: Consensus

Advice to mothers and others should be as for tobacco: that is, smoke away from the infant, out of the house, and not in the car.

Level of evidence: Consensus

2.5.9 Breastfeeding and blood-borne viruses

Human immunodeficiency virus

Breastfeeding increases the risk of transmission of HIV from mother to infant, particularly during the first 6 months. HIV-positive mothers should completely avoid breastfeeding and use formula milk instead. It is important that women who are not breastfeeding be informed of the benefits to the infant of skin-to-skin contact.

Level of evidence: III-2

Comment: Replacing breastfeeding with formula milk is a safe practice in Australia, where safe water and good quality infant formula are readily available. The role of antiretroviral therapy during breastfeeding is yet to be determined in communities where formula feeding carries a substantial risk.

Hepatitis C virus

There is no evidence that breastfeeding increases the risk of transmission of hepatitis C from mother to infant. Women should be informed of the theoretical risks and discard breast milk if it may be contaminated with blood, such as by cracked, abraded or bleeding nipples.

Level of evidence: III-2

Comment: While encouraging HCV-positive women to breastfeed, it is essential that the woman make an informed decision. The information that should be provided includes:

- that the virus does appear in breastmilk
- that (in the absence of HIV co-infection, which can increase HCV viral load) the risk of transmission appears to be small
- that transmission may depend on viral load
- that transmission is not via the gastrointestinal tract, but is blood-borne.

Hepatitis B virus

There is no evidence that breastfeeding increases the risk of transmission of Hepatitis B from mother to infant. To protect against transmission it is extremely important that all infants of HBsAg (hepatitis B surface antigen) positive mothers receive active and passive immunisation within 12 hours after birth.

Level of evidence: III-2

Comment: Although HBV DNA and HBsAg have

been detected in breast milk, no additional risk with breastfeeding has been demonstrated.

2.5.10 Lactation advice

Advice should be sought from a child and family health nurse, a lactation consultant or a midwife with drug and alcohol experience where there is uncertainty about how to advise the drug-dependent mother with regard to breastfeeding.

Level of evidence: Consensus

2.6 Vertical transmission of blood-borne viruses

2.6.1 General considerations

Confidentiality

Confidentiality of information must be assured to women and partners.

Level of evidence: Consensus

Occupational health and safety of staff

Issues affecting the occupational health and safety of staff should be considered in the management of people with blood-borne viruses.

Level of evidence: Consensus

Comment: Normal body fluid precautions should be taken, bearing in mind that infectivity may be related to viral load.

Education

In line with the national strategy on drug use, education about safe sex and risk reduction practices is vital in preventing blood-borne viral infections.

Level of evidence: Consensus

Comment: This applies to all people using health services. All women of childbearing age should be given information about blood-borne viral infections in relation to pregnancy.

Screening

Refer to section 2.2.4 Screening: Screening for blood-borne viruses.

Breastfeeding

Refer to section 2.5.9, Breastfeeding and blood-borne viruses.

2.6.2 Human immunodeficiency virus

Antiretroviral therapy

Antiretroviral therapy reduces the risk of vertical (mother-to-child) transmission. It should commence after the first 12 weeks' gestation and be maintained during pregnancy. Combination therapy is more effective than single agent therapy at preventing perinatal transmission. Consult an infectious diseases specialist for further detail.

Level of evidence: II

Comment: Evidence suggests micro-transfusion may occur during fetal life. The risk of HIV vertical

transmission is significantly reduced if zidovudine is given during pregnancy (from 25 per cent risk in the placebo group to 8 per cent in the zidovudine group). It is further reduced by combination therapy. There is concern regarding the teratogenicity of some antiretroviral drugs during early gestation. Consult an infectious diseases specialist for the management of antiretroviral therapy in pregnancy.

Caesarean section — Reducing risk at birth

Elective caesarean section can reduce the risk of perinatal transmission to the infant. This should be discussed and offered.

Level of evidence: II-1

Exposure of the infant to maternal secretions at birth should be minimised by avoiding invasive fetal monitoring and promptly cleaning and bathing the infant soon after birth.

Level of evidence: Consensus

Comment: It appears that vertical transmission mostly occurs during the last week of pregnancy and during birth. The risk can be reduced by elective caesarean section, avoiding exposure to maternal secretions during birth, and refraining from invasive fetal monitoring. Intravenous antiretroviral therapy should be given before the birth.

Antiretroviral therapy and the newborn

Antiretroviral therapy for the newborn is recommended as soon after birth as possible and for the first 6 weeks of life.

Level of evidence: Consensus

Comment: Choices of drug therapy depend on the maternal viral load determined by PCR test at or close to birth. Combination therapy is considered more effective than single agent therapy. Up-to-date advice should be sought from a paediatric HIV specialist or infectious diseases specialist.

Immunisation

Advice should be sought from a paediatric HIV specialist or infectious diseases specialist for other measures such as prophylaxis against Pneumocystis and modification of immunisation schedules.

Level of evidence: Consensus

Monitoring

Monitoring of HIV status by PCR testing to exclude vertical transmission should be extended to the first 18 months of life.

Level of evidence: Consensus

Comment: Blood tests in the infant should show a decline of transplacental antibodies (ie maternal HIV antibodies), but vertical transmission cannot be excluded by testing during the first 12–15 months. Advice from a paediatric HIV specialist should be sought in line of evolving new evidence.

2.6.3 Hepatitis C virus

Caesarean section

Caesarean section has not been shown to reduce HCV transmission. Recommending caesarean section to prevent vertical transmission is not justified.

Level of evidence: Consensus

Monitoring

Currently infants are tested for hepatitis C at 18 months of age, when transplacental antibodies will have disappeared from the infant's blood. If the parents are very anxious about possible vertical transmission from mother to baby, PCR testing may be offered from the age of 4–6 months. Testing should be organised to coincide with other postnatal checks.

Level of evidence: Consensus

Comment: Some parents experience high levels of anxiety while waiting to find out whether their child has hepatitis C. In such cases, the choice of whether to test early should always be made by the parents. If PCR testing for HCV-RNA is negative at 4–6 months of age, infection is very unlikely (although not impossible). HCV antibody testing to confirm negative status is recommended at 18 months of age (when maternal HCV antibody will no longer be detectable). On the other hand, some parents may prefer not to have earlier testing because of experiences of discrimination and fear of being blamed for transmitting the virus to the infant.

Any testing of babies should be accompanied by thorough counselling of parents before and after the test.

Level of evidence: Consensus

Mother-to-child transmission is demonstrated by the detection of HCV antibodies in the infant beyond 18 months of age, or HCV RNA by PCR at 4-6 months of age.

Level of evidence: Consensus

Comment: The responsibility for following this up lies with the woman's primary health carer, who will often be her general practitioner.

Managing vertical transmission

Infants with confirmed HCV infection should be referred to a paediatric hepatologist or infectious disease specialist.

Level of evidence: Consensus

2.6.4 Hepatitis B virus

Caesarean section

With the availability of passive and active immunisation for infants at birth, elective caesarean section to reduce risk of vertical transmission is not justified.

Level of evidence: Consensus

Vaccination

Women who are HBsAb negative should be offered HBV vaccination after birth.

Level of evidence: Consensus

Comment: It is public health policy in Australia that all newborns receive HBV immunisation. In addition, babies of HBsAg positive mothers are given immunoglobulin.

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3.1 Alcohol

3.1.1 Harmful effects of alcohol

Alcohol is known to have teratogenic effects. Drinking alcohol while pregnant increases the risk of problems in fetal development, but the level of drinking which causes significant fetal problems is not known. In this document, the term 'fetal alcohol spectrum disorder' (FASD) is used to indicate the full range of possible effects of fetal exposure to alcohol, while the term 'fetal alcohol syndrome' (FAS) will be used to indicate the severe effects, characterised by brain damage, facial deformities, and growth deficits.

Screening

Refer to section 2.2.5, Screening.

3.1.2 Advice on drinking alcohol in pregnancy

All pregnant women should be given information on the risks associated with drinking alcohol during pregnancy and advised that no completely safe level of alcohol consumption has been determined for the fetus.

Level of evidence: Consensus

Comment: The Australian Alcohol Guidelines note that the first few weeks after conception, before the first missed period, are probably the most crucial in relation to alcohol. At that time it is unlikely the woman will know she is pregnant, particularly if the pregnancy is unplanned. For this reason, there is a strong need for education about safe drinking for all women of child bearing age, including young women still at school. This education should include a discussion of the risks of binge drinking as well as other patterns of drinking.

From *Australian Alcohol Guidelines: Health Risks and Benefits* (NHMRC, 2001, p.16). www7.health.gov.au/nhmrc/publications/_files/ds9.pdf.

NH&MRC GUIDELINE 11: Women who are pregnant or might soon become pregnant

- 11.1 may consider not drinking at all.
- 11.2 most importantly, should never become intoxicated.
- 11.3 if they choose to drink, over a week, should have less than 7 standard drinks, AND, on any one day, no more than 2 standard drinks (spread over at least two hours).
- 11.4 should note that the risk is highest in the earlier stages of pregnancy, including the time from conception to the first missed period.

See also *Appendix 8: Australian Alcohol Guidelines*:

pregnancy and breastfeeding for more information.

Comment: These guidelines currently concur with the national guidelines developed by the NHMRC for alcohol consumption by pregnant women, although it is noted that the NHMRC guidelines do not classify a level of evidence to support its recommendations.

An abstinence-based approach is not recommended, in part because it could result in disproportionate anxiety among women with an unplanned pregnancy, many of whom consume some alcohol before they know they are pregnant, but usually without harmful consequences for the infant. Anxiety about alcohol consumption has sometimes resulted in precipitous decisions to terminate a pregnancy¹.

The 'standard drink' measure of 10 g of alcohol should be used in assessing the level of alcohol consumption. This measure should be explained to the woman and her partner if present.

Level of evidence: Consensus

Comment: There is a need for better education of both the public and health care workers on what defines a standard drink in Australia (that is, 10 g alcohol). In addition, there is a need for specific education of health care workers about the Australian Alcohol Guidelines. Information about standard drinks and how to calculate the alcohol content of different alcoholic drinks can be found at www.alcohol.gov.au/guidelines/standard.htm.

3.1.3 Aboriginal and Torres Strait Islander women

Health care workers must become familiar with local drinking habits, patterns and terminology (eg 'charged up', 'nugu') to ensure accurate assessment of risk and its management.

Level of evidence: Consensus

Comment: Patterns of consumption of alcohol vary markedly in Aboriginal and Torres Strait Islander communities from non-Indigenous communities: Aboriginal and Torres Strait Islander communities have higher proportions of both non-drinkers and of hazardous/harmful drinkers. Assessment can be difficult because heavy drinking and group drinking are often the norm (that is, involving more than half the community) and are related to external factors, such as canteen hours and 'pay days'. Therefore, alcohol consumption can be difficult to quantify in terms of standard drinks.

¹ See *National Report Fetal Alcohol Syndrome National Workshop 2002*. Australian National Council on Drugs and National Expert Committee on Alcohol.

Nevertheless, it can be categorised according to the Australian Alcohol Guidelines risk categories www7.health.gov.au/nhmrc/publications/_files/ds9.pdf.

3.1.4 Access to treatment

Pregnant women identified as consuming risky levels of alcohol (as defined in the Australian Alcohol Guidelines) should have priority access to alcohol treatment services, including comprehensive assessment and detoxification, but also including therapeutic options such as brief intervention, cognitive behavioural therapy and group sessions.

Level of evidence: Consensus

The need for detoxification is an indication for inpatient admission and treatment. Pregnant women who require alcohol detoxification should be admitted into a supportive health care environment and provided with continuity of care, including ongoing counselling. Women who are withdrawing from alcohol should be supported with medication and nutritional and vitamin supplementation and should have access to appropriate maternal and fetal monitoring. The therapeutic environment should be sensitive to gender and cultural issues that influence the acceptability of treatment.

Level of evidence: Consensus

3.1.5 Neonates and infants

Neonates who have been exposed to regular excessive maternal alcohol consumption in utero are monitored for withdrawal symptoms during their first days of life. Appropriate supportive care and medications to treat withdrawal symptoms will be available to these babies.

Level of evidence: Consensus

Comment: Babies will withdraw 24–48 hours after birth if the mother is intoxicated at birth. Refer to section 4.11.2, Treatment of non-opioid withdrawal.

Neonates whose mothers have engaged in risky levels of drinking (as defined in the Australian Alcohol Guidelines), or those whose mothers have given birth previously to a baby with FAS should be assessed at birth for signs of FAS, and followed up for at least the first 6 months by a health professional with specialist knowledge of FAS.

Level of evidence: Consensus

Comment: Few affected babies have clear physical signs of FAS at birth and diagnosis is difficult. In suspected cases, the infant should be reassessed at about 6 months of age.

Infants/young children who demonstrate signs of FASD should be followed up regularly in the community by an appropriately trained health professional, during pre-school and early school life (that is, up to at least 7 years of age). If the mother is identified during pregnancy as a high risk alcohol user, then she should be offered interventions and support to ensure continuity of care to both mother and child.

Level of evidence: Consensus

Comment: There is evidence from the US to suggest that early intervention for infants with FAS improves long term educational outcomes.

Children with alcohol-related neurodevelopmental disorders (ARND) should have access to appropriate assessments and ongoing support within the health and education services (that is, with professionals experienced in these issues).

Level of evidence: Consensus

When children present for paediatric assessment with attention deficit hyperactivity disorder (ADHD), an adequate history of parental antenatal alcohol intake should be taken.

Level of evidence: Consensus

Comment: Alcohol-related neurodevelopment disorders may be an under-recognised condition. Children diagnosed with ADHD could have alcohol-related neurodevelopment disorders, but an adequate history is not usually taken. The difficulty is that if ADHD is diagnosed at (for example) age 10, more than 10 years has elapsed since the potential fetal exposure. The mother's history of alcohol use is unlikely to be reliable after this lapse of time.

3.1.6 Naltrexone

Refer to section 3.6, Naltrexone.

Breastfeeding

Refer to section 2.5, Breastfeeding.

Safe sleeping practices

Refer to section 2.4.3, Sudden unexpected deaths in infancy (SUDI).

3.2 Tobacco

3.2.1 Harmful effects of tobacco

The harm caused by tobacco smoking during pregnancy is well established, and includes an increased incidence of threatened and spontaneous miscarriage, premature birth, low birth weight for gestational age, perinatal death, SIDS, and other longer-term effects on the health of the child.

Comment: There is substantial evidence that tobacco poses a great risk to both the mother and the fetus. Abstinence early in pregnancy will give the greatest benefit to mother and fetus; stopping smoking at any point during pregnancy is beneficial. Pregnancy may be an opportunity to improve health outcomes for women who smoke. It is a time when many are in regular contact with health professionals and are motivated to stop smoking.

Fertility

Smoking reduces fertility in both men and women. Studies have shown that smoking makes it more difficult for women to become pregnant. Women who are trying to conceive should be advised and supported to quit smoking. In men, smoking increases the risk of impotence and reduces the quality of semen. Men who smoke have a lower sperm count than non-smokers, and their semen contains a higher proportion of malformed sperm and sperm with reduced motility.

Level of evidence: III-2 in US Surgeon General's Report 2004 and consensus in British Medical Association 2004

Comment: Women who quit smoking should be informed of the possibility of increased fertility. This includes women on methadone programs who stop smoking.

3.2.2 Interventions

If possible, information and services for smokers should be integrated into existing services dealing with sexual, reproductive and child health. These include maternity services, male health clinics, well women clinics, cervical screening services, centres for reproductive medicine, child health clinics, Aboriginal medical services and drug and alcohol services.

Level of evidence: Consensus in British Medical Association 2004

Pro-active telephone counselling is effective in increasing smoking cessation rates when used as a sole intervention or when augmenting programs

initiated in hospitals.

Level of evidence: I (Miller and Wood 2002)

Comment: Many Quitlines in Australia now provide expert support throughout a quit attempt through a free callback service. The Quitline service can be contacted on 13 7848 (13 QUIT) for the cost of a local call from anywhere in Australia.

Smoking cessation during pregnancy improves birth outcomes including rates of low birth weight for gestational age, rates of pre-term birth and mean birth weight.

Level of evidence: Consensus in British Medical Association 2004; US Surgeon General's Reports 1990 and 2004)

Smoking cessation programs in pregnancy appear to reduce smoking, low birthweight and preterm birth, but no effect was detected for very low birthweight or perinatal mortality.

Level of evidence: I (Cochrane review: Lumley et al 2001)

Screening

Refer to section 2.2.5, Screening.

3.2.3 Assessment of dependence

If the screening is positive:

- Ask the woman about her understanding regarding the potential harmful effects of smoking on the fetus.
- Discuss in a collaborative way:
 - the benefits of stopping smoking for her and the fetus
 - the options and support for quitting smoking
 - the availability of nicotine replacement therapy and when it is appropriate
 - the risks of passive smoking to her and the fetus, especially if her partner smokes.

Level of Evidence: Consensus

Comprehensive assessment

A comprehensive assessment of all smokers is recommended, including their motivation to quit, degree of nicotine dependence and presence of barriers to cessation. The revised Fagerström Test for Nicotine Dependence (FTND) is a simple 6-question tool for assessing level of nicotine dependence and may be

useful as an indication of whether pharmacotherapy may be required to support a quit attempt. Two questions in the FTND have been biochemically validated: cigarettes per day (CPD) and 'time to first cigarette' (TTFC). See *Appendix 9: Fagerström test for nicotine dependence*.

Level of evidence: IV (Heatherton et al 1991).

Comment: CPD does not on its own give an adequate assessment of nicotine dependence, and should not be relied on by clinicians. Variations in the levels of nicotine in cigarettes, and restricted social opportunities to smoke, have resulted in a change in smoking behaviour to compensate. Compensatory smoking behaviour to increase the level of nicotine in the blood includes taking more inhalations per cigarette, holding the smoke in the lungs longer, and smoking cigarettes closer to the butt before extinguishing them.

TTFC: Smokers who are more highly nicotine dependent are more likely to wake up in the morning feeling 'nicotine-deprived', have their first cigarette earlier after waking and smoke more in the morning than smokers who are less dependent. Asking about 'time to first cigarette' (after waking) (TTFC) can provide a useful indicator of nicotine dependence. Those who smoke their first cigarette of the day within 30 minutes of waking and also smoke 15 cigarettes or more per day are likely to have more difficulty in quitting and may require more intensive support.

Brief assessment

Where a comprehensive assessment is not possible, nicotine dependence can be assessed by asking:

- 1 How many minutes after waking to first cigarette?
 - 2 Number of cigarettes per day?
 - 3 What cravings or withdrawal symptoms in previous quit attempts?
- Smoking within 30 minutes of waking, smoking more than 15 cigarettes per day and a history of withdrawal symptoms in previous quit attempts are all markers of nicotine dependence.
 - Nicotine replacement therapy for dependent smokers is proven to double the chances of successfully quitting. All commercially available forms of NRT are effective as part of a strategy to promote smoking cessation.

Level of evidence: I (Silagy et al 2003).

Comment: Smoking during pregnancy carries a social stigma, which may prompt pregnant smokers to deny, under-report or minimise smoking. Clinicians must bear this in mind when discussing smoking behaviour with

pregnant women. A good therapeutic relationship, based on non-judgmental attitudes on the part of the health care worker, and in which trust is established with the woman, may facilitate disclosure.

3.2.4 Supporting smoking cessation

Smokers should be offered support for smoking cessation and relapse prevention early in pregnancy, and as a routine part of each antenatal, child health or clinic visit. The use of more intensive interventions for smoking cessation reduces the odds of continued smoking.

Level of evidence: I (Cochrane review: Lumley et al 2001)

Comment: With all those identified as smokers, ask the woman how she feels about her smoking. The type of intervention will vary depending on the patient's willingness to quit.

The three categories of intervention are:

- Current smokers now willing to make a quit attempt (cessation support).
- Current smokers unwilling to make a quit attempt at this time (motivational intervention).
- Former smokers who have recently quit (relapse prevention).

Discuss in a collaborative way the options and support for quitting smoking; the availability of nicotine replacement therapy and when it is appropriate; the risks of passive smoking, especially if her partner smokes.

Implementing clinic systems designed to increase the assessment and documentation of tobacco use almost doubles the rate at which clinicians intervene with their patients who smoke and results in higher rates of smoking cessation.

Level of evidence: I (Miller and Wood 2002)

Comment: Screening; assessment of willingness to quit and level of nicotine dependence; and assistance provided should be documented in patient records. Documentation is particularly important in the antenatal setting where the woman may potentially see multiple midwives/doctors during her pregnancy. Recording screening and smoking cessation interventions therefore assists consistency of care delivery and provides a prompt for discussion of smoking at numerous visits.

3.2.5 Smoking cessation and mental health

There is some evidence to indicate that nicotine affects the metabolism of some antipsychotic medications. Quitting smoking may therefore contribute to a change in mental stability in such a situation. Where a pregnant

women who smokes and is prescribed antipsychotic medications wishes to quit smoking, cessation must be undertaken in consultation with the prescribing psychiatrist, as dose adjustment may be necessary.

Level of evidence: Consensus

At least thirty per cent of people seeking smoking cessation treatment may have a history of depression. Depressed people are less likely to quit smoking successfully than those without a history of depression. Some may suffer an increase in symptoms after quitting, however many do not. The period of vulnerability to a new depressive episode appears to vary from a few weeks to several months after cessation (Miller and Wood 2002).

Level of Evidence: Consensus

Comment: Pregnant women with a history of depression should be monitored after cessation to assess the risks of increased symptoms of depression or a new depressive episode, as well as a potential relapse to smoking.

3.2.6 Aboriginal and Torres Strait Islander women

Health care workers, in providing interventions and pregnancy care, should be aware that tobacco use has become the norm in some Aboriginal and Torres Strait Islander communities. That is to say, more than half of a community may smoke. This constitutes an additional social barrier to smoking cessation. In assisting Aboriginal and Torres Strait Islander women to stop smoking, health care providers should support the development of achievable goals.

Level of evidence: Consensus

3.2.7 The '5 As'

The brief intervention approach to smoking cessation known as the '5 As' is useful, but is recommended in these guidelines as the minimum approach to smoking cessation. Extended psychosocial interventions that exceed minimal advice to quit should be made available for pregnant women, particularly if risk factors such as high nicotine dependence, many years smoking, co-habiting with a smoker, or co-morbid anxiety or depression are identified.

Level of evidence: Consensus

1. ASK all women

- 'Do you smoke tobacco?' If the answer is 'no', ask 'Have you ever smoked tobacco'

- Record smoking status.

Level of evidence: 1 (Miller and Wood 2002)

Comment: The second question identifies recent quitters (ie they may have quit yesterday and identify themselves as non-smokers) who may be at risk of relapse throughout pregnancy. Advice may then be given on how to stay quit and benefits of remaining quit.

2. ADVISE

- ALL smokers should be advised to quit in a way that is clear but non-confrontational (eg 'The best thing you can do for your health is to quit smoking.').

Level of evidence: 1 (Miller and Wood 2002)

3. ASSESS

- For all smokers, assess stage of change: 'How do you feel about your smoking at the moment?' and 'Are you ready to quit now?'

- Record stage of change. Assess nicotine dependence.

Level of evidence: Consensus in Miller and Wood 2002

4. ASSIST

The assistance provided depends on willingness to quit:

Level of evidence: Consensus in Miller and Wood 2002

- ASSIST (Not ready):
 - Discuss the benefits of quitting and the risks of continued smoking.
 - Provide information about not exposing others to passive smoking.
 - Advise that help is available when they're ready.
- ASSIST (Unsure):
 - Do motivational interviewing: 'What are the things you like and don't like about your smoking?'
 - Explore their doubts.
 - Explore barriers to quitting.
 - Offer written information (eg Quit Kit) and referral to Quitline 13 7848 (13 QUIT).
- ASSIST (Ready)
 - Affirm and encourage.
 - Provide a Quit Kit and discuss a quit plan.
 - Refer nicotine dependent smokers to a doctor to discuss pharmacotherapy.
 - Discuss relapse prevention.
 - Offer referral to Quitline 13 7848 (13 QUIT), or referral to other available services offering evidence-based smoking cessation support.

- ASSIST (Recent quitters)
 - Congratulate.
 - Discuss relapse prevention.
 - Review and reinforce benefits of quitting.
 - Offer written information (eg Quit Kit) and referral to Quitline 13 7848 (13 QUIT).

5. ARRANGE follow-up

For women attempting to quit, arrange a follow-up visit, if possible.

Level of evidence: Consensus in Miller and Wood 2002

At these visits:

- Congratulate and affirm decision.
- Review progress and problems.
- Encourage continuance of full course of pharmacotherapy (if using).
- Discuss relapse prevention.
- Encourage use of support services.
- Refer to general practitioner or to Quitline 13 7848 (13 QUIT).

In the antenatal setting, there is also opportunity for following up with women who are 'unsure' as well as those who may be 'not ready' to encourage movement along the willingness-to-quit spectrum.

Follow-up visits with their doctor significantly increases cessation rates of smokers at six months or more.

Level of evidence: 1 (Miller and Wood 2002)

3.2.8 Relapse prevention

Maternal smoking increases the risk of poor health outcomes in infants and children, including SIDS, respiratory infections, asthma, and middle ear disease, therefore sustained abstinence in the postpartum period is even more important than in the general population.

Level of evidence: Consensus (in Fiore et al 2000; Miller and Wood 2002)

Comment: Partners of the pregnant woman play an important role in successfully quitting smoking. One of the predictors of relapse is having a partner who continues to smoke.

Providing relapse prevention advice can reduce relapse rates.

Level of evidence: Consensus in Miller and Wood 2002

Because of the chronic relapsing nature of tobacco dependence, clinicians should provide brief effective relapse prevention treatment. When clinicians encounter

a patient who has quit tobacco use recently, they should:

- Reinforce the patient's decision to quit.
- Review the benefits of quitting.
- Assist the patient in any residual problems arising from quitting.

Relapse prevention interventions are especially important soon after quitting and can be delivered by means of scheduled clinic visits, telephone calls, including referral to the Quitline 13 7848 (13 QUIT), or any time the clinician encounters an ex-smoker. A systematic, institutionalised mechanism to identify recent quitters and contact them is essential to deliver relapse prevention messages effectively.

Level of evidence: Consensus in Fiore et al 2000

Women who stop smoking during pregnancy should not be regarded as if they have quit smoking permanently. Smoking status should be canvassed with the woman at each subsequent antenatal visit throughout pregnancy, and in the postpartum period. Smoking cessation and relapse prevention interventions should be a routine part of antenatal and postpartum care.

Level of Evidence: Consensus in British Medical Association 2004; Miller and Wood 2002

Comment: About 25 per cent of women quit smoking once they become pregnant (USSGR 2004). A quarter of these will relapse to smoking during pregnancy. Relapse in the postpartum period is high. Relapse prevention in the postpartum period is important because of the risk of exposure of the infant to environmental tobacco smoke. Interventions to prevent smoking relapse postpartum have been shown to prevent 25 per cent of relapse.

Telephone callback counselling services are effective in assisting cessation for smokers who are ready to quit. Repeated telephone support for up to 12 weeks is more effective than a single telephone counselling session.

Level of evidence: 1 (Miller and Wood 2002)

Comment: Telephone counselling for smoking cessation is very effective and can form the 'Arrange follow-up' section of the '5As' intervention model. In most Australian states the Quitline (13 7848 or 13 QUIT) provides a free callback counselling service. The calls can be tailored to meet the needs of the quitting smoker.

3.2.9 Environmental tobacco smoke

Parents should be advised of the risks associated with environmental tobacco smoke (ETS).

Level of evidence: Consensus

Comment: *The World Health Organization's International Consultation on Environmental Tobacco Smoke (ETS) and Child Health in 1999 brought together experts from developed and developing countries to examine the effects of ETS on child health and to recommend interventions to reduce these harmful effects and eliminate children's exposure. The Consultation concluded that ETS is a real and substantial threat to child health, causing death and suffering throughout the world. ETS exposure causes a wide variety of adverse health effects in children, including lower respiratory tract infections such as pneumonia and bronchitis, coughing and wheezing, worsening of asthma, and middle ear disease. Children's exposure to environmental tobacco smoke may also contribute to cardiovascular disease in adulthood and to neurobehavioural impairment.*

The Consultation also concluded that maternal smoking during pregnancy is a major cause of sudden infant death syndrome (SIDS) and other well-documented health effects, including reduced birth weight and decreased lung function. In addition, the Consultation noted that ETS exposure among non-smoking pregnant women can cause a decrease in birth weight and that infant exposure to ETS contributes to the risk of SIDS and SUDI (See section 2.4.3 Sudden Unexpected Deaths in Infancy).

It is suggested that screening questions be used for pregnant women and new parents regarding potential for exposure to ETS. This may include asking whether there are smokers living in the home, and advising that, to reduce ETS, partners, family and friends do not smoke in the home or the car, or ideally, become non-smokers.

Level of evidence: Consensus

3.2.10 Nicotine replacement therapy (NRT) in pregnancy

There is currently a lack of evidence on the safety of NRT in pregnancy but reports of expert committees have recommended its use in certain circumstances. NRT should be considered when a pregnant woman is otherwise unable to quit, and when the likelihood and benefits of cessation outweigh the risks of NRT and potential continued smoking.

Level of Evidence: Consensus in Fiore et al 2000

Comment: *NRT can have a substantial impact on the chances that a dependent smoker will be able to quit, but there is concern that its use in pregnancy may have adverse effects on the fetus. The safety and efficacy in pregnancy of pharmacotherapies such as NRT and bupropion is still debated and further research is required. The ratio of potential benefit to*

harm is uncertain, so most recommendations are to consider pharmacotherapy only after psychosocial intervention has failed (such as cognitive behavioural therapy, counselling, group support). Pregnant women in Australia are not prohibited from using NRT, but it is classified as a Category D product during pregnancy, and it is recommended that medical advice be sought before use. (See Appendix 7: Categorisation of drug risks in pregnancy and breastfeeding.) In Australia NRT packages carry warnings against its use in pregnancy, but the Australian Therapeutic Goods Administration notes that 'Short term exposure during the first trimester is unlikely to cause a hazard to the fetus'².

The pregnant woman should be advised to discuss the use of NRT with her doctor as soon as it appears that she will be unable to quit using non-pharmacological interventions alone.

Level of Evidence: Consensus

Comment: *The woman's general practitioner should support NRT after two or more weeks of the woman trying to quit without success.*

The goal in pregnancy should be to be free of both tobacco and nicotine. Nicotine itself has been shown to be toxic to the developing fetus in animal studies. While NRT products are not completely without risk, the dose of nicotine is smaller and the risk to the fetus is much lower than that associated with continuing to smoke. Tobacco smoke contains carbon-monoxide and more than four thousand other chemicals, many of which are also reproductive toxins. NRT does not contain these other chemicals. If NRT use is recommended after consultation with the treating doctor, intermittent-use formulations (gum, lozenge, inhaler, sublingual tablet) are preferred for use during pregnancy because they provide smaller daily doses of nicotine than continuous-use formulations (transdermal patches).

Level of Evidence: III-2 (Dempsey and Benowitz 2001)

If the clinician and the pregnant woman decide to use NRT, the clinician should consider:

- monitoring blood nicotine levels to assess the level of drug delivery
- using medication doses that are at the low end of the effective dose range (but see below)

² Therapeutic Goods Administration, Australian Drug Evaluation Committee, 1999. *Prescribing medicines in pregnancy: an Australian categorisation of risk of drug use in pregnancy*, 4th edition. Australian Department of Health and Ageing, p. 52.

- choosing delivery systems that yield intermittent, rather than continuous, drug exposure (eg gum rather than patch).

Level of Evidence: Consensus in Fiore et al 2000

The total time to completion of NRT should be monitored and should not exceed the recommended regimen. Some clinicians and women may find blood tests a barrier and may prefer to monitor urine cotinine levels.

Effective dose range: There is some evidence that nicotine and cotinine metabolism is accelerated in pregnancy, which means that the effective dose range may be higher in pregnancy than it is for non-pregnant women. A woman continuing NRT from before pregnancy may not be effectively treated with a reduced dose, or may even require an increased dose.

Level of Evidence: IV (Dempsey et al 2002)

Comment: The total dose of nicotine delivered to fetus is less with intermittent than with continuous-use formulations of NRT. Cigarette smoking does not deliver nicotine continuously, so the effects on the fetus of continuous exposure to nicotine are unknown. NRT should be discontinued early in pregnancy once cessation is achieved. Women who have quit during pregnancy should be monitored to ensure that relapse doesn't occur.

3.2.11 Bupropion and smoking cessation

The use of bupropion during pregnancy or lactation is listed as a precaution in MIMS (2005) and is not recommended.

Level of evidence: Consensus

Comment: Bupropion is an effective non-nicotine medication that is available only on prescription. It may not be appropriate for all smokers. Bupropion can be combined with NRT to help with quitting. The medication is commenced approximately one week prior to quitting and reduces the urge to smoke, but should be combined with counselling. At the time of publication Zyban is the only form of bupropion available in Australia.

3.2.12 Myths to be discounted in informing women of the risks

The idea that nicotine withdrawal during smoking cessation is more stressful to the fetus than continued smoking is not supported by evidence, and should not be given as advice.

Level of Evidence: Consensus in British Medical Association 2004; US Surgeon General's Reports, 2001 and 2004

Comment: The evidence for the large range of negative

health effects caused by smoking in pregnancy is vast. Among other harmful effects, women who smoke in pregnancy are three times more likely to have a baby with low birthweight for gestational age. Low birthweight babies are at increased risk of illness, death in infancy and health consequences in later life. The physiological effects of smoking on fetal growth are caused by reduced oxygenation of blood to the fetus. This occurs primarily through two independent mechanisms: first the vasoconstrictive effects of nicotine on the uterine and umbilical arteries; second the increase in carboxyhemoglobin, the concentration of carbon monoxide in the blood, with higher carbon monoxide concentration in fetal than in maternal blood. These two factors combined produce a reduction in fetal blood flow, increasing the risk of low birth weight for gestational age. In addition, cigarette smoke contains more than 4000 other toxins, including mutagens and carcinogens, which are conveyed to the fetus in the blood. Studies show an increased risk of SUDI among offspring of women who smoke during pregnancy. Level of Evidence: Consensus in British Medical Association 2004; US Surgeon General's Reports, 2001 and 2004

In the case of tobacco smoking, the practice of 'cutting down' (sometimes described as 'harm reduction') on the number or strength of cigarettes smoked is not supported by evidence that it provides any protection to the fetus and is not recommended. Women should be informed of this and complete abstinence from smoking should be recommended as best for the mother and fetus.

Level of evidence: Consensus

Comment: This may seem counter-intuitive to some people, but there is no evidence that cutting down the number of cigarettes smoked leads to a reduction in serum nicotine levels. Evidence suggests that smokers titrate their nicotine intake by varying their inhalation habits. Stronger inhalations lead to greater exposure to the harmful impact of carbon monoxide. If a woman reports a change in smoking either through reduction in number or reduction in strength of cigarettes asking about how she inhales the smoke may provide an indication of compensatory smoking.

3.3 Opioids

3.3.1 Heroin

A heroin-dependent pregnant woman should be offered stabilisation through induction onto a methadone program, combined with drug and alcohol counselling and psychosocial support.

Level of evidence: Consensus

Comment: See also to section 2.2.18, Late presentations and section 2.3.3, Out of hours emergency presentations.

3.3.2 Contraceptive advice and pregnancy planning

When opioid-dependent women are admitted to an opioid treatment program (on methadone or buprenorphine maintenance), their health and therefore their fertility is likely to improve. This may increase the risk of unplanned pregnancy. This possibility should be discussed with women entering treatment, who need advice about reliable and easy to use methods of contraception.

Level of evidence: Consensus

3.4 Methadone

Note: Methadone is always given in liquid form for the treatment of addictive disorders.

3.4.1 Efficacy of methadone maintenance treatment

Observational studies have found that heroin use in pregnancy is associated with intrauterine growth restriction (IUGR). Methadone maintenance treatment (MMT) is associated with improved fetal development and infant birth weight. This effect is reduced by continued use of heroin during pregnancy.

Level of evidence: III-2

MMT throughout pregnancy reduces the risk of perinatal and infant mortality in heroin-dependent women. Continued heroin use in pregnancy may reduce this protective effect.

Level of evidence: III-2

Methadone treatment during pregnancy is not associated with adverse postnatal development in children of opioid-dependent women.

Level of evidence: III-2

3.4.2 Methadone induction

Heroin-dependent pregnant women should have priority access to methadone treatment. This may include admission to an inpatient obstetric unit for stabilisation and rapid dose titration, with respite from the external environment.

Level of evidence: Consensus

Partners of pregnant women who are using heroin should also be offered priority access to opioid substitution treatment.

Level of evidence: Consensus

Comment: A partner's use of heroin increases the woman's risk of relapsing into heroin use.

3.4.3 Adequate dosing

The methadone dose during pregnancy should be titrated to a level that not only blocks withdrawal symptoms, but also suppresses heroin use.

Level of evidence: Consensus

Comment: Methadone dose should be titrated according to the woman's symptoms and not kept low in an attempt to reduce neonatal abstinence syndrome

(see section 3.4.4, Relationship between methadone dose and neonatal abstinence syndrome).

During pregnancy, methadone dose increases may be required due to increased metabolism and increased blood volume.

Level of evidence: Consensus

3.4.4 Relationship between methadone dose and neonatal abstinence syndrome

Multiple factors contribute to the severity of NAS in children born to opioid-dependent women including (but not limited to) maternal smoking, heroin use, and benzodiazepine dependence. There is no clear dose–response relationship between methadone and risk of NAS.

Level of evidence: III-3

Comment: It is not possible to confidently predict risk of NAS based on maternal dosage, as there are many other factors that influence NAS outcomes, such as maternal polydrug use, type of opioid used and gestational age at birth. While there is some data that suggest infants exposed to higher methadone doses in utero may be at increased risk of NAS, this is only one small factor in a complex equation.

3.4.5 Detoxification from opioids

Methadone

Withdrawal from methadone is associated with a high risk of relapse to heroin use and should not be encouraged during pregnancy.

Level of evidence: IV

Heroin

A pregnant woman seeking withdrawal from heroin as an intervention during pregnancy (ie supervised detoxification) should be informed of the risks and benefits, including the risks to the fetus (increased risk of infant mortality and low birth weight for gestational age) and the high risk of relapse. Methadone maintenance treatment should be offered in the first instance. If the woman still refuses methadone maintenance treatment, then the risks of supervised withdrawal may be reduced by undertaking withdrawal under the following conditions:

- in the second trimester only, that is during weeks 14 to 32

- with fetal monitoring, in a monitored setting, such as an inpatient obstetric unit
- using tapering doses of methadone to create a gradual withdrawal.

During this period, the benefits of methadone maintenance should be continually discussed.

Level of evidence: Consensus

3.4.6 Split dosing

There is insufficient evidence to say whether split dosing with methadone is preferable to single daily dosing during pregnancy. It may help stabilise conditions within the uterus for the developing infant by reducing the difference between peak and trough concentrations of methadone in the blood. It is recommended that split dosing be available as a clinical option for all pregnant women who experience withdrawal symptoms as pregnancy advances. Systematic research into the effects of split dosing should be undertaken.

Level of evidence: Consensus

Each State and Territory jurisdiction should develop policy guidelines that allow for split dosing when there is a clinical need. The guidelines should allow the second part of the dose to be provided as a takeaway, provided the usual safety criteria for takeaways can be met. This will avoid requiring the woman to attend the clinic twice daily. Issues to be taken into account in issuing a takeaway dose include (but are not limited to): the opening hours of the clinic, the distance and cost of transport, the presence of other children in the household, the presence or absence of a reliable partner to share the care of the other children, the woman's involvement in paid work.

Level of evidence: Consensus

3.4.7 Management of vomiting in pregnant women on MMT

Vomiting is a serious concern in pregnant women on methadone maintenance. Vomiting of a methadone dose may lead to withdrawal in both mother and fetus. Withdrawal symptoms cause fetal distress, and should be avoided. Services should develop protocols to guide staff in the event that a pregnant woman vomits after

her methadone dose. If there is no protocol, then the prescriber should be notified.

If a methadone dose is vomited by a pregnant woman

- within 10 minutes of dosing – consider giving a repeat dose
- within 10–60 minutes of dosing – consider giving half a repeat dose
- more than 60 minutes after dosing – consider giving half a repeat dose if withdrawal occurs.

It is preferable that staff have observed the vomiting, but since it is unlikely that all stomach contents are expelled during a vomit, it is still difficult to be sure how much of the dose can be absorbed. Where there is doubt, every effort should be made for the woman to be reassessed by an experienced clinician 4 to 6 hours after vomiting, when the effects of methadone should be at their peak, to determine whether an additional small dose is required.

The following points are recommended for managing ongoing problems with vomiting during pregnancy:

- Women should be discouraged from ingesting methadone on an empty stomach.
- Women should be encouraged to sip their dose slowly.
- If the dose of methadone appears to consistently cause vomiting, consider splitting the dose or giving rectal prochlorperazine 30–60 minutes before dosing.
- If a woman vomits constantly and not necessarily in relation to her dose of methadone, she should be assessed and treated according to obstetric protocols for hyperemesis gravidarum:
 - Assess degree of dehydration and ketosis (Consider admission if urine ketones are more than 2+).
 - Look for other causes of vomiting (eg urinary tract infection).
 - Consider need for intravenous rehydration.
 - Consider need for pharmacotherapy (eg rectal prochlorperazine, or intramuscular or intravenous ondansetron).
 - Consider need for improving nutritional status (eg improved diet, vitamin/iron supplements).

Level of evidence: Consensus

3.4.8 Dose review after giving birth

Dose reduction after giving birth is currently a common practice, but the extent and timing of dose reductions has not been investigated in research studies. The maintenance dose should be reviewed in the early days following birth, and regularly as indicated thereafter.

The focus in reviewing the dose should be on supporting and enhancing the woman's stability, taking into account:

- signs of withdrawal or intoxication
- assessed risk of reverting to illicit drug use.

Effective liaison between the midwife, obstetric services, neonatal services, child protection services, Aboriginal medical services and drug treatment services is crucial in the postnatal period. It can be facilitated by the case manager (regardless of where the case manager is located).

Level of evidence: Consensus

Breastfeeding

Refer to section 2.5, Breastfeeding.

3.5 Buprenorphine

3.5.1 Women already on buprenorphine maintenance treatment

The appropriate first line treatment for an opioid-dependent woman who is pregnant, or who plans to become pregnant, is methadone maintenance treatment. However, if a woman is already on buprenorphine maintenance treatment (BMT), wishes to continue, and can provide informed consent, it is acceptable to continue buprenorphine maintenance during pregnancy and breastfeeding. For further guidance, refer to the *Revised National Clinical Guidelines and Procedures for the use of Buprenorphine in the Treatment of Heroin Dependence* www.nationaldrugstrategy.gov.au/publications/illegal.htm.

Level of evidence: Consensus

Extended follow-up of infants exposed to buprenorphine in utero is strongly recommended, for example, a full developmental paediatric assessment at 2 years of age.

Level of evidence: Consensus

Comment: Informed consent is a critical and complex issue for women who are pregnant, and particularly so for treatments where limited data are available on safety (such as buprenorphine and naltrexone). However, it is likely that the risks of ongoing heroin use greatly outweigh the risks of buprenorphine maintenance. It is preferable that women already on buprenorphine continue that treatment rather than run a risk of relapsing into heroin use. Not all pregnant women already on buprenorphine will transfer to methadone. It is not feasible to enrol all pregnant women on buprenorphine in clinical trials — currently only one Australian State is holding a clinical trial. Informed consent to treatment and long-term follow-up of the infant are crucial.

3.5.2 Induction onto buprenorphine from heroin during pregnancy

Sometimes heroin-dependent pregnant women present for treatment, will not accept methadone and request buprenorphine. Unlike methadone, the safety of buprenorphine in pregnancy has not been demonstrated, and will not be for at least several years. Nonetheless, treatment guidelines should not restrict specialist obstetric units and drug and alcohol specialists from using buprenorphine as a treatment for heroin-dependent pregnant women who refuse methadone treatment and can provide informed consent.

Level of evidence: Consensus

Comment: Induction into buprenorphine maintenance treatment during pregnancy should not be considered a routine option, nor should it be undertaken without specialist obstetric and addiction advice and support, preferably by referral to a specialist unit. Access to clinical trials is limited, but, if possible, the woman should be offered enrolment in a trial.

Breastfeeding

Refer to section 2.5, Breastfeeding.

3.5.3 Transfer of pregnant women from MMT to BMT

Transfer of a pregnant woman already on methadone maintenance treatment to buprenorphine maintenance treatment is strongly advised against, because of the risks of precipitated withdrawal.

Level of evidence: Consensus

Comment: Buprenorphine is a partial opioid-receptor agonist with a higher affinity for opioid receptors than methadone. If a person stabilised on methadone takes a dose of buprenorphine, the effect can be similar to taking an opioid antagonist: precipitated withdrawal.

3.6 Naltrexone

The safety and efficacy of naltrexone in pregnancy is not established. Human studies regarding the effects of naltrexone in pregnancy are very limited. Naltrexone should not be offered in pregnancy, except in the context of clinical trials.

Level of evidence: Consensus

If a woman on naltrexone becomes pregnant, and is progressing well in treatment, she should be advised that the safety of naltrexone is not established. If she wishes to continue naltrexone and can provide informed consent, it is acceptable to continue naltrexone during pregnancy. Follow-up of babies exposed to naltrexone in utero is recommended, such as a comprehensive developmental assessment by a paediatrician at 2 years of age.

Level of evidence: Consensus

3.7 Cannabis

3.7.1 Risks

The health risks of cannabis in pregnancy have not been clearly established. For the woman they may include increased risk of respiratory problems, mood and other psychological problems, and financial and other social problems.

Cannabis is often taken mixed with tobacco, and the harms associated with tobacco in pregnancy are considerable.

There is no evidence of neonatal abstinence syndrome solely from cannabis use. There is low level evidence of a mild withdrawal from sole cannabis use. This is not usually apparent until at least the second week postnatally. It is unlikely to require care in the neonatal nursery or separation from the mother. It is important parents are taught supportive settling techniques. Refer to section 4.7, Supportive therapies for babies at risk of NAS.

Mothers should be advised that regular exposure to cannabis in utero may influence newborn infant behaviours in the first weeks of life.

Level of Evidence: Consensus

Pregnant women should be advised that while the health risks of cannabis in pregnancy have not been clearly established, some studies have suggested that children born to cannabis-dependent parents may have some developmental problems, such as:

- subtle differences in higher cognitive processes and perceptual organisation (but less than those due to nicotine or other substances used in pregnancy)
- sleep disturbances in 3-year-olds
- reduced memory and performance on verbal scales at 3 years
- reduced height at 6 years
- increased child hyperactivity, impulsivity and inattention at 10 years.

Level of Evidence: III-2

Comment: While there have been case reports of increased risk associated with in-utero cannabis exposure, current evidence does not indicate it is a teratogen.

Screening

Refer to section 2.2.5, Screening.

3.7.2 Management

Pregnant women should be advised of the possible physical, psychological and social implications for themselves and their infant from regular cannabis use.

Level of Evidence: Consensus

If a pregnant woman identifies herself as a regular cannabis user, she should be offered a range of interventions to help her stop, including information, brief intervention, counselling and psychologically based treatment for cannabis dependency.

Level of Evidence: II

Comment: The primary management of pregnant women using cannabis is counselling. There is some evidence of psychiatric disorders associated with cannabis dependence.

Safe sleeping

Refer to section 2.4.3, Sudden unexpected deaths in infancy (SUDI).

Breastfeeding

Refer to section 2.5.8, Breastfeeding and cannabis.

3.8 Benzodiazepines

3.8.1 Risks

The health risks of benzodiazepines in pregnancy have not been clearly established. There have been inconsistent reports of morphological problems associated with fetal exposure to benzodiazepines.

Regular benzodiazepine use in pregnancy may be associated with a neonatal abstinence syndrome, which may be of delayed onset.

Intoxication with any drug while caring for a young child is risky, and pregnant women should be informed of universal SIDS precautions and safe sleeping practices.

Screening

Refer to section 2.2.5, Screening.

3.8.2 Management

Ideally, the recommended management of a benzodiazepine-dependent pregnant woman is transfer to a long-acting benzodiazepine (diazepam) and gradual dose reduction, with a view to being drug-free at birth. While this is the ideal goal of treatment, clinicians must work individually with each woman to set goals that are achievable for her.

Level of evidence: Consensus

Babies born to benzodiazepine-dependent women should be observed for 1 week in hospital before discharge, and should have an outpatient review weekly during the first month of life. The Finnegan scale may be used to identify neonatal abstinence syndrome associated with benzodiazepines (see section 4.4, Measuring NAS caused by other drugs, including polydrug use). Educating parents to watch for signs of withdrawal after discharge may be helpful, with instructions to present earlier if indicated by the infant's behaviour.

Supportive measures without drug treatment are the primary management of the baby, but if pharmacological treatment of benzodiazepine withdrawal is required, phenobarbitone is the drug of choice. Refer to section 4.11.2, Treatment of non-opioid withdrawal.

Level of evidence: IV

Safe sleeping

Refer to section 2.4.3, Sudden unexpected deaths in infancy (SUDI).

Breastfeeding

Refer to Section 2.5.6, Breastfeeding and Benzodiazepines.

3.9 Amphetamines

3.9.1 Risks

The health risks of amphetamine use in pregnancy have not been clearly established. There have been inconsistent reports of problems associated with exposure in utero, including the development of cerebral ischemic lesions. It has been suggested that a history of amphetamine use, particularly intravenous amphetamine use, should be taken as a marker of a high-risk pregnancy.

There are few reports of neonatal abstinence symptoms associated with maternal amphetamine use. In one study of 134 infants exposed to amphetamines in utero, 49 per cent experienced withdrawal symptoms, but only 4 per cent required medication.

If amphetamines are used close to the birth, the baby may be born directly affected, and may be over-active and agitated. Refer to Part 4, Management of neonatal abstinence syndrome (NAS), as the symptoms are similar.

Screening

Refer to section 2.2.5, Screening.

3.9.2 Management

A pregnant woman using amphetamines should be advised of the potential health risks to herself and to her baby. Women seeking further support should be provided with counselling. Care should be provided within a multidisciplinary framework. Women should be encouraged to reduce or cease amphetamine use. Use of amphetamines is associated with mental illness and mental health should be monitored.

Level of evidence: Consensus

Breastfeeding

Refer to section 2.5.7, Breastfeeding and psychostimulants.

3.10 Cocaine

3.10.1 Risks

Cocaine use during pregnancy has been associated with an increased risk of intra-uterine growth restriction, placental abruption and premature rupture of membranes. Many effects thought to be attributable to cocaine, however, could be explained by concurrent tobacco use, cannabis use or the quality of the environment. The evidence is inconsistent. Nevertheless, a history of cocaine use, particularly intravenous use, should be taken as a marker of a high-risk pregnancy.

Level of evidence: Consensus.

Neonatal withdrawal symptoms from cocaine are seen much less frequently than symptoms of opioid withdrawal. Neonatal withdrawal from cocaine may be mild and not require medication. Refer to section 4.11.2, Treatment of non-opioid withdrawal.

Developmental problems have been observed in children exposed to cocaine in utero, although whether this is a result of in-utero exposure, or a result of environmental factors, is unclear. Children with identified developmental and cognitive problems following in-utero exposure respond to early intervention and other educational interventions.

Screening

Refer to section 2.2.5, Screening.

3.10.2 Management

A pregnant woman using cocaine should be advised of the potential health risks to herself and to her baby. Women seeking further support should be provided with counselling.

Level of evidence: Consensus

Breastfeeding

Refer to section 2.5.7, Breastfeeding and psychostimulants.

3.11 Inhalants

3.11.1 Risks

Inhalant use is an increasing concern in Australian society, particularly in some rural and remote communities. Few data have been collected regarding the prevalence of inhalant use nationally, or about best management strategies.

There is evidence to suggest that inhalant use is associated in the long term with central nervous system damage, which results in tremors when attempting to move, poor coordination and difficulty walking. Personality may also be affected resulting in volatile mood swings.

During pregnancy, inhalant use is associated with low birth weight for gestational age and increased risk of miscarriage, birth defects and SIDS.

An abstinence syndrome has been observed in infants born to mothers known to be volatile substance users during their pregnancy. This consisted of a characteristic odour (reflecting pulmonary excretion of the volatile substance), excessive and high-pitched cry, sleeplessness, hyperactive Moro reflex, tremor, hypotonia and poor feeding.

Level of evidence: IV

Screening

Refer to section 2.2.5, Screening.

3.11.2 Management

In Aboriginal and Torres Strait Islander communities, clinical interventions should always be guided by the principles identified by the Ministerial Council on Drugs Strategy (2003–2006) for addressing substance use for Aboriginal and Torres Strait Islander peoples, listed in section 2.1, Aboriginal and Torres Strait Islander women.

4.1 Definition of NAS

Neonatal abstinence syndrome (NAS) is a syndrome of drug withdrawal observed in infants of mothers physically dependent on drugs, manifested by non-specific symptoms and signs in the infant. NAS is more common in infants born to opioid-dependent women than in infants born to women dependent on other drugs or alcohol. NAS in infants of opioid dependent mothers is manifested by neurological excitability, gastrointestinal dysfunction and autonomic signs. There may be poor feeding, sleep-wake abnormalities, vomiting, dehydration, poor weight gain and occasionally seizures.

Relationship between NAS and antenatal care

The outcomes of infants at risk of NAS depend in part on the quality of antenatal care the woman receives during pregnancy. In particular:

- Assessment and preparation of a care plan as part of the coordinated antenatal management of the pregnant woman and her family has an important positive impact on neonatal outcomes.
- Late presentations in pregnancy are associated with inadequate antenatal care, which can have a negative impact on the neonate.

For a guide to management of a drug-dependent pregnant woman, see section 2.2, Antenatal care.

Concurrent illness

Concurrent illness, including infection and hypoglycaemia, should be considered when assessing an infant at risk of NAS.

Level of evidence: Consensus.

Comment: Infants of mothers with a drug or alcohol problem are at increased risk of preterm birth and low birth weight, frequently associated with chorioamnionitis. Clinical signs of illness such as infection and hypoglycaemia may overlap with those of NAS.

4.2 Detecting NAS

Infants of all mothers taking opioids for a prolonged period during pregnancy should be monitored for NAS.

Level of evidence: III-2

Comment: Withdrawal in the neonate has been documented even if methadone was stopped one month earlier (but not more), so it is important that an accurate maternal history of opioid use is taken. On the other hand, the babies of women receiving one dose of opioid, for example, during birth, should not be considered at risk of withdrawal.

4.3 Measuring opioid NAS

A validated assessment tool for determining which infants have NAS should be used.

Level of evidence: III-2. (Lipsitz 1975; Finnegan et al 1975; O'Brien et al 2004; Zahorodny et al 1998; Osborn et al 2005a).

The recommended assessment tools in these guidelines are the Finnegan neonatal abstinence severity score (NASS) or the modified Finnegan neonatal abstinence severity score (see Appendix 10: Examples of neonatal abstinence syndrome scoring scales).

Level of evidence: Consensus

Comment: Other validated assessment tools have also been used, such as the Lipsitz and the neonatal withdrawal scale (NWS), but the Finnegan tools are recommended here because they are already taught as a standard across Australia. (see sections 3.1.5, Neonates and infants; 3.7, Cannabis; 3.8; Benzodiazepines; 3.9, Amphetamines; 3.10, Cocaine)

4.4 Measuring other NAS

The Finnegan or modified Finnegan scale should also be used

1. to assess withdrawal from other drugs, including benzodiazepines and alcohol
2. to assess possible stimulant intoxication in the neonatal period, if perinatal history indicates that this is appropriate.

Level of evidence: Consensus

Comment: Although the Finnegan scale is not adequately validated for use in this situation, sedative withdrawal and stimulant intoxication share many of the same neurological features as opioid withdrawal, including risk of seizures. (see sections 4.5 Monitoring of newborns

4.5 Monitoring of newborns

All babies born to drug-dependent mothers should receive routine postnatal monitoring, plus specific assessment with the Finnegan or modified Finnegan scale, commencing 2 hours after birth and subsequently every 4 hours.

Level of evidence: Consensus

Comment: The Finnegan scale is usually scored every 4 hours (30–60 minutes after feeds). The score is an important guide to proper management of NAS (see section 4.10, Initiating pharmacological treatment of NAS).

4.6 Resuscitating the baby of a opioid-using mother

If there is a history of regular opioid use during pregnancy, use of antagonist agents such as naloxone (and naltrexone) in the neonatal period, including for resuscitation, is contraindicated. Its use may precipitate severe rapid onset of withdrawal associated with seizures.

In the event of respiratory depression in an infant of an opioid-dependent mother, normal resuscitation methods should be used (without naloxone), including thorough assessment and mechanical ventilation as required.

Level of evidence: Consensus

4.7 Supportive therapies for babies

Non-pharmacological management is the first line of treatment for all babies born to drug-dependent women. That management will include supportive care interventions, such as a quiet setting, breastfeeding, use of a pacifier, cuddling, swaddling, small frequent feeds, and close skin contact by carrying in a sling and other methods. Close monitoring of weight loss during the period of withdrawal is necessary because feeding disturbances are common. Where caloric intake appears insufficient with breastfeeding alone, consideration should be given to the use of supplemental expressed breast milk or formula until adequate caloric intake is established.

Level of evidence: Consensus

Comment: Breastfeeding is an important aspect of care (see section 2.5, Breastfeeding). Decisions about the safety of breastfeeding should consider all the drugs being used by the mother, including alcohol and prescribed drugs.

Despite the importance of non-pharmacological therapies for babies with NAS, treatment with supportive care and morphine is more effective than supportive care alone, significantly reducing time to regain birth weight and the duration of supportive care.

Level of evidence: III-1

4.8 Role of parent/s

If the mother and father demonstrate interest and ability, they should be involved in the assessing and managing of NAS. With this in mind, parents should be informed and educated during the antenatal period about the risks, supportive care, assessments and treatments of NAS.

Level of evidence: Consensus

Comment: See Appendix 11: Example of parent information brochure on NAS.

4.9 Support for mothers/parents

Mothers of infants at risk of NAS should receive appropriate breastfeeding information and support, parenting support and assessment, and should be taught settling techniques. Women and their partners/support persons should also receive information about safe sleeping practices, especially while using sedating medications, including methadone.

Level of evidence: Consensus

4.10 Initiating pharmacological treatment

Pharmacological treatment of infants with NAS due to opioids should be initiated when the Finnegan or modified Finnegan score averages 8 or more on 3 consecutive scores or 12 or more on 2 consecutive scores when assessed by an experienced scorer.

Level of evidence: III-1 (Osborn et al 2005a and 2005b)

4.11 Pharmacological choices of treatment

4.11.1 Treatment of opioid withdrawal

Use of opioids for infants with NAS due to opioid withdrawal

An opioid should be used as initial treatment for infants with NAS symptoms due to opioid withdrawal. The opioid of choice is morphine.

Level of evidence: III-1 (Osborn et al 2005a)

Comment: Opioids should not be used unless there is confidence that the NAS is induced by opioid withdrawal.

It is unclear from the evidence what the starting dose of opioid should be. Tempered by the use of clinical judgement, a starting dose of morphine 0.5 mg/kg/day in four divided doses (six-hourly) is recommended. Doses should be titrated to NAS scores, that is, to control infant signs of NAS.

Level of evidence: III-1 (Osborn et al 2005a)

Comment: Infants with opioid-related NAS are less likely to have seizures if treated with an opioid. They are also less likely to require treatment with a second agent, and may have a reduced duration of treatment.

Use of phenobarbitone for infants with NAS due to opioid withdrawal

The benefits of using phenobarbitone in addition to an opioid for infants with opioid-related NAS are unclear. If there has been concurrent use of other drugs in pregnancy, particularly benzodiazepines, and symptoms of NAS are not adequately suppressed by an opioid alone, phenobarbitone may be indicated as an additional therapy.

Level of evidence: III-1 (Osborn et al 2005a)

4.11.2 Treatment of non-opioid withdrawal

Infants with NAS due to unknown drug use or drug use not including opioids

If an infant has signs of NAS and the drugs used by the mother are unknown, an experienced person should make a full assessment of maternal drug use. In addition, infant urine and meconium may be used for toxicological analysis.

Level of evidence: Consensus

If an infant has signs of NAS and reaches the treatment threshold (see section 4.10, Initiating pharmacological treatment of NAS), and the drugs used by the mother are unknown, or are sedatives, such as benzodiazepines, or the infant was born to a mother intoxicated with alcohol, then phenobarbitone should be used as initial treatment.

Level of evidence: Consensus

Comment: It is rare for infants to require pharmacological treatment for NAS due to other drugs including tobacco, cannabis, amphetamines, cocaine or antidepressants.

Dosing with phenobarbitone

It is unclear whether a loading dose of phenobarbitone should be used. If used as initial therapy (rather than in addition to an opioid), then a loading dose is likely to achieve more rapid control of symptoms.

Level of evidence: III-1 (Osborn et al 2005b)

Phenobarbitone should be commenced at a dose of 5 mg/kg/day split into two divided doses. The dose should be titrated to achieve control of NAS according to the Finnegan score.

Level of evidence: III-1 (Osborn et al 2005b)

4.12 Setting for care of baby

Whether the infant being assessed or treated for NAS is cared for in a special care nursery or with the mother on the postnatal ward varies across Australia. In principle, unnecessary separation of the infant from the mother should be avoided. However, the safety of the infant is the primary concern. Setting for care will depend on individual circumstances, the health care facilities available, the condition of the baby and the ability of the mother to safely care for the baby.

Level of evidence: Consensus

Comment: Wherever possible, the first choice should be to keep the infant with the mother.

4.13 Drug testing of newborn, Day 1

Routine urine drug testing of all infants is not indicated. Urine drug testing and/or meconium drug testing may be performed where it is considered of diagnostic importance to work out what drugs the mother has been using, particularly where there is no confident therapeutic relationship with the mother. In cases where it is decided to undertake urine or meconium testing, then the test should be explained to the mother, and informed consent should be obtained.

Level of evidence: Consensus

Comment: The quality of the therapeutic relationship is an important factor in obtaining reliable information from the mother.

4.14 Minimum length of stay of baby

Infants at risk of NAS should remain in hospital for at least 5 days. This allows for a minimum time to monitor for signs of NAS, assess the parents' parenting skills, assess the adequacy of infant feeding and check for excessive weight loss.

Level of evidence: Consensus

Comment: This recommendation is not meant to discourage longer hospital stays for the baby at risk of NAS. Some infants have a delayed onset of NAS, requiring a longer stay in hospital. (see Appendix 12: Duration of postnatal hospitalisation required to detect severe NAS).

4.15 Safe discharge

4.15.1 Criteria for safe discharge of infants home

All mothers should be assessed adequately before discharge with respect to current drug usage and psychological stability, parent craft abilities, and social situation. The infant's well-being must also be assessed.

Absolute contraindications to discharge home include:

- excessive weight loss (10 per cent or more of birth weight)
- baby not yet 5 days old
- suspected infant neglect or abuse
- suspected home violence

- a court order preventing baby from being discharged home
- further assessment for withdrawal is required.

Relative contraindications to discharge home include:

- poor parent craft ability of mother or primary carer
- inadequate home support or acceptance of assistance
- inadequate housing or material goods
- erratic behaviour or continued problematic drug use
- polydrug use
- inability to provide adequate monitoring of infant wellbeing.

Most infants requiring treatment for NAS caused by opioid withdrawal will reach treatment threshold by 7 days after birth (see Appendix 12: Duration of postnatal hospitalisation required to detect severe NAS). A few may have delayed withdrawal, requiring an extended stay in hospital. If mothers insist on going home against medical advice, a community services (child protection) notification should be considered.

4.15.2 Safe discharge home of baby on pharmacological treatment

There are insufficient data to determine the safety of discharge of infants on morphine. Before an infant is discharged home on morphine or phenobarbitone, the treatment team must be satisfied of the safety of the home environment and of the parents' parenting abilities and ability to administer treatment. Careful and frequent supervision by the treatment team is required.

Level of evidence: Consensus

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Glossary

This glossary is based on the National Drug Strategy 'Australia's integrated framework 2004–2009'.

Aboriginal Health Worker: an Aboriginal and Torres Strait Islander person employed to provide health services to Aboriginal and/or Torres Strait Islander people.

abstinence: refraining from drug or alcohol use.

AIDS (acquired immune deficiency syndrome): a syndrome defined by the development of serious opportunistic infections, neoplasms or other life threatening manifestations resulting from progressive HIV-induced immunosuppression.

analgesia: pain relief.

benzodiazepines: a group of drugs used mainly as sedatives and muscle relaxants, and for the treatment of epilepsy (eg diazepam). Dependence on benzodiazepines may develop quickly and be difficult to treat, consequently care must be used in prescribing. Non-prescription use and over use is common.

binge drinking: conventionally can refer to occasional bouts of heavy drinking by young and/or non-alcohol-dependent people, although not limited to young people.

binge drug use: refers to occasional bouts of heavy use of any drug by young and/or non-drug-dependent people.

blood-borne virus: a virus that can be transmitted from an infected person to another person by blood-to-blood contact, including through the sharing of injecting equipment.

BMT: buprenorphine maintenance treatment: a treatment for opioid dependence in which the dependent person is prescribed regular doses of buprenorphine, a long-acting partial agonist of opioid receptors. The dose is in tablet form placed under the tongue. Like methadone maintenance, buprenorphine maintenance reduces the subjective effect of and craving for short-acting opioids such as heroin and stabilises the dependent person in treatment. People in buprenorphine maintenance are less likely to inject opioids, share injecting equipment, or engage in criminal activity associated with illicit drug use.

buprenorphine: a long-acting partial agonist of opioid receptors.

continuity of care: in these guidelines, refers to managing pregnant women so as to ensure that their health care is complete and continuous, with a minimum of changes in health care providers and with a coordinated handover of health care responsibilities when a change of health care providers is required.

dependence: see 'drug dependence'.

dose titration: see 'titration'.

drug: a substance that produces a psychoactive effect. Within the context of the National Drug Strategy 'drug' is used generically to include tobacco, alcohol, pharmaceutical drugs and illicit drugs. The National Drug Strategy also takes account of performance and image-enhancing drugs, and substances such as inhalants and kava.

drug dependence: drug dependence is characterised by a strong desire to take a drug. Among the indicators of dependence are impaired control over drug use, a higher priority given to drug use than to other activities and obligations, increased tolerance, physical withdrawal symptoms, and repeated drug use to suppress withdrawal.

drug-related harm: any adverse social, physical, psychological, legal or other consequence of drug use that is experienced by a person using drugs or by people living with or otherwise affected by the actions of a person using drugs.

engagement: enrolling the woman in ongoing care; initiating the processes of care in such a way that the woman commits to continuing treatment. It is the quality of the therapeutic relationship that is important.

Entonox gas: a 50:50 mixture of oxygen and nitrous oxide gas, provided to women in labour as a form of pain relief.

evidence-informed practice: integration of the best available evidence with professional expertise to make decisions.

fetal alcohol syndrome (FAS): birth defects in an infant caused by the mother's alcohol use during pregnancy. Children with fetal alcohol syndrome have brain damage, facial deformities, and growth deficits. Heart, liver, and kidney defects also are common, as well as vision and hearing problems. Affected individuals have difficulties with learning, attention, memory, and problem solving. The syndrome is at the severe end of a spectrum of negative effects on the fetus caused by alcohol.

fetal alcohol spectrum disorder (FASD): a congenital disorder caused by the mother's alcohol use during pregnancy. There is a wide range of these disorders, from minor defects in physical or mental development to the fetal alcohol syndrome.

gestation: pregnancy. The normal full-term gestation is 40 weeks (280 days), measured from the first day of the mother's last menstrual period to the birth. The gestational age is the estimated age of the fetus in the womb or of the neonate at birth.

harm-reduction strategies: strategies that are designed to reduce the impacts of drug-related harm on individuals and communities. Governments do not condone illegal risk behaviours such as injecting drug use: they acknowledge that these behaviours occur and that they have a responsibility to develop and implement public health and law-enforcement measures designed to reduce the harm that such behaviours can cause.

harm minimisation: the primary principle underpinning the National Drug Strategy. It refers to policies and programs aimed at reducing drug-related harm. It aims to improve health, social and economic outcomes for both the community and the individual, and encompasses a wide range of approaches, including abstinence-oriented strategies. Australia's harm-minimisation strategy focuses on both licit and illicit drugs. Harm minimisation includes preventing anticipated harm and reducing actual harm.

harmful drug use: a pattern of drug use that has adverse social, physical, psychological, legal or other consequences for a person using drugs or people living with or otherwise affected by the actions of a person using drugs. Hazardous drug use is any drug use that puts the person using drugs, or those living with or otherwise affected by the actions of a person using drugs, at risk of these harmful consequences. Hazardous drug use includes any use of illicit drugs.

HCV: hepatitis C virus: a blood-borne virus that affects the liver. Transmission occurs when the blood of someone who is already infected with hepatitis C enters the bloodstream of another person, such as through sharing needles.

health care worker/practitioner: in these guidelines, means any of the workers with professional training (eg in medicine, nursing, psychology, social work, physiotherapy, drug and alcohol counselling or other therapies) who are involved in the care of pregnant women.

HIV: human immunodeficiency virus. A human retrovirus that leads to acquired immune deficiency syndrome (AIDS). Transmission occurs through the exchange of bodily fluids, especially blood or semen.

illicit drug: a drug whose production, sale or possession is prohibited. 'Illegal drug' is an alternative term.

infancy: from 28 days to the first year of life.

inhalants: substances inhaled for psychoactive effects—for example, glues, aerosol sprays, paints, industrial solvents, thinners, petrol and cleaning fluids.

Intergovernmental Committee on Drugs (IGCD): one of the advisory bodies supporting the Ministerial Council on Drug Strategy, the Intergovernmental Committee on Drugs is a Commonwealth–State–Territory government forum which provides advice to Ministers on the full range of drug-related matters. It consists of senior officers representing health and law-enforcement agencies in each Australian jurisdiction (appointed by their respective health and law-enforcement Ministers) and other people with expertise in identified priority areas (for example, representatives of the Australian Customs Service, the Department of Education, Science and Training and the Ministerial Advisory Committee on Aboriginal and Torres Strait Islander Affairs). The IGCD is responsible for implementing the National Drug Strategic Framework. For further information, refer to www.nationaldrugstrategy.gov.au/councils/igcd.htm

intervention: any action by a health care provider intended to alter a health care outcome for a member of the population. Providing information, enrolling a patient in treatment, providing specific treatments or support services are all interventions.

kava: a drink or preparation obtained from the kava plant, *Piper methysticum*.

licit drug: a drug whose production, sale or possession is not prohibited. 'Legal drug' is an alternative term.

methadone: a long-acting opioid drug taken orally. The liquid form is always used in the treatment of addictive disorders, whereas the tablet form is used in the treatment of cancer or other intractable pain.

MMT: methadone maintenance treatment: a treatment for opioid dependence in which the dependent person is prescribed regular doses of methadone, a long-acting opioid drug. Methadone is given as a non-sweetened syrup taken orally. Methadone maintenance reduces the subjective effect of and craving for short-acting opioids such as heroin, stabilises the dependent person in treatment. People in methadone maintenance are less likely to inject opioids, share injecting equipment, or engage in criminal activity associated with illicit drug use.

Ministerial Council on Drug Strategy (MCDS): the peak policy- and decision-making body in relation to licit and illicit drugs in Australia, the Ministerial Council on Drug Strategy brings together Commonwealth, State and Territory Ministers of Health and Law Enforcement, including the Minister responsible for Education. The role of the Council is to collectively determine national policies and programs to reduce drug-related harm. The Ministerial Council ensures that the Australian approach to harmful drug use is nationally coordinated and integrated. Its collaborative approach is designed to achieve national consistency in policy principles, program development and The MCDS meets twice a year, usually in May and November and a Communique of the outcomes of the meeting is made publicly available. For further information, refer to www.nationaldrugstrategy.gov.au/councils/mcnds.htm.

miscarriage: spontaneous abortion; expulsion of the fetus from the womb before it is viable.

mortality: death. The mortality rate is the rate of death from a specified cause or in a specified population.

naloxone: a fast-acting opioid antagonist. Naloxone is used to treat overdoses of opioid drugs. It competitively displaces opioid agonists from opioid receptors, and can rapidly reverse symptoms and signs of opioid toxicity.

naltrexone: a long acting, highly specific opioid antagonist. Naltrexone blocks opioid receptors so that a person taking naltrexone will not experience the usual effects of taking opioids. Naltrexone competitively displaces opioid agonists if they are present. Naltrexone maintenance treatment can help some people with a history of opioid-dependence remain abstinent.

narcotic drug: usually refers to opioids. It is also a preferred term in United Nations conventions, where it may be used to refer more widely to other drugs.

National Drug Strategy: formerly the National Campaign against Drug Abuse, was initiated in 1985, following a Special Premiers Conference. The National Drug Strategy provides a comprehensive, integrated approach to the harmful use of licit and illicit drugs and other substances. The aim is to achieve a balance between harm-reduction, demand-reduction and supply-reduction measures to reduce the harmful effects of drugs in Australian society. The National Drug Strategy promotes partnerships between health, law enforcement and education agencies, drug users, people affected by drug-related harm, community-based organisations and industry, to reduce drug-related harm in Australia.

National Drug Strategy Household Survey: the National Drug Strategy Household Survey series is one of the data-collections used to monitor trends and progress under the National Drug Strategy. The Surveys have been conducted nationally in 1985, 1988, 1991, 1993, 1995, 1998, 2001 and 2004 and provide data on behaviour, knowledge and attitudes relating to drug use among people aged 14 years and over.

Needle and Syringe Programs: Authorised programs for distributing, disposing of or selling needles and syringes.

neonatal abstinence syndrome (NAS): a syndrome of drug withdrawal observed in infants of mothers physically dependent on drugs, manifested by non-specific symptoms and signs in the infant. NAS is more common in infants born to opioid-dependent women than in infants born to women dependent on other drugs or alcohol. NAS in infants of opioid-dependent mothers is manifested by neurological excitability, gastrointestinal dysfunction and autonomic signs. There may be poor feeding, sleep-wake abnormalities, vomiting, dehydration, poor weight gain and occasionally seizures.

neonatal period: first 28 days of life.

neonatal death: death of a live-born baby within the first 28 days from the time of birth.

nicotine: the principle drug in tobacco. It is a potent nerve poison and is included in many insecticides. In lower concentrations, the substance is a stimulant and is one of the main factors leading to the pleasure and habit-forming qualities of tobacco smoking.

nicotine replacement therapy (NRT): a treatment designed to help people stop smoking by providing them with an alternative source of nicotine (such as nicotine chewing gum or skin patches). By removing the craving for nicotine, NRT reduces the desire to smoke.

opiate: see 'opioid'.

opioid: the generic term applied to alkaloids and their derivatives obtained from the opium poppy (*Papaver somniferum*), including methadone, morphine, heroin and codeine.

opioid treatment program: a program to provide pharmacotherapies for opioid dependent people, such as methadone maintenance or buprenorphine maintenance.

optimum therapeutic dose: the dose of a drug that achieves the best possible treatment of the patient. Determining the optimum therapeutic dose involves balancing the beneficial effects and side effects of the drug.

overdose: the use of a drug in an amount that causes acute adverse physical or mental effects. Overdose may produce transient or lasting effects and can sometimes be fatal.

partnership approach: in the context of the National Drug Strategy, a partnership approach is defined as a close working relationship between the Commonwealth government, State and Territory governments, local governments, affected communities (including drug users and those affected by drug-related harm), business and industry, community-based organisations, professional workers and research institutions.

PCR: polymerase chain reaction. This reaction can be used to amplify specific fragments of DNA or RNA in a sample (such as a blood sample). PCR tests are used for the diagnosis of viral infections such as HIV.

perinatal period: from 20 completed weeks gestation up to 7 days post delivery.

perinatal death; perinatal mortality: stillbirths plus any deaths up to 7 days from the time of birth.

pharmacotherapy: treatment using drugs. Pharmacotherapies for drug dependence include methadone maintenance or buprenorphine maintenance as a treatment for heroin dependence and nicotine replacement therapy as a treatment for tobacco dependence.

polydrug use: the use of more than one drug, simultaneously or at different times. The term 'polydrug user' is often used to distinguish a person with a varied pattern of drug use from someone who uses one kind of drug exclusively.

population group: can refer to an entire population group, as defined by geographical location, or to sub-groups defined by geographical location, age, risk factor, or possession of a common condition or disease.

preterm labour and birth (delivery): birth after 20 weeks and before 37 weeks gestation

prevention: within the context of the National Drug Strategy, prevention refers to measures that prevent or delay the onset of drug use as well as measures that protect against risk and prevent and reduce the harms associated with drug supply and use.

psychoactive effects: effects that alter mental processes—mood, cognition, thinking or behaviour.

psychostimulant: a drug that activates, enhances or increases neural activity. Caffeine, nicotine, amphetamines, cocaine and MDMA (ecstasy) are the psychostimulants most commonly used in Australia.

relapse: the recurrence of a disease after a seeming recovery; in relation to drug dependence, this means a return to using the drug of dependence after a period of abstinence.

sudden infant death syndrome (SIDS): the sudden death of an infant which remains unexplained after a full paediatric autopsy including toxicology, review of medical and social history, and assessment of the circumstances of the death.

smoking status: a description of an individual's current smoking habits, such as 'Never smoked', 'Quit smoking [how long ago]', 'Trying to quit', 'Cutting down [from what to what]', 'Current smoker [number of cigarettes per day]'.

stillbirth: an in utero death delivering after 20th week of pregnancy

sudden unexpected deaths in infancy (SUDI): death of an infant less than 12 months of age, where the death was sudden, and was unexpected at the time. The term 'unexpected' indicates that the cause of death was not recognised before the event, although it may be diagnosed at autopsy. SUDI usually includes death due to SIDS and to other ill-defined causes (such as sleeping accidents).

teratogen: an agent that can cause malformations of an embryo or fetus

titration: the process of finding the optimum therapeutic dose of a drug for an individual by observing the effect of each dose on the individual and adjusting subsequent doses up or down accordingly. Dose titration can be guided by observations of signs and symptoms in the individual and/or by biochemical tests (such as blood tests).

user groups: community-based organisations representing the interests of drug users.

vertical transmission: transmission of an infection from mother to fetus or infant.

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Appendix 1: Advice for health care workers on drugs and alcohol

National Quitline number	13 7848 (<i>cost of local call</i>)
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Australian Capital Territory	
Alcohol and Drug Service (ADIS)	02 6207 9977

New South Wales	
NSW Drug and Alcohol Specialist Advisory Service (DASAS) (24-hour health professionals telephone service)	02 9361 8006 1800 023 687 (<i>outside Sydney</i>)

Northern Territory	
Drug and Alcohol Clinical Advisory Service (DACAS-NT)	1800 111 092

Queensland	
Queensland Drug Information Centre	07 3636 7098
Therapeutic Advice and Information Service	1300 138 677
Alcohol and Drug Information Service (ADIS) (24-hour counselling, information and referral)	07 3236 2414 1800 177 833 (<i>outside Brisbane</i>)

South Australia	
Alcohol and Drug Information Service (ADIS) in SA	1300 13 13 40

Tasmania	
Drug and Alcohol Clinical Advisory Service (DACAS)	1800 630 093

Victoria	
The Women's Alcohol & Drug Service (pregnancy care and professional support)	03 9344 3631
DirectLine (24 hour counselling and referral)	1800 888 236
Quit Victoria	03 9663 7777

Western Australia	
Antenatal Chemical Dependency Clinic (ACDC) Women's and Children's Health Service	08 93401379

Appendix 2: Advice for consumers on drugs, alcohol and medications

National Quitline number	13 7848 (<i>cost of local call</i>)
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Australian Capital Territory	
Alcohol and Drug Service (ADIS) (24-hour counselling, information and referral)	02 6207 9977

New South Wales	
MotherSafe: the Statewide Medications in Pregnancy and Lactation Advisory Service The Royal Hospital for Women, Barker Street, Randwick 2031	02 9382 6539 Freecall 1800 647 848
Alcohol and Drug Information Service (ADIS) (24-hour counselling, information and referral)	02 9361 8000 1800 422 599 (<i>outside Sydney</i>)
Poisons' Information Centre	13 11 26

Northern Territory	
ADIS NT (24-hour counselling, information and referral)	1800 131 350
Drug and Poisons Information Centre Royal Darwin Hospital Specialty Tropical Medicine	08 8922 8424
Pregnancy Drug Information Centre, Royal Darwin Hospital	08 8922 8424

Queensland	
National Prescribing Service Limited (NPS) Medicines Line Monday to Friday, 9am to 6pm EST	1300 888 763
Alcohol and Drug Information Service (ADIS) (24-hour counselling, information and referral)	07 3236 2414 1800 177 833 (<i>outside Brisbane</i>)

South Australia	
Alcohol and Drug information Service (ADIS) (24-hour counselling, information and referral)	1300 131 340
Drugs in Pregnancy Service Women's and Children's Hospital, 9am – 5pm Monday to Friday	08 8161 7222

Tasmania	
Alcohol and Drug Information Service (ADIS) (24-hour counselling, information and referral)	1800 811 994

Victoria	
Drug information Centre The Royal Women's Hospital, Melbourne, 9am – 5pm Monday to Friday	03 9344 2277

Western Australia	
Antenatal Chemical Dependency Clinic (ACDC) Women's and Children's Health Service	08 93401379

Appendix 3: Examples of drug use assessment tools

Example 1: The Alcohol, Smoking and Substance Involvement Screening Test (ASSIST)

WHO - ASSIST V3.0

CLINICIAN ID	<input type="text"/>	CLINIC	<input type="text"/>
PATIENT ID	<input type="text"/>	DATE	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

INTRODUCTION *(Please read to patient. Can be adapted for local circumstances)*

(Many drugs & medications can affect your health. It is important for your health care provider to have accurate information about your use of various substances, in order to provide the best possible care.)

The following questions ask about your experience of using alcohol, tobacco products and other drugs across your lifetime and in the past three months. These substances can be smoked, swallowed, snorted, inhaled, injected or taken in the form of pills (show drug card).

Some of the substances listed may be prescribed by a doctor (like amphetamines, sedatives, pain medications). For this interview, we will not record medications that are used as prescribed by your doctor. However, if you have taken such medications for reasons other than prescription, or taken them more frequently or at higher doses than prescribed, please let me know. While we are also interested in knowing about your use of various illicit drugs, please be assured that information on such use will be treated as strictly confidential.

NOTE: BEFORE ASKING QUESTIONS, GIVE ASSIST RESPONSE CARD TO PATIENT

Question 1

In your life, which of the following substances have you <u>ever used?</u> <i>(NON-MEDICAL USE ONLY)</i>	No	Yes
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	3
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	3
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	3
d. Cocaine (coke, crack, etc.)	0	3
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	3
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	3
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	0	3
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	3
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	3
j. Other - specify:	0	3

Probe if all answers are negative: “Not even when you were in school?”	If “No” to all items, stop interview. If “Yes” to any of these items, ask Question 2 for each substance ever used.
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Question 2

In the <u>past three months</u> , how often have you used the substances you mentioned (<i>FIRST DRUG, SECOND DRUG, ETC</i>)?	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	2	3	4	6
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	2	3	4	6
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	2	3	4	6
d. Cocaine (coke, crack, etc.)	0	2	3	4	6
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	2	3	4	6
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	2	3	4	6
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	0	2	3	4	6
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	2	3	4	6
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	2	3	4	6
j. Other - specify:	0	2	3	4	6

If "Never" to all items in Question 2, skip to Question 6.

If any substances in Question 2 were used in the previous three months, continue with Questions 3, 4 & 5 for each substance used.

Question 3

During the <u>past three months</u> , how often have you had a strong desire or urge to use (<i>FIRST DRUG, SECOND DRUG, ETC</i>)?	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	3	4	5	6
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	3	4	5	6
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	3	4	5	6
d. Cocaine (coke, crack, etc.)	0	3	4	5	6
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	3	4	5	6
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	3	4	5	6
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	0	3	4	5	6
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	3	4	5	6
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	3	4	5	6
j. Other - specify:	0	3	4	5	6

Question 4

During the <u>past three months</u> , how often has your use of (<i>FIRST DRUG, SECOND DRUG, ETC</i>) led to health, social, legal or financial problems?	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	4	5	6	7
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	4	5	6	7
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	4	5	6	7
d. Cocaine (coke, crack, etc.)	0	4	5	6	7
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	4	5	6	7
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	4	5	6	7
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	0	4	5	6	7
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	4	5	6	7
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	4	5	6	7
j. Other - specify:	0	4	5	6	7

Question 5

During the <u>past three months</u> , how often have you failed to do what was normally expected of you because of your use of (<i>FIRST DRUG, SECOND DRUG, ETC</i>)?	Never	Once or Twice	Monthly	Weekly	Daily or Almost Daily
a. Tobacco products					
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	5	6	7	8
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	5	6	7	8
d. Cocaine (coke, crack, etc.)	0	5	6	7	8
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	5	6	7	8
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	5	6	7	8
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	0	5	6	7	8
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	5	6	7	8
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	5	6	7	8
j. Other - specify:	0	5	6	7	8

Ask Questions 6 & 7 for all substances ever used (i.e. those endorsed in Question 1)

Question 6

Has a friend or relative or anyone else <u>ever</u> expressed concern about your use of (FIRST DRUG, SECOND DRUG, ETC.)?	No, Never	Yes, in the past 3 months	Yes, but not in the past 3 months
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	6	3
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	6	3
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	6	3
d. Cocaine (coke, crack, etc.)	0	6	3
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	6	3
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	6	3
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	0	6	3
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	6	3
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	6	3
j. Other – specify:	0	6	3

Question 7

Have you <u>ever</u> tried and failed to control, cut down or stop using (FIRST DRUG, SECOND DRUG, ETC.)?	No, Never	Yes, in the past 3 months	Yes, but not in the past 3 months
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)	0	6	3
b. Alcoholic beverages (beer, wine, spirits, etc.)	0	6	3
c. Cannabis (marijuana, pot, grass, hash, etc.)	0	6	3
d. Cocaine (coke, crack, etc.)	0	6	3
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)	0	6	3
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)	0	6	3
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)	0	6	3
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)	0	6	3
i. Opioids (heroin, morphine, methadone, codeine, etc.)	0	6	3
j. Other – specify:	0	6	3

Question 8

	No, Never	Yes, in the past 3 months	Yes, but not in the past 3 months
Have you <u>ever</u> used any drug by injection? (NON-MEDICAL USE ONLY)	0	2	1

IMPORTANT NOTE:

Patients who have injected drugs in the last 3 months should be asked about their pattern of injecting during this period, to determine their risk levels and the best course of intervention.

PATTERN OF INJECTING

Once weekly or less *or*
Fewer than 3 days in a row

INTERVENTION GUIDELINES

Brief Intervention including “risks associated with injecting” card

More than once per week *or*
3 or more days in a row

Further assessment and more intensive treatment*

HOW TO CALCULATE A SPECIFIC SUBSTANCE INVOLVEMENT SCORE.

For each substance (labelled a. to j.) add up the scores received for questions 2 through 7 inclusive. Do not include the results from either Q1 or Q8 in this score. For example, a score for cannabis would be calculated as: **Q2c + Q3c + Q4c + Q5c + Q6c + Q7c**

Note that Q5 for tobacco is not coded, and is calculated as: **Q2a + Q3a + Q4a + Q6a + Q7a**

THE TYPE OF INTERVENTION IS DETERMINED BY THE PATIENT’S SPECIFIC SUBSTANCE INVOLVEMENT SCORE

	Record specific substance score	no intervention	receive brief intervention	more intensive treatment *
a. tobacco		0 - 3	4 - 26	27+
b. alcohol		0 - 10	11 - 26	27+
c. cannabis		0 - 3	4 - 26	27+
d. cocaine		0 - 3	4 - 26	27+
e. amphetamine		0 - 3	4 - 26	27+
f. inhalants		0 - 3	4 - 26	27+
g. sedatives		0 - 3	4 - 26	27+
h. hallucinogens		0 - 3	4 - 26	27+
i. opioids		0 - 3	4 - 26	27+
j. other drugs		0 - 3	4 - 26	27+

NOTE: *FURTHER ASSESSMENT AND MORE INTENSIVE TREATMENT may be provided by the health professional(s) within your primary care setting, or, by a specialist drug and alcohol treatment service when available.

WHO ASSIST V3.0 RESPONSE CARD FOR PATIENTS

Response Card - substances

a. Tobacco products (cigarettes, chewing tobacco, cigars, etc.)
b. Alcoholic beverages (beer, wine, spirits, etc.)
c. Cannabis (marijuana, pot, grass, hash, etc.)
d. Cocaine (coke, crack, etc.)
e. Amphetamine type stimulants (speed, diet pills, ecstasy, etc.)
f. Inhalants (nitrous, glue, petrol, paint thinner, etc.)
g. Sedatives or Sleeping Pills (Valium, Serepax, Rohypnol, etc.)
h. Hallucinogens (LSD, acid, mushrooms, PCP, Special K, etc.)
i. Opioids (heroin, morphine, methadone, codeine, etc.)
j. Other - specify:

Response Card (ASSIST Questions 2 – 5)

Never: not used in the last 3 months

Once or twice: 1 to 2 times in the last 3 months.

Monthly: 1 to 3 times in one month.

Weekly: 1 to 4 times per week.

Daily or almost daily: 5 to 7 days per week.

Response Card (ASSIST Questions 6 to 8)

No, Never

Yes, but not in the past 3 months

Yes, in the past 3 months

**Alcohol, Smoking and Substance Involvement Screening Test
(WHO ASSIST V3.0) Feedback REPORT CARD for Patients**

Name _____ Test Date _____

Specific Substance Involvement Scores

Substance	Score	Risk Level
a. Tobacco products		0-3 Low 4-26 Moderate 27+ High
b. Alcoholic Beverages		0-10 Low 11-26 Moderate 27+ High
c. Cannabis		0-3 Low 4-26 Moderate 27+ High
d. Cocaine		0-3 Low 4-26 Moderate 27+ High
e. Amphetamine type stimulants		0-3 Low 4-26 Moderate 27+ High
f. Inhalants		0-3 Low 4-26 Moderate 27+ High
g. Sedatives or Sleeping Pills		0-3 Low 4-26 Moderate 27+ High
h. Hallucinogens		0-3 Low 4-26 Moderate 27+ High
i. Opioids		0-3 Low 4-26 Moderate 27+ High
j. Other - specify		0-3 Low 4-26 Moderate 27+ High

What do your scores mean?

- Low:** You are at low risk of health and other problems from your current pattern of use.
- Moderate:** You are at risk of health and other problems from your current pattern of substance use.
- High:** You are at high risk of experiencing severe problems (health, social, financial, legal, relationship) as a result of your current pattern of use and are likely to be dependent

Are you concerned about your substance use?

a. tobacco	Your risk of experiencing these harms is:..... Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> (tick one)
	Regular tobacco smoking is associated with:
	Premature aging, wrinkling of the skin
	Respiratory infections and asthma
	High blood pressure, diabetes
	Respiratory infections, allergies and asthma in children of smokers
	Miscarriage, premature labour and low birth weight babies for pregnant women
	Kidney disease
	Chronic obstructive airways disease
	Heart disease, stroke, vascular disease
	Cancers

b. alcohol	Your risk of experiencing these harms is:..... Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> (tick one)
	Regular excessive alcohol use is associated with:
	Hangovers, aggressive and violent behaviour, accidents and injury
	Reduced sexual performance, premature ageing
	Digestive problems, ulcers, inflammation of the pancreas, high blood pressure
	Anxiety and depression, relationship difficulties, financial and work problems
	Difficulty remembering things and solving problems
	Deformities and brain damage in babies of pregnant women
	Stroke, permanent brain injury, muscle and nerve damage
	Liver disease, pancreas disease
	Cancers, suicide

c. cannabis	Your risk of experiencing these harms is:..... Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> (tick one)
	Regular use of cannabis is associated with:
	Problems with attention and motivation
	Anxiety, paranoia, panic, depression
	Decreased memory and problem solving ability
	High blood pressure
	Asthma, bronchitis
	Psychosis in those with a personal or family history of schizophrenia
	Heart disease and chronic obstructive airways disease
	Cancers

d. cocaine	Your risk of experiencing these harms is:....	Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/>
	Regular use of cocaine is associated with:	
	Difficulty sleeping, heart racing, headaches, weight loss	
	Numbness, tingling, clammy skin, skin scratching or picking	
	Accidents and injury, financial problems	
	Irrational thoughts	
	Mood swings - anxiety, depression, mania	
	Aggression and paranoia	
	Intense craving, stress from the lifestyle	
	Psychosis after repeated use of high doses	
	Sudden death from heart problems	

e. amphetamine type stimulants	Your risk of experiencing these harms is:.....	Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/>
	Regular use of amphetamine type stimulants is associated with:	
	Difficulty sleeping, loss of appetite and weight loss, dehydration	
	jaw clenching, headaches, muscle pain	
	Mood swings –anxiety, depression, agitation, mania, panic, paranoia	
	Tremors, irregular heartbeat, shortness of breath	
	Aggressive and violent behaviour	
	Psychosis after repeated use of high doses	
	Permanent damage to brain cells	
	Liver damage, brain haemorrhage, sudden death (from ecstasy) in rare situations	

f. inhalants	Your risk of experiencing these harms is:.....	Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/>
	Regular use of inhalants is associated with:	
	Dizziness and hallucinations, drowsiness, disorientation, blurred vision	
	Flu like symptoms, sinusitis, nosebleeds	
	Indigestion, stomach ulcers	
	Accidents and injury	
	Memory loss, confusion, depression, aggression	
	Coordination difficulties, slowed reactions, hypoxia	
	Delirium, seizures, coma, organ damage (heart, lungs, liver, kidneys)	
	Death from heart failure	

g. sedatives	Your risk of experiencing these harms is: Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> (tick one)
	Regular use of sedatives is associated with:
	Drowsiness, dizziness and confusion
	Difficulty concentrating and remembering things
	Nausea, headaches, unsteady gait
	Sleeping problems
	Anxiety and depression
	Tolerance and dependence after a short period of use.
	Severe withdrawal symptoms
	Overdose and death if used with alcohol, opioids or other depressant drugs.

h. hallucinogens	Your risk of experiencing these harms is:..... Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> (tick one)
	Regular use of hallucinogens is associated with:
	Hallucinations (pleasant or unpleasant) – visual, auditory, tactile, olfactory
	Difficulty sleeping
	Nausea and vomiting
	Increased heart rate and blood pressure
	Mood swings
	Anxiety, panic, paranoia
	Flash-backs
	Increase the effects of mental illnesses such as schizophrenia

i. opioids	Your risk of experiencing these harms is: Low <input type="checkbox"/> Moderate <input type="checkbox"/> High <input type="checkbox"/> (tick one)
	Regular use of opioids is associated with:
	Itching, nausea and vomiting
	Drowsiness
	Constipation, tooth decay
	Difficulty concentrating and remembering things
	Reduced sexual desire and sexual performance
	Relationship difficulties
	Financial and work problems, violations of law
	Tolerance and dependence, withdrawal symptoms
	Overdose and death from respiratory failure

WHO-ASSIST Risks of Injecting Card – Information for Patients

Using substances by injection increases the risk of harm from substance use.

This harm can come from:

- **The substance**
 - If you inject any drug you are more likely to become dependent.
 - If you inject amphetamines or cocaine you are more likely to experience psychosis.
 - If you inject heroin or other sedatives you are more likely to overdose.

- **The injecting behaviour**
 - If you inject you may damage your skin and veins and get infections.
 - You may cause scars, bruises, swelling, abscesses and ulcers.
 - Your veins might collapse.
 - If you inject into the neck you can cause a stroke.

- **Sharing of injecting equipment**
 - If you share injecting equipment (needles & syringes, spoons, filters, etc.) you are more likely to spread blood borne virus infections like Hepatitis B, Hepatitis C and HIV.

❖ It is safer not to inject

- ❖ **If you do inject:**
 - ✓ always use clean equipment (e.g., needles & syringes, spoons, filters, etc.)
 - ✓ always use a new needle and syringe
 - ✓ don't share equipment with other people
 - ✓ clean the preparation area
 - ✓ clean your hands
 - ✓ clean the injecting site
 - ✓ use a different injecting site each time
 - ✓ inject slowly
 - ✓ put your used needle and syringe in a hard container and dispose of it safely

- ❖ **If you use stimulant drugs like amphetamines or cocaine the following tips will help you reduce your risk of psychosis.**
 - ✓ avoid injecting and smoking
 - ✓ avoid using on a daily basis

- ❖ **If you use depressant drugs like heroin the following tips will help you reduce your risk of overdose.**
 - ✓ avoid using other drugs, especially sedatives or alcohol, on the same day
 - ✓ use a small amount and always have a trial "taste" of a new batch
 - ✓ have someone with you when you are using
 - ✓ avoid injecting in places where no-one can get to you if you do overdose
 - ✓ know the telephone numbers of the ambulance service

Example 2: Women's Alcohol and Drug Client Assessment Tool



The Royal Womens Hospital Women's Alcohol And Drug Service (WADS)

132 Grattan Street, Carlton 3053, Australia,
Telephone (03) 9344 3631 www.rwh.org.au/wads

Women's alcohol and drug service worker:

Date of screening:

Client: Past New

Client details

Name:

Address:

Telephone:

Mobile:

UR:

DOB:

Age:

Country of birth:

Cultural background:

Occupation:

Language used at home:

Interpreter needed: YES NO

Level of education:

Aboriginal or Torres Strait Islander: YES NO

Literacy difficulties: YES NO

Date of referral:

Referee:

Address:

Telephone:

General practitioner details

Name:

Address:

Telephone:

Fax:

Pharmacotherapy prescriber

Name:

Address:

Telephone:

Fax:

Current pharmacy details

Name:

Address:

Telephone:

Fax:

Support service details

Contact person:

Agency:

Address:

Telephone:

Fax:

Previous Pregnancies

1. Year _____ Outcome _____

Gestation _____ F/M _____

Delivery mode _____

2. Year _____ Outcome _____

Gestation _____ F/M _____

Delivery mode _____

3. Year _____ Outcome _____

Gestation _____ F/M _____

Delivery mode _____

Current Pregnancy

Have you had a positive pregnancy test: YES NO

Expected date of delivery: _____

Gestation (in weeks): _____

Was this pregnancy planned: YES NO

Have you had antenatal care: YES NO

If yes with whom: _____

Commencement date: _____

Medical/psychiatric history

Past medical/psychiatric history:

Current medical/psychiatric history:

Drug use history

Heroin

Age at first use: _____

Method of use: _____

Age at heaviest use: _____

Amount used at this time: _____

How many times a day did you use: _____

Were there any precipitating factors: YES NO

- peer pressure
- relationship/family breakdown
- financial hardship
- abuse/domestic violence

Other: _____

Age when you first sought to reduce/address your drug use: _____

- self detox
- home detox/supervised help
- pharmacotherapy
- specialist AOD counselling service
- self-help support group
- general practitioner
- AOD treatment residential
- general counselling

Other: _____

Current heroin use

Amount used: _____ How many times a day: _____

Method of use: _____

Has your use changed recently? YES NO

Reason for change:

- pregnancy
- relationship
- financial hardship
- legal issues
- desire to change

Other: _____

Date and time last used: _____

Injecting drug use history

Do you share injecting equipment?

Present: YES NO

Past: YES NO

Have you shared injecting equipment with a partner: YES NO

Have you shared injecting equipment with people other than your partner: YES NO

Alcohol use history

Age at first use: _____

Age at heaviest use: _____

Amount used at this time: _____

Were there any precipitating factors: YES NO

- peer pressure
- relationship/family breakdown
- financial hardship
- abuse/domestic violence

Other: _____

Alcohol current use

Amount used: _____

Has your use changed recently: YES NO

Reason for change:

- pregnancy
- relationship
- financial hardship
- legal issues
- desire to change

Other: _____

Date and time last used alcohol: _____

Amphetamines use history

Age at first use: _____

Method of use: _____

Age at heaviest use: _____

Amount used at this time: _____

How many times a day did you use: _____

Were there any precipitating factors: YES NO

peer pressure

relationship/family breakdown

financial hardship

abuse/domestic violence

Other: _____

Amphetamine current use

Method of use: _____

How many times a day: _____

Has your use changed recently: YES NO

Reason for change:

pregnancy

relationship

financial hardship

legal issues

desire to change

Other: _____

Date and time of last use: _____

Cannabis use history

Age at first use: _____

Method of use: _____

Age at heaviest use: _____

Amount used at this time: _____

How many times a day did you use: _____

Were there any precipitating factors: YES NO

peer pressure

relationship/family breakdown

financial hardship

abuse/domestic violence

Other: _____

Cannabis current use

Amount used: _____

Method of use: _____

How many times a day: _____

Has your use changed recently: YES NO

Reason for change:

pregnancy

relationship

financial hardship

legal issues

desire to change

Other: _____

Date and time of last use: _____

Benzodiazepines use history

Age at first use: _____

Method of use: _____

Age at heaviest use: _____

Amount used at this time: _____

How many times a day did you use: _____

Were there any precipitating factors: YES NO

peer pressure

relationship/family breakdown

financial hardship

abuse/domestic violence

Other: _____

Benzodiazepines current use

Benzo names: _____

Amount used: _____

Method of use: _____

How many times a day: _____

Has your use changed recently: YES NO

Reason for change:

- pregnancy
- relationship
- financial hardship
- legal issues
- desire to change

Other: _____

Date and time of last use: _____

Ecstasy use history

Age at first use: _____

Age at heaviest use: _____

Amount used at this time: _____

How many times a day did you use: _____

Were there any precipitating factors: YES NO

- peer pressure
- relationship/family breakdown
- financial hardship
- abuse/domestic violence

Other: _____

Ecstasy current use

Amount used: _____

Method of use: _____

How many times a day: _____

Has your use changed recently: YES NO

Reason for change:

- Pregnancy
- Relationship
- Financial hardship
- Legal issues
- Desire to change

Other: _____

Date and time of last use: _____

LSD use history

Age at first use: _____

Age at heaviest use: _____

Method of use: _____

Amount used at this time: _____

How many times a day did you use: _____

Were there any precipitating factors: YES NO

- peer pressure
- relationship/family breakdown
- financial hardship
- abuse/domestic violence

Other: _____

LSD current use

Amount used: _____

Method of use: _____

How many times a day: _____

Has your use changed recently: YES NO

Reason for change:

- pregnancy
- relationship
- financial hardship
- legal issues
- desire to change

Other: _____

Date and time of last use: _____

Inhalants use history

Age at first use: _____

Method of use: _____

Age at heaviest use: _____

Amount used at this time: _____

How many times a day did you use: _____

Were there any precipitating factors: YES NO

- peer pressure
- relationship/family breakdown
- financial hardship
- abuse/domestic violence

Other: _____

Inhalants current use

Names: _____

Amount used: _____

Method of use: _____

How many times a day: _____

Has your use changed recently: YES NO

Reason for change:

- pregnancy
- relationship
- financial hardship
- legal issues
- desire to change

Other: _____

Date and time of last use: _____

Tobacco use history

Age at first use: _____

Age at heaviest use: _____

How many times a day did you use: _____

Were there any precipitating factors: YES NO

- peer pressure
- relationship/family breakdown
- financial hardship
- abuse/domestic violence

Other: _____

Tobacco current use

How many times a day: _____

Has your use changed recently: YES NO

Reason for change:

- pregnancy
- relationship
- financial hardship
- legal issues
- desire to change

Other: _____

Cocaine use history

Age at first use: _____

Age at heaviest use: _____

Amount used at this time: _____

How many times a day did you use: _____

Were there any precipitating factors: YES NO

- peer pressure
- relationship/family breakdown
- financial hardship
- abuse/domestic violence

Other: _____

Current cocaine use

Amount used: _____

Method of use: _____

How many times a day: _____

Has your use changed recently: YES NO

Reason for change:

- Pregnancy
- Relationship
- Financial hardship
- Legal issues
- Desire to change

Other: _____

Date and time of last use: _____

Other substance use

**Pharmacotherapy
(methadone, buprenorphine, naltrexone)**

Age at first use: _____

How many times daily: _____

Method of use: _____

Amount used at this time: _____

Were there any precipitating factors: YES NO

peer pressure

relationship/family breakdown

financial hardship

abuse/domestic violence

Other: _____

Current pharmacotherapy

Amount used: _____

Method of use: _____

Has your use changed recently: YES NO

Reason for change:

Pregnancy

Relationship

Financial hardship

Legal issues

Desire to change

Other: _____

Date and time of last use: _____

Prescription medication

History

Current medication

Partner details

Name: _____

Address: _____

Age: _____ DOB: _____

Is your partner the father of the baby: YES NO

Is the baby's father aware of the pregnancy:

YES NO

How long have you and your partner been together:

Does your partner use drugs: YES NO

Partner's current drug use: _____

Method: _____

Amount: _____

How many times a day: _____

Is your partner's drug use a problem for you:

YES NO

Has your partner's use changed recently
and reasons for change: _____

Is he/she in treatment: _____

Partner's legal issues

none

bond

cbo

parole

ico

remand

drug treatment order

prison

bail/charged

court order

combined custody and community treatment

Other: _____

Partners previous children

Does your partner have any other children:

YES NO

Children details

Name: _____

DOB: _____

Name: _____

DOB: _____

Have DHS/child protection been involved:

YES NO

Details (order): _____

Partner's history with DHS/child protection

Details: _____

Clients history with DHS/child protection

Have you been a client of child protection as a child:

YES NO

Details: _____

Current involvement

- permanent care order
- guardianship order
- custody to the secretary order
- interium protection order
- supervision order
- unknown

Further details: _____

Client's children

Children details

Name: _____

DOB: _____

Name: _____

DOB: _____

Name: _____

DOB: _____

Have DHS/CP been involved: YES NO

- permanent care order
- guardianship order
- custody to the secretary order
- interium protection order

supervision order

unknown

Further information: _____

Clients legal situation

- none
- bond
- cbo
- parole
- ico
- remand
- drug treatment order
- prison
- bail/charged
- court order
- combined custody and community treatment

Other: _____

Further information: _____

Previous incarceration

Details: _____

Financial

Income:

- employed full-time
- pensioner
- self employed
- student
- employed part-time
- home duties
- sickness benefits
- unemployment

Other: _____

Referral to: _____

Housing

What type of housing are you currently in:

Living arrangement:

- alone
- spouse/partner
- alone with child(ren)
- spouse/partner and child(ren)
- friend(s)
- parent(s)
- relatives
- group household

Other: _____

Accommodation

- house/flat – owned house/flat – rented
- rooming/boarded hostel (supported)
- psychiatric home/hostel shelter/refuge
- AOD treatment service no fixed abode
- caravan park

Other: _____

How long have you been there: _____

Have you been homeless in the past 12 months:

- YES NO

Do you plan to move to more suitable housing:

- YES NO

Do you need housing assistance: YES NO

Details: _____

Do you have a housing worker: YES NO

Name: _____

Address: _____

Phone: _____

Referral made to housing worker: YES NO

Details: _____

Genogram

Significant relationship: _____

Abuse and domestic violence issues

In the past have you been exposed to:

Verbal abuse, physical trauma,
sexual assault and/or emotional trauma:

What age were you at the time: _____

Further information: _____

Worker access issues for home visits

Type of housing:

- house flat apartment

Access issues (stairs, parking):

Details: _____

Pets at the home:

- unknown no yes type:

Are pets restrained: no yes

Weapons in the home:

- unknown no yes type:

Past/current violence towards workers:

- no yes

Details: _____

Past/current violence in the home:

- unknown no yes

Details: _____

Suicide risk history

Past

Attempt: _____

Self harm: _____

Ideation: _____

Treatment: _____

Current

Attempt: _____

Self harm: _____

Ideation: _____

Treatment: _____

Individual treatment plan

Short term goals: _____

Medium term goals:

Long term goals: _____

*Source: Women’s Alcohol and Drug Service (WADS),
The Royal Women’s Hospital, Melbourne, Victoria.*

Appendix 4: Examples of assessment scales for opioid withdrawal in adults

Example 1: The short opiate withdrawal scale

Please put a check mark in the appropriate box if you have suffered from any of the following conditions in the last 24 hours:

	None	Mild	Moderate	Severe
Feeling Sick				
Stomach Cramps				
Muscle Spasms/Twitching				
Feelings of Coldness				
Heart Pounding				
Muscular Tension				
Aches and Pains				
Yawning				
Runny Eyes				
Insomnia/Problems Sleeping				

Scoring: None = 0 Mild = 1 Moderate = 2 Severe = 3

Gossop M. 'The development of a Short Opiate Withdrawal Scale (SOWS)'. *Addictive Behaviors*. 15(5), pp.487-90, 1990.

Example 2: a. The subjective opiate withdrawal scale (SOWS)

Date: _____ Time: _____

Please score each of the 16 items below according to how you feel now (circle one number)

	Symptom	not at all	a little	moderately	quite a bit	extremely
1	I feel anxious	0	1	2	3	4
2	I feel like yawning	0	1	2	3	4
3	I am perspiring	0	1	2	3	4
4	My eyes are tearing	0	1	2	3	4
5	My nose is running	0	1	2	3	4
6	I have goosebumps	0	1	2	3	4
7	I am shaking	0	1	2	3	4
8	I have hot flushes	0	1	2	3	4
9	I have cold flushes	0	1	2	3	4
10	My bones and muscles ache	0	1	2	3	4
11	I feel restless	0	1	2	3	4
12	I feel nauseous	0	1	2	3	4
13	I feel like vomiting	0	1	2	3	4
14	My muscles twitch	0	1	2	3	4
15	I have stomach cramps	0	1	2	3	4
16	I feel like using now	0	1	2	3	4

Total score range 0-64.

Example 2: b. Objective opioid withdrawal scale (OOWS)

Date: _____ Time: _____

Observe the patient during a 5 minute observation period then indicate a score for each of the opioid withdrawal signs listed below (items 1-13). Add the scores for each item to obtain the total score

	Sign	Measures		Score
1	Yawning	0 = no yawns	1 = \geq 1 yawn	
2	Rhinorrhoea	0 = < 3 sniffs	1 = \geq 3 sniffs	
3	Piloerection (observe client's arm)	0 = absent	1 = present	
4	Perspiration	0 = absent	1 = present	
5	Lacrimation	0 = absent	1 = present	
6	Tremor (hands)	0 = absent	1 = present	
7	Mydriasis (pupil dilation)	0 = absent	1 = \geq 3 mm	
8	Hot and Cold flushes	0 = absent	1 = shivering / huddling for warmth	
9	Restlessness	0 = absent	1 = frequent shifts of position	
10	Vomiting	0 = absent	1 = present	
11	Muscle twitches	0 = absent	1 = present	
12	Abdominal cramps (Holding stomach)	0 = absent	1 = Holding stomach	
13	Anxiety	0 = absent	1 = mild - severe	
	TOTAL SCORE			

Total score range 0-13

Handelsman L, Cochrane K, Aronson M, Ness R, Rubinstein K, Kanof P 1987 'Two new rating scales for opiate withdrawal' *American Journal of Drug and Alcohol Abuse* 13 (3), p. 293-308.

Source: *Women's Alcohol and Drug Service (WADS), Royal Women's Hospital, Melbourne Victoria.*

Appendix 5: Examples of safe sleeping practices information

Example 1: Women's Alcohol and Drug Service Safe Sleeping brochure

SAFE SLEEPING FOR YOUR BABY



Women's Alcohol and Drug Service Women's Alcohol and Drug Service

If you use drugs or alcohol you need to be aware of the increased risk of SIDS

Women's Alcohol and Drug Service The Royal Women's Hospital

Support and Information

- SIDS and Kids**
Ph: 1300 308 307
- 24 hr service, cost of local call.
Ph: 03 9822 9611 - 24 hr service.
- QUTLINE** Ph: 131 848 - 24 hr service.
- DirectLine** Ph: 1800 888 235
- 24 hr service, freecall.
- Maternal and Child Health Line**
Ph: 132 229 - 24 hr service, freecall.

contact details
Women's Alcohol & Drug Service
208 Darling St Carlton 3053
Phone 03 9354 3031
www.wadg.org.au
After hours assistance
RPHV Emergency Department
Phone 03 9354 2222
Royal Children's Hospital
Emergency Department
Phone 03 9346 1827

The Royal Women's Hospital

Important

- Follow the SIDS and Kids guidelines.
- Don't smoke in the house.**
- Don't have baby sleeping in the same bed as you, but have her/him sleeping in the same room.
- Have a responsible adult available to care for your baby if you decide to use drugs or alcohol.

Escape you own habits to reduce the risk for your baby

- Read the 'SIDS & kids safe sleeping' brochure. This can be obtained from your Midwife, Doctor or Maternal & Child Health Nurse.
- Follow the 'SIDS and kids' recommendations for safe sleeping.
- Seek professional assistance to reduce or cease your drug or alcohol use. Contact DirectLine on 1800 888 235 to talk with someone about your drug or alcohol use.
- Don't smoke in the house or car or allow anyone else to smoke near your baby.
- Ring the QUTLINE on 131 848 for information and support to help you and your partner quit smoking.
- Take your baby to a Doctor or hospital Emergency Department if he or she appears unwell.
- Develop a Safety Plan. Have a responsible adult available to care for your baby if you decide to use drugs or alcohol.



What is SIDS?

SIDS is short for Sudden Infant Death Syndrome. In the past, this was called 'cot death.' It means the sudden unexpected death of a baby from no known cause. It is the most common cause of death for infants in Australia between the ages of one month and twelve months. More babies die of SIDS in winter than in summer.

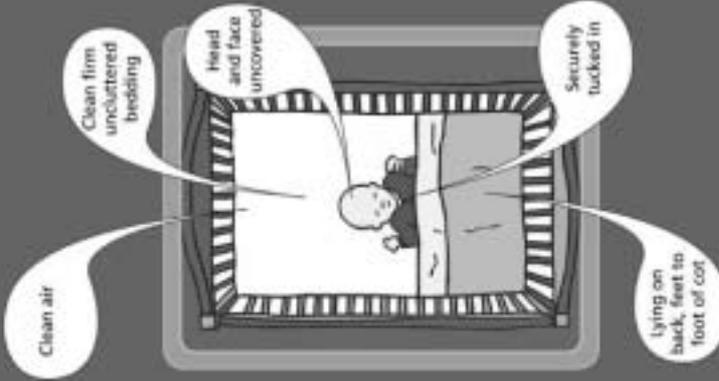
Why is my baby more at risk?

The risk of SIDS is greater if you smoke or use drugs and alcohol during pregnancy or after your baby is born. Even if you are in late pregnancy your baby will still benefit by you taking action to reduce or cease smoking and drug or alcohol use.

How to put your baby to sleep safely

Follow the safe sleeping recommendations from SIDS and Kids

- ❑ Always have your baby sleeping in her/his own cot.
- ❑ Ensure the cot has a firm well fitted mattress and clean bedding.
- ❑ Never put your baby to sleep on a waterbed, bean bag, sofa or mattress on the floor. They are not safe sleeping places and your baby may suffocate or overheat.
- ❑ At night time have your baby in her/his cot in the room where you sleep.
- ❑ Be sure that other people who care for your baby know how to put her/him to sleep safely.



Why your baby should not share your bed

It is not recommended that your baby shares your bed for sleeping, feeding or comforting. Drugs such as methadone, heroin and sedatives, tranquilizers and antidepressants can cause you to sleep heavily. This may lead to you being less aware of where your baby is in the bed. There have been occasions when parents have accidentally smothered their babies under these circumstances.

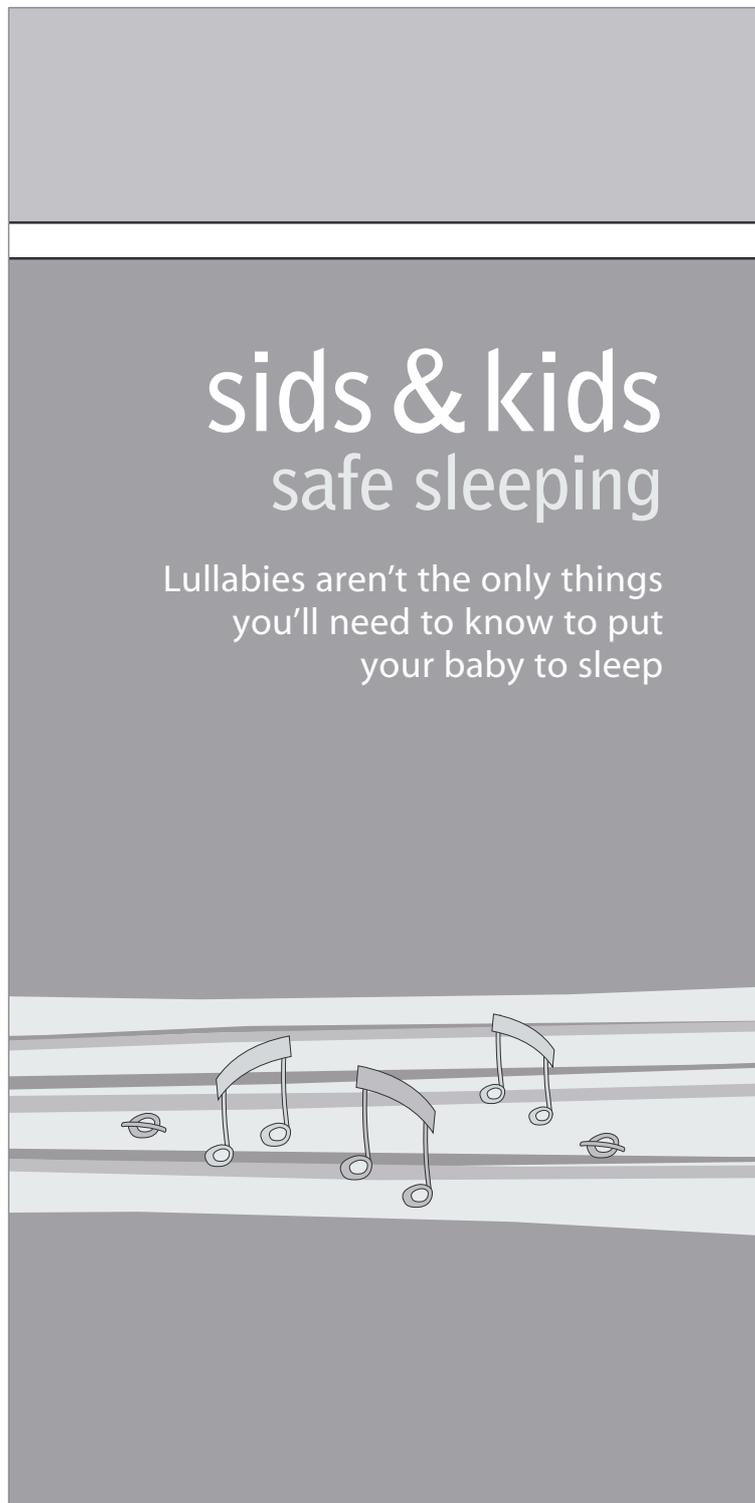
Help with safe bedding

If you are having difficulty getting safe bedding, contact your Social Worker or Midwife. There are services available to help you obtain baby goods.

Ensure your baby's safety

To make sure your baby's sleeping environment is safe, ask the Domiciliary Midwife or Maternal & Child Health Nurse to check when they visit.

Example 2: *Sids and Kids* Safe Sleeping brochure



Source: *SIDS and Kids: Safe sleeping* www.sidsandkids.org/safe_sleeping.html.

For more information, see *SIDS and Kids* www.sidsandkids.org/home.html

Or you can contact National Health Promotion Manager Tel. 02 6287 4255

Appendix 6: Examples of discharge assessment checklists

Example 1: The Royal Women's Hospital Assessment for Infant Home Based Withdrawal

<p>THE ROYAL WOMEN'S HOSPITAL</p> <p>Assessment for Infant Home Based Withdrawal (IHBW)</p>	<p><i>(Affix Label Here)</i></p>		
<p>ANTENATAL ASSESSMENT</p> <p>For completion by social worker at 36/40 weeks gestation EDC: _____</p> <p>Name of provider: _____</p> <p>Signature: _____ Date: _____</p>			
INDICATOR	<u>NO CONCERN</u>	<u>CONCERN</u>	<u>PLAN</u>
Mother stable and/or Infant's Primary carer			
Ongoing illicit drug use or alcohol abuse (mother)			
Severe mental illness			
Poor or non-attendance for antenatal care; refused or dropped out of care			
Unstable living arrangements; inadequate or temporary accommodation			
Current history of domestic violence or abuse – physical or emotional			
Unstable drug or alcohol use by others in the household			
Current Child Protection concerns that preclude the infant from IHBW			
Demonstrated absence of commitment to infant			
Non-acceptance of referrals and supports			
Recent history of non-compliance with services			
Unable to access hospital and M&CH or GP service for weekly appointments			
Absence of agreement to home based management			
<p>Comments: _____</p> <p>_____</p> <p>_____</p>			
<p>Original sheet to be retained in mother's medical record Forward duplicate sheet to the Case Manager, SCN</p>			

ASSESSMENT FOR IHBW

MR/90629A

Assessment for Infant Home Based Withdrawal (IHBW)

SPECIAL CARE NURSERY ASSESSMENT

Baby's DOB: _____

Name of provider: _____

Signature: _____

Date: _____

INDICATOR	<u>NO CONCERN</u>	<u>CONCERN</u>	<u>PLAN</u>
Mother stable and/or Infant's Primary carer			
Ongoing illicit drug use or alcohol abuse (mother)			
Severe mental illness			
Poor or non-attendance for antenatal care; refused or dropped out of care			
Unstable living arrangements; inadequate or temporary accommodation			
Current history of domestic violence or abuse – physical or emotional			
Unstable drug or alcohol use by others in the household			
Current Child Protection concerns that preclude the infant from IHBW			
Demonstrated absence of commitment to infant			
Non-acceptance of referrals and supports			
Recent history of non-compliance with services			
Unable to access hospital and M&CH or GP service for weekly appointments			
Absence of agreement to home based management			

Retain in baby's medical record

Example 2: Chemical Use in Pregnancy Discharge Checklist

Chemical Use in Pregnancy (CUPS) Discharge Checklist

(tick appropriate boxes)

- Administration of medication
- Signs and symptoms of NAS
- Completed Medicare form
- Emergency contact numbers
- SIDS information and safe sleeping for under 2s
- Parentcraft Skills
 - Sleep and settling
Independent / Supervised / Assisted
 - Bottle sterilisation
Independent / Supervised / Assisted
 - Breastfeeding
Independent / Supervised / Assisted
- Provisions for baby
- CUPS clinic appointment / Early childhood clinic appointment
- Blue Book
- Discharge summary
- Child at risk identification
Referral / No referral

Other agencies family referred to

Source: Royal Hospital for Women, Randwick, NSW and the Langton Centre, Surry Hills, NSW.

Appendix 7: Categorisation of drug risks in pregnancy and breastfeeding

Australian categorisation of risk of drug use in pregnancy

Category A

Drugs which have been taken by a large number of pregnant women and women of childbearing age without any proven increase in the frequency of malformations or other direct or indirect harmful effects on the fetus having been observed.

Category C

Drugs which, owing to their pharmacological effects, have caused or may be suspected of causing, harmful effects on the human fetus or neonate without causing malformations. These effects may be reversible. Accompanying texts should be consulted for further details.

Category B1

Drugs which have been taken by only a limited number of pregnant women and women of childbearing age, without an increase in the frequency of malformation or other direct or indirect harmful effects on the human fetus having been observed. Studies in animals have not shown evidence of an increased occurrence of fetal damage.

Category B2

Drugs which have been taken by only a limited number of pregnant women and women of childbearing age, without an increase in the frequency of malformation or other direct or indirect harmful effects on the human fetus having been observed. Studies in animals are inadequate or may be lacking, but available data show no evidence of an increased occurrence of fetal damage.

Category B3

Drugs which have been taken by only a limited number of pregnant women and women of childbearing age, without an increase in the frequency of malformation or other direct or indirect harmful effects on the human fetus having been observed. Studies in animals have shown evidence of an increased occurrence of fetal damage, the significance of which is considered uncertain in humans.

Category D

Drugs which have caused, are suspected to have caused or may be expected to cause, an increased incidence of human fetal malformations or irreversible damage. These drugs may also have adverse pharmacological effects. Accompanying texts should be consulted for further details.

Category X

Drugs which have such a high risk of causing permanent damage to the fetus that they should not be used in pregnancy or when there is a possibility of pregnancy.

Source: Therapeutic Goods Administration, Australian Drug Evaluation Committee, 1999, *Prescribing medicines in pregnancy: an Australian categorization of risk of drug use in pregnancy* 4th edition, Australian Department of Health and Ageing, Canberra, [inside front cover, no page number].

Hale's categorisation of breastmilk drug risks

L1 Safest

Drug which has been taken by a large number of breastfeeding mothers without any observed increase in adverse effects in the infant. Controlled studies in breastfeeding women fail to demonstrate a risk to the infant and the possibility of harm to the breastfeeding infant is remote or the product is not orally bioavailable in an infant.

L2 Safer

Drug which has been studied in a limited number of breastfeeding women without an increase in adverse effects in the infant. And/or the evidence of a demonstrated risk which is likely to follow use of this medication in a breastfeeding woman is remote.

L3 Moderately Safe

There are no controlled studies in breastfeeding women; however, the risk of untoward effects to a breastfed infant is possible or controlled studies show only minimal non-threatening adverse effects. Drugs should be given only if the potential benefit justifies the potential risk to the infant.

L4 Possibly Hazardous

There is positive evidence of risk to a breastfed infant or to breastmilk production by the benefits from use in breastfeeding mothers may be acceptable despite the risk to the infant (eg if the drug is needed in a life-threatening situation or for a serious disease for which safer drugs cannot be used or are ineffective).

L5 Contraindicated

Studies in breastfeeding mothers have demonstrated that there is significant and documented risk to the infant based on human experience or it is a medication that has a high risk of causing significant damage to an infant. The risk of using the drug in breastfeeding women clearly outweighs any possible benefit from breastfeeding. The drug is contraindicated in women who are breastfeeding an infant.

Appendix 8: Australian Alcohol Guidelines: pregnancy and breastfeeding

NH&MRC GUIDELINE 11: Women who are pregnant or might soon become pregnant

11.1 may consider not drinking at all.

11.2 most importantly, should never become intoxicated.

11.3 if they choose to drink, over a week, should have less than 7 standard drinks, AND, on any one day, no more than 2 standard drinks (spread over at least two hours).

11.4 should note that the risk is highest in the earlier stages of pregnancy, including the time from conception to the first missed period.

Rationale: Alcohol in a woman's blood stream enters that of her unborn child, and this may affect the child from conception onwards. It is difficult to identify exactly the lower levels of drinking at which alcohol may cause harm to the child and, for this reason, a woman may consider not drinking at all.

Nevertheless, while more high quality research is needed, the limited available evidence indicates that averaging less than one drink per day has no measurable impact on children's physical and mental development.

The evidence indicates that episodes of drinking above the guideline levels considerably increase the risk to the unborn child, including the risk of miscarriage, low birth weight, cognitive defects and congenital abnormalities. Heavy bouts of drinking maximise that risk.

The evidence base is discussed on page 77. See also pages 23 and 46.

Comment: The most important consideration for women is to avoid a high blood alcohol level at any time during the pregnancy. The first weeks after conception

are probably the most critical in relation to alcohol, and the woman is usually unaware of the pregnancy at this stage. The guideline is therefore important not only for women who are pregnant, but for those who may soon become pregnant.

The literature review undertaken for these guidelines found no definite evidence that low-level drinking causes harm to the unborn child. Other authorities have, nevertheless, recommended no drinking during pregnancy. Women may choose not to drink at all, out of caution, especially if relevant risk factors are present: for example, if the mother has health problems such as high blood pressure or poor nutrition. Good antenatal care and good diet, including folate and vitamin B supplements, and not smoking are also very important.

BREASTFEEDING—A Prudent Approach

Women who are breastfeeding are advised not to exceed the levels of drinking recommended during pregnancy, and may consider not drinking at all.

Comment: Alcohol in the blood stream passes into breast milk. There is little research evidence available about the effect that this has on the baby, although practitioners report that, even at relatively low levels of drinking, it may reduce the amount of milk available and cause irritability, poor feeding and sleep disturbance in the infant. Given these concerns, a prudent approach is advised.

Source: This page is an extract from the Australian Alcohol Guidelines (NHMRC, 2001, p.16) available at www.alcoholguidelines.gov.au/index.htm

Appendix 9: Fagerström test for nicotine dependence

Fagerstrom Test for Nicotine Dependence*

1. How soon after you wake up do you smoke your first cigarette?

After 60 minutes	(0)
31-60 minutes	(1)
6-30 minutes	(2)
Within 5 minutes	(3)
2. Do you find it difficult to refrain from smoking in places where it is forbidden?

No	(0)
Yes	(1)
3. Which cigarette would you hate most to give up?

The first in the morning	(1)
Any other	(0)
4. How many cigarettes per day do you smoke?

10 or less	(0)
11-20	(1)
21-30	(2)
31 or more	(3)
5. Do you smoke more frequently during the first hours after awakening than during the rest of the day?

No	(0)
Yes	(1)
6. Do you smoke even if you are so ill that you are in bed most of the day?

No	(0)
Yes	(1)

Score

Your score was _____

Your level of dependence on nicotine is

- | | |
|------|----------------------|
| 0-2 | Very low dependence |
| 3-4 | Low dependence |
| 5 | Medium dependence |
| 6-7 | High dependence |
| 8-10 | Very high dependence |

Source: *Heatherton TF, Kozlowski LT, Frecker RC, Fagerstrom KO. The Fagerstrom Test for Nicotine Dependence: A revision of the Fagerstrom Tolerance Questionnaire. *British Journal of Addictions* 1991;86, p.1119-27

Appendix 10: Examples of neonatal abstinence syndrome scoring scales

Example 1: Royal Prince Alfred Hospital modified Finnegan's Scale

Modified Finnegan's scale

Infants of mothers known or suspected to be drug users who are showing signs of withdrawal should be scored every 4 hours. The scoring should be applied in a consistent manner by personnel who are experienced in dealing with such infants.

NOTE: Caution must be exercised before symptoms listed here are accepted as part of drug withdrawal. For example, symptoms such as fever, tachypnoea or seizures could be due to sepsis, which should be excluded first with appropriate tests.

System	Signs and symptoms	Score
CNS	High-pitched cry	2
	Continuous high-pitched cry	3
	Sleeps <1 hour after feeding	3
	Sleeps <2 hours after feeding	2
	Sleeps <3 hours after feeding	1
	Mild tremors disturbed	1
	Mod-severe tremors disturbed	2
	Mild tremors undisturbed	3
	Mod-severe tremors undisturbed	4
	Increased muscle tone	2
	Excoriation (specify area)	1
	Myoclonic jerks	3
	Generalised convulsions	5

System	Signs and symptoms	Score
Metabolic/ Vasomotor/ Respiratory	Fever (37.3-38.3 deg C)	1
	Fever (>38.3 deg C)	2
	Frequent yawning (>3-4 times)	1
	Nasal snuffiness	1
	Sneezing (>3-4 times)	1
	Nasal flaring	2
	Respiratory rate > 60/min	1
	Respiratory rate > 60/min + retractions	2
Gastrointestinal disturbances	Excessive sucking	1
	Poor feeding	2
	Regurgitation	2
	Projectile vomiting	3
	Loose stools	2
	Watery stools	3

Infants scoring 3 consecutive abstinence scores averaging more than 8 (eg 9-7-9) or ≥ 12 for 2 scores require treatment. The scoring interval should be 4 hourly until the infant has been stabilised. Infants withdrawing from non-opiates frequently display similar behaviours to those withdrawing from opiates.

For more information on Neonatal Abstinence Syndrome from the Royal Prince Alfred Hospital Department of Neonatal Medicine Protocol Book see www.cs.nsw.gov.au/rpa/neonatal/html/newprot/nas.htm.

Source: Department of Neonatal Medicine Protocol Book, Royal Prince Alfred Hospital, Sydney, NSW

Example 2: Women's Alcohol and Drug Service NAS Scoring System

Neonatal Handbook

Neonatal Abstinence Scoring System

Infants at risk of narcotic withdrawal are assessed for signs of withdrawal ½ to 1hr after each feed. Infants who display signs of withdrawal will score from signs in each of the three sections of the scoring chart. The scoring chart is designed for term infants who are fed 4 hourly. Allowances must be made for infants who are preterm or beyond the initial newborn period.

SYSTEM	SIGN	SCORE								
C.N.S.	Excessive cry	2								
	Continuous cry	3								
	Sleeps <1hr after feed	3								
	Sleeps <2hrs after feed	2								
	Sleeps <3hrs after feed	1								
	Over active Moro reflex	2								
	Very over active Moro reflex	3								
	Mild tremors disturbed *	1								
	Mod/severe tremors disturbed *	2								
	Mild tremors undisturbed *	3								
	Mod/severe tremors undisturbed *	4								
	Increased muscle tone	2								
	Excoriation *	1								
	Myoclonic jerks	3								
Generalised convulsions	5									
G.I.T.	Excessive Sucking	1								
	Poor Feeding *	2								
	Regurgitation *	2								
	Projectile Vomiting	3								
	Loose Stools	2								
	Watery Stools	3								
OTHER	Sweating	1								
	Fever 37.3 to 38.3 C	1								
	Fever 38.4 C and above	2								
	Frequent yawning (>3-4 in 1/2hr)	1								
	Mottling	1								
	Nasal Stuffiness	1								
	Sneezing (>3-4 in 1/2hr)	2								
	Nasal flaring	1								
	Respiratory rate >60/min.	1								
	Respiratory rate >60/min. & retraction	2								
TOTAL SCORE										

Adapted from L.P.Finnegan (1986)

Explanation of Signs

- Tremors – infants should only get one score from the four options in this category
- Excoriation – score when presents, rescore only if it increases or appears in another area
- Poor Feeding – score if slow to feed or baby takes inadequate amounts
- Regurgitation – score if it occurs more frequently than usual in a newborn

Neonatal Handbook - http://www.wch.org.au/nets/handbook/index.cfm?doc_id=622#Guidelines

Source: Women's Alcohol and Drug Service (WADS), Royal Women's Hospital, Melbourne Victoria.

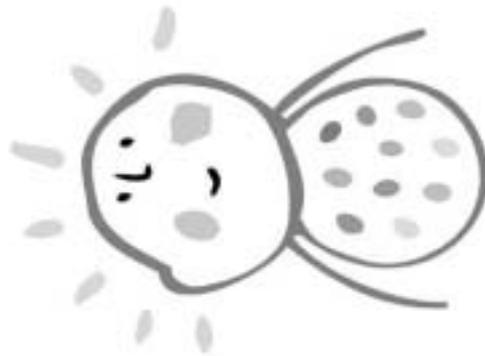
Appendix 11: Example of parent information brochure on NAS

Caring for your Baby with NAS

The brochure on the following pages is laid out for photocopying, collation and folding to create an A5 booklet.

Source: Royal Prince Alfred Hospital, Sydney, New South Wales.

CARING FOR YOUR BABY WITH NAS



Perinatal & Family Drug Health 2003
 Drug Health Services
 RPA Women's and Babies
 PH: 02 9515 6111

NEONATAL SYSTEM	ABSTINENCE CHART SIGNS & SYMPTOMS	Date/Time	SCORE	
CENTRAL NERVOUS SYSTEM DISTURBANCES	High pitched cry		2	
	Continuous high pitched cry		3	
	Sleeps < 1hr between feeds		2	
	Sleeps < 2hr between feeds		1	
	Sleeps < 3hr between feeds		1	
	Mild tremors when disturbed		2	
	Moderate-severe tremors when disturbed		3	
	Mild tremors undisturbed		4	
	Moderate-severe tremors		2	
	Increased muscle tone		1	
METABOLIC/ VASOMOTOR/ RESPIRATORY DISTURBANCES	Excoriation (specify area)		1	
	Myoclonic jerks		3	
	Generalised convulsions		5	
	Fever (37.3-38.3°C)		1	
	Fever (38.4°C and higher)		2	
	Frequent yawning x3-4 times		1	
	Nasal stuffiness		1	
	Sneezing x3-4 times		1	
	Nasal flaring		2	
	Respiratory rate <60/min		1	
GASTO- INTESTINAL DISTURBANCES	Respiratory rate >60/min with retractions		2	
	Excessive sucking		1	
	Poor Feeding		2	
	Regurgitation		2	
	Projectile vomiting		3	
	Loose stools		2	
	Watery stools		3	
	TOTAL SCORE			
	SCORER'S INITIALS			

EMERGENCY CONTACT NUMBERS:

Emergency Services Number 000
 Nursery 9515 8894/8897

Perinatal & Family 9515 7611 (8:30am - 5pm) Mon - Fri

Safe Sleeping For Under 2's.

It is important that your newborn baby has a safe place to sleep. Bed sharing with your baby or nursing your baby in your arms whilst being affected by any substance could put your baby at risk of dying from either suffocation or overheating. It is important to provide a cot for your baby to sleep in to prevent the risk of sudden infant death syndrome (SIDS). To further reduce the risk of SIDS place your baby on his/her back to sleep, don't smoke around your baby, position your baby at the base of the cot, put your baby in clothes that may prevent overheating like cotton and don't cover your babies head, these are some things you can do as a parent to reduce the risk of SIDS (SIDS pamphlet 2001). If you have any further questions on how to reduce SIDS ask your midwife or contact the SIDS foundation on 1300 308 307.

We would like to acknowledge the following contributors with many thanks:

- ◆ Antenatal Chemical Dependency Unit at the King Edward Memorial Hospital, Perth.
- ◆ Staff and clients of RPA Women and Babies, Sydney.

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NEONATAL ABSTINENCE SYNDROME

The information in this booklet is to help you understand how to manage drug withdrawal in newborn babies. This withdrawal is known as Neonatal Abstinence Syndrome (NAS).

Once a baby has been born, the baby will no longer be exposed to the substances taken during pregnancy. This can result in a baby developing signs of withdrawal.

It is impossible to predict which babies will experience NAS, or how it will affect them. Every baby and every withdrawal is different.

Every baby will have an unsettled period each day and they tend to have a least one unsettled day per week. We need to keep this in mind so that we do not confuse normal newborn behaviour with NAS signs.

-1-

SIGNS OF NAS

Is your baby experiencing any of these signs?

- ❖ High pitched cry
- ❖ Irritability
- ❖ Tremors/Jittering
- ❖ Sleeping difficulties
- ❖ Stuffy nose
- ❖ Sneezing
- ❖ Feeding difficulties due to sucking problems
- ❖ Tense arms, legs and back
- ❖ Poor weight gain
- ❖ Vomiting/Diarrhoea
- ❖ Increased breathing rate
- ❖ Convulsions
- ❖ Skin irritation
- ❖ Increased temperature, sweating



-2-

PARENTS' FEELINGS WHEN THEIR BABY EXPERIENCES NAS

Having a baby with NAS can often put you on an emotional roller coaster. Your emotions may range from guilt, anxiety, fear, anger, sadness, loss, grief, disappointment, relief, hope and a need to be seen as a good parent. These feelings are even stronger when you are separated from your baby. The staff acknowledge and understand that this is a very stressful and emotional time. Together we have the same goal - to help you and your baby through the withdrawal and to get your baby home with you as soon as possible.

GOING HOME

When you and your baby are getting ready to go home, you will meet with the DIPS social worker, DIPS team and RPA staff to talk about:

- ❖ Referral to Neonatal Early discharge & Family Support Program
- ❖ Your baby's Blue Book
- ❖ Postnatal clinic or Early Childhood Health Centre
- ❖ Giving your baby's medication for NAS
- ❖ Linking in with community resources
- ❖ Medicare, birth registration and Centrelink forms
- ❖ Emergency contact phone numbers (see back page)
- ❖ SIDS and safe sleeping for under 2's

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The dose of medications prescribed for your baby will depend on:

- ❖ The NAS scores (the higher the scores, the higher the dose needed).
- ❖ Your baby's weight (the more your baby weighs, the higher the dose needed).

The dose is adjusted according to your baby's response to treatment. The process of scoring, assessing and reducing the medication continues until the signs of withdrawal have stopped. Sometimes your baby's medication needs to be increased if they suddenly put on a large amount of weight.

Babies can be discharged home on these medications and medical follow up will be arranged prior to your baby leaving hospital. Staff will teach you how to administer the medication and what times to give it.

The midwives will help you with some techniques that may assist you and your baby. These involve things like positioning to aid feeding, wrapping your baby, massage, bathing and settling techniques.

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NAS is when your baby displays a combination of these signs.

Babies may also experience these signs for other reasons, so your baby will be closely monitored to exclude other problems such as a fever.

Most babies who experience NAS show signs within 24-72 hours after birth. Sometimes however, signs don't appear until 7 days after your baby is born, and for this reason all babies exposed to alcohol or other drugs during pregnancy need to stay in hospital for at least 5 - 7 days to be monitored.



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The time it takes for signs of NAS to begin to show depends on:

- ❖ The combination of drugs or alcohol used in pregnancy, particularly in the last three days before the birth.

NAS can last from one week to six months. The length of the withdrawal process can depend on:

- ❖ The amount of drugs or alcohol a baby has been exposed to.
- ❖ Multiple drug use eg: using methadone with either speed, heroin, benzodiazepines, alcohol &/or cocaine.

The reduction or elimination of drug use other than methadone will help to decrease the likelihood and/or severity of any withdrawal symptoms experienced by your baby.

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MEDICATION

The medications that are used to treat NAS are morphine and phenobarbitone. They are used either separately or as a combination of both.

MORPHINE

Morphine is an opiate-based medication and a depressant. Morphine is prescribed to treat your baby for opiate withdrawal, for example if your baby has been exposed to methadone, heroin, morphine, panadeine forte etc.

Other medication may be considered if the morphine dose cannot be increased further and your baby remains unsettled.

PHENOBARBITONE

Phenobarbitone (phenobarb) is an anticonvulsant and a barbiturate. Phenobarb is prescribed to treat your baby for withdrawal from substances such as benzodiazepines and alcohol. Some babies need a combination of morphine and phenobarb to settle their symptoms. For example, if your baby has been exposed to multiple drug use such as methadone and benzos or if we have reached the maximum dose of morphine and your baby remains unsettled with NAS,

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NAS MAY OCCUR DIFFERENTLY DEPENDING ON THE SUBSTANCE YOUR BABY WAS EXPOSED TO:

Amphetamines - Babies exposed to this drug may become more irritable. Disturbed sleep pattern and feeding patterns are often noticed and settling techniques are encouraged in these babies.

Benzodiazepines - Withdrawal symptoms can be delayed following birth. When used in combination with opiates eg. Methadone/Heroin the withdrawal in the baby is more difficult and stabilisation on medication may take a longer time.

Cocaine - When used in combination with opiates eg. Methadone/Heroin the withdrawal in the baby is more difficult and stabilisation on medication may take a longer time.

Heroin - Withdrawal symptoms can begin to be observed from 2hrs to 48hrs following birth.

Marijuana - Babies exposed to this drug may become more irritable and have a disturbed sleep pattern. Soothing Settling techniques are encouraged in these babies.

Methadone - Withdrawal symptoms can begin to be observed from 48hrs up to 7 days following birth.

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MANAGEMENT AND TREATMENT OF NAS

You and the midwife will assess your baby for signs of withdrawal every 4 hours before a feed using the score chart (see back page).

The scores recorded against each sign are added up. If the score comes to 8 three times in a row or above 8 twice in a row your baby will be transferred to the nursery so that your baby can be monitored more closely. If your baby cannot be settled with nursing techniques then your baby will need, for your babies own comfort, to commence on medication to treat NAS.

Your baby will need to stay in the nursery for a minimum of 24-48 hours and will stay in hospital until the NAS is stabilised with medication. This can sometimes take several weeks, depending on your baby and how your baby is coping during this time.

The nursery is staffed by nurses, midwives and doctors who will assist you to care for your baby. They will show you how to give your baby his/her medication. If you find you are feeling substance affected at any stage it may be a good idea to get support from the people around you rather than handling your baby yourself.

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**SUGGESTED SETTling TECHNIQUES FOR YOUR
BABY / CALMING SUGGESTIONS**

Prolonged crying

- Hold your baby close to your body, perhaps wrapped in a sheet or light blanket.
- Avoid loud noises, bright lights and excessive handling.
- Try not to pat your baby, just rub your baby gently. Humming and gentle rocking may help.

(may be high pitched)

Breathing troubles

- Always sleep your baby on his/her back.

Sleeplessness

- Your baby needs a quiet environment. If your baby is asleep allow your baby to rest.
- Check they have a clean nappy. This may make them sleep more comfortably.
- If your babies bottom looks irritated, clean with water only, using zinc cream every change.

Vomiting

- Your baby may vomit some times.
- Hold your baby in an upright position when feeding. Burp your baby after each feed.

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Excessive sucking

- When awake, your baby may want to suck all the time.
- Your baby may not be hungry, but your baby may just need the comfort of your breast or a dummy.

Sneezing

- This is a sign of NAS but can also be normal baby behaviour.

Poor feeding

- Your baby may require more frequent breastfeeds
- You may need to feed your baby small amounts, often, using slow-flow teats.
- Feed in a quiet, calm surrounding with minimal noise and disturbance.

Trembling

- You may need to wrap your baby securely in a sheet/light blanket.

Fever

- NAS can make your baby very warm. Try not to use too many blankets or clothes on your baby.
- Your baby may need to be dressed in cotton clothes or wraps like cheese cloth that allows the heat to escape.
- If your baby has a temperature over 37.5 degrees you should seek medical help.

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Appendix 12: Duration of postnatal hospitalisation required to detect severe NAS

Introduction: Severe neonatal abstinence syndrome (NAS) is a potentially life threatening medical illness. Inpatient observation for 7 to 10 days after delivery is recommended to avoid unsupervised withdrawal. However, prolonged inpatient stay has significant psycho-social and economic implications to both the infant's family and the community.

Aim: To evaluate appropriate duration of hospitalisation sufficient to detect severe NAS prior to discharge.

Methods: We conducted a 2 year retrospective review of all infants born to narcotic dependent women at the Royal Women's Hospital in the time period between January 1998 and December 1999 (inclusive).

All infants were observed as inpatients utilising a modified Finnegan NAS scoring system until a minimum of 7 days of age.

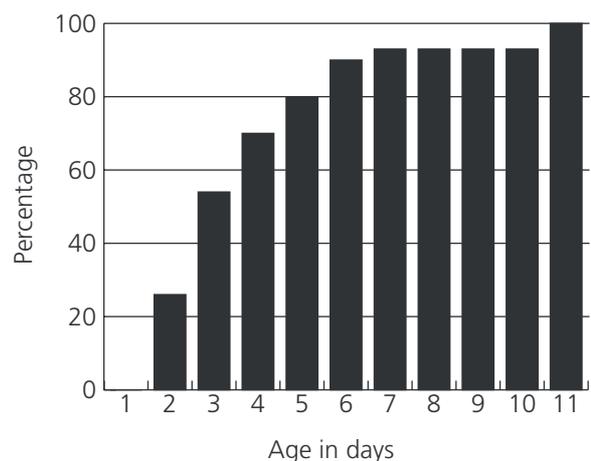
Severe NAS was defined as that requiring medical therapy based on the recommendations of Finnegan et al.

Age in days when each infant first received medication was recorded.

Results: 203 infants exposed to regular maternal narcotic use during pregnancy were born during the study period.

40 (20 per cent) infants received postnatal oral morphine therapy for symptoms of significant narcotic withdrawal.

Culmulative percentage of infants requiring medication for narcotic withdrawal



36 of the medicated infants were exposed to regular antenatal methadone, 4 were exposed to heroin only.

38 infants (95 per cent) experienced peak symptoms of neonatal abstinence syndrome by 7 days of age.

Conclusion: Discharge of infants born to narcotic-dependent women prior to 7 days of life may result in a significant risk of these infants experiencing symptoms of severe neonatal abstinence syndrome in an unsupervised environment.

Source: PN Henschke: Royal Women's Hospital Chemical Dependency Unit, Carlton, Victoria.

