Guideline

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Guidelines for the Management of Substance Use During Pregnancy Birth and the Postnatal Period

Document Number GL2014_022

Publication date 17-Dec-2014

Functional Sub group Clinical/ Patient Services - Governance and Service Delivery
Clinical/ Patient Services - Baby and child

Summary These guidelines support and provide best practice advice to health professionals in the management of drug use during pregnancy, birth and early development years of the newborn.

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Applies to Local Health Districts, Board Governed Statutory Health Corporations, Chief Executive Governed Statutory Health Corporations, Specialty Network Governed Statutory Health Corporations, Affiliated Health Organisations, Community Health Centres, NSW Ambulance Service, Private Hospitals and Day Procedure Centres, Public Health Units, Public Hospitals

Audience Medical Practicioners, Nursing, Clinical, Allied Health, Midwifery,

Distributed to Public Health System, Divisions of General Practice, Government Medical Officers, Ministry of Health, Tertiary Education Institutes

Review date 17-Dec-2019

Policy Manual Patient Matters

File No. 11/5552

Status Active

Director-General

NSW GOVERNMENT Health

GUIDELINE SUMMARY

NSW CLINICAL GUIDELINES FOR THE MANAGEMENT OF SUBSTANCE USE DURING PREGNANCY, BIRTH AND THE POSTNATAL PERIOD

PURPOSE

These clinical guidelines are intended to support a range of health care workers who care for pregnant and breastfeeding women with substance use issues, and their infants and families.

KEY PRINCIPLES

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 substance use will benefit from an 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 substance use, which may include counselling, pharmacotherapies and relapse prevention strategies.

USE OF THE GUIDELINE

These guidelines are intended for use by all health care practitioners in NSW working with pregnant women who are using substances during pregnancy, and the postnatal period. Substances refers to both licit purposes, such as those prescribed for pain relief, substance use treatment or other issues, and illicit purposes, which can include prescribed substances used for purposes other than that prescribed, and illicit substances.

Substances discussed in these guidelines include the licit substances of alcohol and tobacco; illicit substances of opioids, amphetamine-type stimulants (ATS), cocaine, cannabis and inhalants; and prescription medication which can be used licitly or illicitly. 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. This NSW revision of the guidelines has chapters specifically addressing the needs of women who are incarcerated or at risk of incarceration, women who live in rural and/or remote locations, and Aboriginal women. New legislation pertaining to child protection in NSW is also covered in detail.

REVISION HISTORY

Version	Approved by	Amendment notes
GL2014_022 December 2014	Deputy Secretary, Systems Purchasing and Performance	New policy

ATTACHMENTS

1. Guidelines for the Management of Substance Use During Pregnancy Birth and the Postnatal Period.

CLINICAL GUIDELINES

FOR THE MANAGEMENT OF SUBSTANCE USE DURING PREGNANCY, BIRTH AND THE POSTNATAL PERIOD

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SHPN (MHDAO) 140396
ISBN 978-1-74187-069-5

Further copies of this document can be downloaded from the NSW Health website www.health.nsw.gov.au

October 2014

Contents

Summary

The 'National Clinical Guidelines for the Management of Drug Use During Pregnancy, Birth and the Early Development Years of the Newborn' was endorsed by the Ministerial Council on Drug Strategy out of session on 2 December 2005. The 'Guidelines' and companion 'Background Papers' were prepared for the Intergovernmental Committee on Drugs by NSW Health and SA Health with the funding and support of Australian federal, State and Territory governments, as well as the New Zealand government, under the Ministerial Council on Drug Strategy Cost Shared Funding Model. The project was completed under the guidance of a Steering Committee and two expert workshops. Permission for NSW Health to revise the document for a NSW audience was granted.

These guidelines were subsequently revised in 2014 by NSW Health under the direction of the Substance Use in Pregnancy Advisory Committee, Chaired by Associate Professor Adrian Dunlop. Substantial editing as well as new sections were provided by the National Drug and Alcohol Research Centre (NDARC) by Associate Professor Lucinda Burns, Elizabeth Whittaker and Sarah Goodsell, with additional and updated references provided in the References section of this document. Additional material was provided by experts, as well as representatives from the wider NSW Health system. The revision was undertaken in partnership between the Mental Health and Drug and Alcohol Office and NSW Health Kids and Families.

Introduction

The adverse effects on fetal development of alcohol, tobacco and other substances such as psychostimulants and opioids are well known. Women who are pregnant or who may become pregnant are therefore a high priority for interventions to reduce substance use. The National clinical guidelines for the management of drug use during pregnancy, birth and the early development years of the newborn were published in March 2006. This NSW revision of the nationally agreed clinical guidelines brings them in line with changes to the National Health and Medical Research Council Guidelines regarding alcohol use in pregnancy and recent research findings with respect to the safety of buprenorphine use in pregnancy, and ensures that the guidelines are suitable for the NSW context including rural and remote settings.

These clinical guidelines are intended to support a range of health care workers who care for pregnant and breastfeeding women with substance 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 of alcohol and tobacco; illicit substances of opioids, amphetamine-type stimulants (ATS), cocaine, cannabis and inhalants; and prescription medication which can be used licitly or illicitly. 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. This NSW revision of the guidelines has chapters specifically addressing the needs of women who are incarcerated or at risk of incarceration, women who live in rural and/or remote locations, and Aboriginal women. New legislation pertaining to child protection in NSW is also covered in detail.

Literature reviews focusing on recent literature for each of the key areas covered were conducted and key clinical points were developed by the Clinical Reference Group based on a summary of this information. For the chapters pertaining to rural and/or remote care, women of Aboriginal origin and women who are incarcerated, semi-structured interviews with key health professionals were conducted. These interviews were transcribed and analysed for key themes, and this information was integrated with information from the literature review. References sourced for the updated literature reviews are found in the bibliography at the back of this document. All other references can be found in the original (national) guidelines and the companion to the original guidelines, 'Background Papers', which are available at <www.health.nsw.gov.au/pubs/2006/bkg_pregnancy.html>

This document is organised into 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. One page summaries are included and may be used as standalone fact sheets, covering the main points in each chapter.

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 substance use will benefit from an 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 substance use, which may include counselling, pharmacotherapies and relapse prevention strategies.

These guidelines are intended for use by all health care practitioners in NSW working with pregnant women who are using substances during pregnancy, and the postnatal period.

SECTION ONE

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 [INSERT 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>

While the NHMRC has modified its method of grading evidence (see 'NHMRC levels of evidence and grades for recommendations for developers of guidelines', Dec 2009), this update of the Guidelines remains consistent with the original grading system.

Other studies that do not meet this grading system are cited.

SECTION TWO

General Principles

SUMMARY SECTION

2.1 General Principles Summary

Substance use information for women

- Women of child bearing age, including those at school and who are already pregnant, are a high priority for interventions to reduce substance use.
- It is important to consider the social supports and emotional well-being of pregnant women who use alcohol, tobacco and other drugs.

Care of pregnant substance-dependent women

- Pregnant substance-dependent women will benefit from specialist assessments and help (e.g., D&A specialist), a consistent case manager and care team during pregnancy, and specific drug and alcohol treatments (e.g., counselling, pharmacotherapies).

Contraception

- All women with problematic alcohol, tobacco or other drug use should be provided with advice on contraception to reduce unplanned pregnancies and harm to the unborn child.

Exposure to alcohol, tobacco and other drugs may have a serious effect on the fetus in the very early stages of pregnancy, particularly before the first missed period.

Vertical transmission of blood-borne viruses

- All substance-dependent women should receive information about vertical transmission of blood borne viruses before falling pregnant, including transmission prevention, managing infections and pregnancy implications.

Mental health issues

- Health care workers must recognise signs of mental illness in pregnant women and refer to specialist treatment.

Confidentiality

- In all communications it is important to work within the privacy legislation and local guidelines to ensure privacy and confidentiality are maintained, particularly for substance-dependent women. The sharing of information across the health system in relation to medical records for reasonably expected purposes is covered by the NSW Health Privacy Manual for Health Information. This includes information when being discharged from one health service to another, or concurrent treatment.

Confidentiality is a fundamental right of all people using health care services.

- It is important to note alsothat government agencies and NGOs who are 'prescribed bodies' are allowed to exchange information that relates to a child's safety, welfare or well-being.

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.
- The contact details of specialist support services should be readily available for pregnancy care providers, including after hours contact details.

Child protection

- Substance use alone may not be an indicator for a child protection report or notification.

Legislation requires that the safety and well-being of the child is a paramount consideration.

More information

- Alcohol and Drug Information Service (ADIS) is a 24-hour confidential information, advice and referral telephone service for all substances. If in Sydney, call 02 9361 8000. If in regional NSW, call 1800 422 599.
- NSW Health offers information about the protection and well-being of children. Visit <www.health.nsw.gov.au/initiatives/kts/index.asp>.

2.2 Substance use information for all women of child-bearing age

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

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

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

Information about substance 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

2.3 Care of all substance dependent women of child bearing age

These guidelines are intended for use by all health care practitioners working with pregnant women who may be using substances in pregnancy, including both licit and illicit substances.

The guidelines recommend that pregnant women who use substances 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 substance use, which may include counselling, pharmacotherapies and relapse prevention.

2.3.1 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. Long acting forms of contraception are generally preferred (e.g. progesterone implants, IUDs). This approach will facilitate planned rather than unplanned pregnancies, and reduce harm to the unborn child.

2.3.2 Vertical transmission of blood-borne viruses

Before pregnancy it is important that all substance-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.

2.3.3 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 3.3.11 Coexisting mental health and substance use issues.

2.3.4 Confidentiality

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 substances or who have infectious diseases (especially blood-borne viruses), confidentiality takes on a particular significance because of the social stigma attached to these conditions.

Chapter 16A of the *Children and Young Persons (Care and Protection) Act 1998* allows government agencies and non government organisations (NGOs) who are 'prescribed bodies' to exchange information that relates to a child's or young person's safety, welfare or well-being without consent. It takes precedence over the protection of confidentiality or of an individual's privacy because the safety,

welfare and wellbeing of children and young people is considered to be paramount. Further information may be found in *PD2013_007 Child Wellbeing and Child Protection Policies and Procedures for NSW Health*, Ch 6.

The sharing of information across the health system in relation to medical records for reasonably expected purposes is covered by the NSW Health Privacy Manual for Health Information. This includes information when being discharged from one health service to another, or concurrent treatment.

2.3.5 Maternity 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. See section 3.3.12 Team Management Approach.

2.3.6 Child protection

Every health worker has a responsibility to protect the health, safety, welfare and wellbeing of children or young people with whom they have contact.

PD2013_007 Child Wellbeing and Child Protection Policies and Procedures for NSW Health outlines Health workers' responsibilities under the *Children and Young Persons (Care and Protection) Act 1998, Commission for Children and Young People Act 1998 /Child Protection (Working with Children) Act 2012, Ombudsman Act 1974*.

These policies and procedures apply to all frontline Health professionals in the NSW Health Service (as defined in the *Health Services Act 1997*). They are relevant to Health workers who provide services for children and young people as well as to those who provide services to adult clients who may be parents or carers. They are also relevant to support staff who work in the NSW Health Service.

Adult health services have a key role to play in identifying and responding to child wellbeing and child protection concerns because the cause of the abuse or neglect is frequently parental or carer illness behaviour, earlier life experience, or disadvantage or deprivation. In working with parents and carers to address the context of the lives of children within their families, NSW Health services focus in particular on those parental or carer factors that increase vulnerability including chronic and complex health needs, substance use, mental illness, and the impact of historical trauma and disadvantage.

Substance use alone is not an indicator for a child protection report to the Child Protection Helpline (telephone: 133 627). However, the safety, welfare and wellbeing of children, including unborn children is a consideration in all drug and alcohol interventions for adult clients and pregnant women.

Work to promote child wellbeing and protection is provided optimally when the parents or carers of the child or young person are actively engaged in working towards sustainable change in their own lives and strengthening their parenting capability.

Responding to concerns:

When a Health worker has concerns about the safety, welfare or wellbeing of a child or young person they are to use the MRG prior to reporting to the Child Protection Helpline. The MRG will assist Health mandatory reporters in making a decision about the level of risk and in deciding whether to report their concerns. The MRG is available at http://sdm.community.nsw.gov.au/mrg/

If the concern is imminent Health workers must:

- Call the Child Protection Helpline immediately when concerns constitute suspected risk of significant harm and the child protection concerns are about imminent risk.

If the concern is not imminent Health workers are to:

- Contact the Child Protection Helpline (telephone: 133 672) within 24 hours when concerns constitute suspected risk of significant harm
- Contact the Health Child Wellbeing Unit (telephone: 1300 480 420) when concerns about the child or young person's safety, welfare or wellbeing are identified through the application of the MRG as being below the statutory reporting threshold or if the Health worker is uncertain whether the concerns meet the statutory threshold
- Document their concerns in the client Health record and if appropriate continue working with

the client/patient when the concerns are not at a level which requires a Child Protection Helpline response or contact with a Child Wellbeing Unit.

Further information on responding to child protection concerns can be found in *PD2013_007 Child Wellbeing and Child Protection Policies and Procedures for NSW Health*.

SECTION THREE

The Care of pregnant women with substance use problems

SUMMARY SECTION

3.1 Continuity of Care and of Carers Summary

Background information

- Continuity of care and of carers is now accepted as best practice for all pregnant women.

> *Pregnancy care providers and maternity services should always provide continuity of care for pregnant women.*

- Multidisciplinary teams who work together can achieve optimal pregnancy, birth and parenting outcomes for each woman and her family.
- A multidisciplinary team can include a 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.

Clinical implications

> *Continuity of care and of caregivers is particularly important for vulnerable groups, such as women with substance use issues.*

- Continuity of care is established by:
  - effective engagement skills, including cultural awareness skills
  - an effective system that 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.

Aboriginal 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.*

- Clinical interventions with pregnant Aboriginal women who use substances should be guided by six common principles. These are:

1. 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 well-being, community development and capacity building.
2. Local planning is required to develop responses to needs and priorities set by Aboriginal communities.
3. Culturally valid strategies that are effective for Aboriginal peoples must be developed, implemented and evaluated.
4. Aboriginal peoples must be centrally involved in planning and implementing strategies to address use of alcohol, tobacco and other drugs in their communities.
5. Aboriginal 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 peoples.

3.2 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 a 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 substance use 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 substance 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 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 pregnant Aboriginal women be guided by the six common principles identified by the former Ministerial Council on Drugs Strategy 2003-2006 for addressing substance use by Aboriginal peoples. These are:

1. 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 well-being, community development and capacity building.
2. Local planning is required to develop responses to needs and priorities set by local Aboriginal communities.
3. Culturally valid strategies that are effective for Aboriginal peoples must be developed, implemented and evaluated.
4. Aboriginal peoples must be centrally involved in planning and implementing strategies to address use of alcohol, tobacco and other drugs in their communities.
5. Aboriginal communities should have control over their health, drug and alcohol and related services.
6. 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 peoples.

Level of evidence: Consensus

SUMMARY SECTION

3.3 Antenatal care

3.3.1 Antenatal Care Summary

Engage with the women

- Engagement aims to establish a professional, trusting and empathetic relationship in which the woman.
- Engagement skills include having a non-judgement attitude, understanding the woman's attitudes and beliefs, acknowledging the woman's feelings, and adhering to privacy and confidentiality.

Aboriginal women

- Cultural sensitivity and awareness are key skills of engagement, particularly when engaging Aboriginal peoples in care. Training is required to develop these skills in health care professionals.

Literacy

- To engage all women, including those with low literacy, all pregnancy and substance issues should be discussed verbally with the woman (and her partner) to ensure understanding, as well as written down.

Conduct regular screenings at antenatal visits

- If a pregnant woman is identified as using substances during pregnancy, the appropriate protocols should be followed which, depending on the substance, may include interventions and involving specialist services.

Effective engagement skills and sensitive questioning by the health care worker may help to facilitate accurate disclosure of substance use by pregnant women.

Involve the partner/support person

- If the woman provides informed consent, the support persons should be involved in all stages of care, including discussions of substance use and offering them interventions for their substance use if appropriate.

Conduct a psychosocial assessment

- At the first antenatal visit, a psychosocial assessment for discharge planning should be conducted.

The supports that each woman needs will most likely change during the antenatal and postnatal stages.

Manage coexisting mental health and substance use issues

- 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.

Involve a multidisciplinary team

- A skilled multidisciplinary team is ideal to provide care for the substance-dependent pregnant woman.
- A case manager should be appointed to oversee the woman's care and liaise with her care team.

Develop a written care plan with the woman

- The woman must be involved in formulating and reviewing the plan for it to be meaningful to her, and for her to commit to it.

Prepare for discharge

- Planning for discharge must begin at the first antenatal visit with the woman and her support people.

Prepare for the birth and postnatal period

- This will include the usual antenatal preparations and childbirth education, as well as options for pain relief, breastfeeding advice and parenting education.

Women who present late

- 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.

Late presentation in pregnancy may indicate an infant at risk of neonatal abstinence syndrome (NAS).

3.3.2 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 a 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
Pregnant women who are substance-dependent, like other vulnerable populations, may be difficult to engage and maintain in pregnancy care. Each presentation of a substance-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 substance-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 substance-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 in 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

3.3.3 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 substance 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 substance use in pregnancy is difficult
- an understanding of the significance of establishing and sustaining a sound and trusting professional relationship with women with substance use issues
- awareness that women with substance use issues often have a number of service providers involved in their lives.

3.3.4 Aboriginal women

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

Level of evidence: Consensus

Culturally safe engagement of pregnant Aboriginal women, particularly in rural, remote and regional areas, is not the same as for Aboriginal women in urban areas. Culturally safe engagement with pregnant Aboriginal women in rural, remote and some regional areas includes engaging local Aboriginal community Elders and members by:

- participating in a cultural vouching process

- acknowledging cultural differences.

Mainstream health workers should acquire a cultural mentor through the vouching process to provide guidance amd local knowledge about the local Aboriginal community.

Engagement with clients by:

- acknowledging that the location of engagement is vital for the client (i.e., engaging women may not necessarily have to happen in a hospital, but it may occur by a river bank or in the bush)
- taking note of non-verbal expressions of illness or discomfort
- being aware that that body language often differs e.g. in some rural Aboriginal communities, people may not look directly at you, so sitting or standing beside a client and looking down is culturally appropriate and respectful
- discussing the woman's beliefs, cultural, traditional and non-Aboriginal beliefs
- requesting the woman to nominate a cultural consultant
- engaging in clinical and cultural vouching for the consultant.
- explicitly negotiating the limits to confidentiality with the client
- negotiating issues of possible blame within the community, family or with friends
- discussing what traditional treatments have occurred in the past and their effectiveness
- discussing which traditional treatments need to occur in partnership with mainstream treatments

Level of evidence: Consensus

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

3.3.5 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

3.3.6 Screening

General screening for substance use

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

- prescribed medications (such as opioid replacement therapies, antidepressants, mood stabilisers and benzodiazepines)
- over the counter medications (such as paracetamol)
- alcohol
- tobacco
- caffeine
- other substance use (such as cannabis, opioids, psychostimulants (speed, ecstasy, cocaine), inhalants and use of prescribed medications).

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 harmful or dependent use. From a child protection perspective, being significantly intoxicated when directly responsible for the child, and regular, daily, near daily substance use, or binge use are of most concern (see section 3.8, Protecting the safety, welfare and well-being of the unborn or newborn child). 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 that

is crucial to obtaining an accurate history and for retaining the woman in continuing care.

Level of evidence: Consensus

Comment
The information provided about substance use as much as three months before conception provides insight into the maternal substance use at conception, and is particularly relevant in the development of Fetal Alcohol Syndrome Disorders (FASD).

Information about most prescribed medications may be obtained from designated agencies (see Appendix 1: Advice for health care workers and consumers on alcohol, tobacco and other drugs and medications in NSW).

Screening for alcohol

All pregnant women should be asked about their level of alcohol consumption. If women are consuming alcohol during pregnancy, then a full assessment of alcohol intake should be undertaken and appropriate referrals should be made. The IRIS (Indigenous Risk Impact Screen) has been shown to be a valid screener for substance use and mental health risk for Indigenous people although it has not been evaluated for use with pregnant women.

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 and AUDIT-C are validated tools, but are 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 by 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 screens for substance use at the same frequency as non-pregnant women in similar circumstances (e.g., when in an opioid treatment program).

Level of evidence: Consensus

Comment
The effectiveness of urine testing for substance use in pregnant women in unclear. There is some evidence that within a trusting professional

relationship, self-disclosure of substance use may be reliable.

Meconium screening post-birth

Meconium (the first series of green stools excreted by the infant after birth) screening is a method used to identify infants who have been exposed to drugs in utero. However, the science behind meconium screening at present is not strong enough to warrant widespread implementation. Caution should be applied because of the critical social implications for mother and baby.

Level of evidence: Consensus

Screening for blood-borne viruses

The Australian Clinical Practice Guidelines for Antenatal Care recommend routine screening early in pregnancy for HIV and Hepatitis B, because evidence supports the benefits of interventions to reduce the risk of vertical transmission to the newborn.

Diagnosis of hepatitis B during pregnancy provides an opportunity to implement strategies to improve the health of the woman and reduce the risk of transmission of the virus to her baby. For example, appropriate referral and follow up can ensure mothers are offered antiviral treatment during the later stages of pregnancy, when indicated.

Pregnant women who are hepatitis B positive should be referred to an infectious disease or gastroenterology specialist (where available) for a discussion about treatment to in the final trimester; and providing hepatitis B immunoglobulin and vaccination to all babies of hepatitis B positive mothers.

In relation to Hepatitis C (HCV), routine screening is not considered to be clinically justifiable in pregnancy in view of the lack of effective treatment options. However, testing for hepatitis C may be offered to 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.

All screening for blood-borne viruses must be conducted with the informed consent of the woman. The results of any testing should be noted in the woman's medical record and a follow-up system in place, including access to counselling.

Sexually Transmissible Infections (STIs) present risk factors for complications of pregnancy. In terms of chlamydia, potential complications include preterm birth and intrauterine growth restriction. Left untreated, chlamydia may result in conjunctivitis, low birth weight, and infant mortality. In terms of untreated syphilis, risks include congenital infection causing infant mortality, and permanent impairment.

The NSW Ministry are in the process of rescinding the NSW Health Guidelines "Screening for sexually Transmissible Diseases and Blood Borne Viruses in pregnancy" (GL2005_024). The National Antenatal Guidelines (2013) provides guidance for all maternity care providers irrespective of profession, will be adopted in its place.

Level of evidence: Consensus in Clinical Practice Guidelines Antenatal Care Module

Screening for hepatitis C virus (HCV)

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 reviews. If a HCV antibody test is positive, further investigation is required to determine viral status (e.g., HCV PCR test). Liver function tests should also be conducted. HCV treatment is changing rapidly and there are some indications that in the future therapy in the final trimester may be appropriate. Treatment after birth may be something to plan for.

Level of evidence: Consensus: I Lee, Gong, Brok, Boxall & Gluud, 2006

3.3.7 Screening for sexually transmitted infections (STIs)

Screening for STIs early in pregnancy may be appropriate, particularly for women with known risk factors. The national *Clinical Guidelines: Antenatal Care* recommend that all women are screened in early pregnancy for syphilis, whilst testing for Chlamydia should be offered to all women under the age of 25 years. Screening for gonorrhoea and other STIs is not routinely recommended but should be considered for women with known risk factors, irrespective of age.

Sexually Transmissible Infections (STIs) present risk factors for complications of pregnancy. In terms of chlamydia, potential complications include preterm birth and intrauterine growth restriction. Left untreated, chlamydia may result in conjunctivitis, low birth weight, and infant mortality. In terms of untreated syphilis, risks include congenital infection causing infant mortality, and permanent impairment.

The NSW Ministry are in the process of rescinding the NSW Health Guidelines "Screening for sexually Transmissible Diseases and Blood Borne Viruses in pregnancy" (GL2005_024). The National Antenatal Guidelines (2013) provides guidance for all maternity care providers irrespective of profession, will be adopted in its place.

In the national guidelines, Antenatal care is noted as an opportune time to screen all women for sexually transmissible infections. The following are specific recommendations which are undertaken at either the first hospital or first GP visit:

- Routinely offer chlamydia testing at the first antenatal visit to all pregnant women younger than 25 years.
- Routinely offer and recommend syphilis testing at the first antenatal visit

3.3.8 Comprehensive substance use assessment and treatment planning

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

- ascertain whether the woman is or may be substance-dependent (if so, refer for specialist drug and alcohol assessment and management). It is vital to consider whether the woman is a polydrug user
- 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 substance 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. Women may initially under-report substance use, therefore it is important to revisit these questions after rapport has been established.

See Appendix 2: Examples of assessment scales for alcohol withdrawal, and Appendix 3: Examples of substance use assessment tools.

3.3.9 Partner/support person

From the first visit the partner (or support person and family if relevant) should be included in all stages of care, including discussions about substance 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 substance use. A partner's substance use increases the woman's risk of continuing or relapsing to substance use.

3.3.10 Psychosocial assessment

A Psychosocial assessment of each woman is conducted at the initial 'booking' visit in NSW public health facilities. This assessment considers:

- 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-substance using networks, as well as substance use interventions. Counselling and other

support, such as referral to social work, should be initiated early in pregnancy.

Level of evidence: Consensus

3.3.11 Coexisting mental health and substance use issues

All health care workers involved in pregnancy care must be able to recognise signs of 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 perinatal mental health team, or alternative local service for assessment and advice (e.g., 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
- 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 local protocols and 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 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. See section 4.5.5, Risks of untreated depression in pregnancy and postnatally.

Women who are experiencing any symptoms of mental ill health should be referred to a General Practitioner, Psychiatrist or other mental health professional. It is important that pregnant and breastfeeding women who are on antidepressants or other psychiatric medications have regular contact with their General Practitioner or mental health professional. Pregnant and breastfeeding women should be encouraged not to discontinue their antidepressant or other psychiatric medication abruptly because of the risk of relapse. Women who are on antidepressant or other psychiatric medications who are admitted into hospital should have their medication administered and monitored by staff.

National Perinatal Depression Initiative

The National Perinatal Depression Initiative aims to improve prevention and early detection of antenatal and postnatal depression and provide better support and treatment for expectant and new mothers experiencing depression. This initiative, which benefits women who are at risk of, or experiencing, depression during pregnancy or in the first year following childbirth, enables the provision of:

- routine screening for depression for women during the perinatal period using the Edinburgh Postnatal Depression Scale
- follow-up treatment, support and care for women who are at risk of, or experiencing, perinatal depression
- training and development for health professionals to help them screen expectant and new mothers to identify those at risk of, or experiencing, perinatal depression, make appropriate referrals and provide treatment, care and support
- research and data collection including research into prevention activities and surveys of women's preferences to ensure services meet their needs.

See the National Perinatal Depression Initiative https://www.health.gov.au/internet/main/publishing.nsf/Content/mental-perinat

SAFE START

SAFE START is a program provided by NSW Health that assesses women who are expecting or caring for an infant. *SAFE START* provides the opportunity to identify early parental psychosocial risks by completing a comprehensive psychosocial assessment and depression screening for all women in the antenatal and post natal period. Identification of parental risk factors, such as anxiety and depression and social risk factors such as poverty and domestic violence is the first step in preventing to an infant's development. Parental mental health problems have a significant long term impact on healthy attachment and optimal developmental and health outcomes for infants and children. SAFE START involves universal psychosocial risk assessment and depression screening for all women as part of a comprehensive health assessment during both pregnancy and the postnatal periods. This is linked to a network of supports and health-related services for those mothers, infants and families at risk of adverse physical and mental health outcomes.

See NSW Health/Families NSW Supporting Families Early Package:
http://www0.health.nsw.gov.au/policies/pd/2010/pdf/PD2010_017.pdf

http://www0.health.nsw.gov.au/policies/pd/2010/pdf/PD2010_016.pdf

http://www0.health.nsw.gov.au/policies/gl/2010/pdf/GL2010_004.pdf

See section 3.8.4, Responding to risk of harm prenatally.

3.3.12 Team Management Approach

A skilled multidisciplinary team is ideal to provide care for the substance-dependent pregnant woman. In some circumstances, a collaborative response from more than one agency may be of benefit to mother and family. As described in the 'Maternal and Child Health Primary Health Care Policy' (NSW Health 2009) a team management approach to care is required for women or families identified through the SAFE START assessment process as vulnerable and in need of additional support. This approach is considered essential for women where risk factors such as significant substance use, mental health and child protection issues.

Such a team consists of specialists and generalists relevant to each woman's situation. These might include (where available):

- a general practitioner,
- midwife,
- obstetrician,
- social worker,
- addiction medicine specialist or addiction psychiatrist,
- psychologist,
- psychiatrist,
- mental health worker,
- drug and alcohol worker,
- dietician,
- Aboriginal health worker,
- paediatrician,
- child and family health nurse,
- lactation consultant,
- or probation and parole officer.

Multidisciplinary Case management meetings provide all team members with the opportunity to discuss the woman's particular needs, seek support and advice and develop coordinated care plans.

Where a team management approach is not available, women with *complex* substance 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 pregnant women

In remote, regional and urban areas, Aboriginal health workers, and Aboriginal liaison officers are integral members of the primary health care team providing risk assessments on mental health and substance use issues, clinical care, health education and liaison services between Aboriginal women, hospital services and community-based services.

Level of evidence: Consensus

Wherever possible ensure that pregnant Aboriginal women with drug dependencies are referred to an appropriate maternity service e.g. Aboriginal Maternal and Infant Health Service (AMIHS), an Aboriginal Medical Service (AMS) or a primary health care service that provides culturally appropriate services for pregnant Aboriginal women with a drug dependency. This will assist in ensuring that multidisciplinary care is provided during the perinatal period and during the early childhood years. Where women choose their care or require care in a tertiary health facility, shared care should be considered. An Aboriginal support worker is required at all times.

Level of evidence: Consensus

3.3.13 Allocating a case manager or key worker

To ensure continuity of care and adequate risk management, a case manager, or key worker 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/key worker. 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/key worker and care team.

Level of evidence: Consensus

Comment
Without a definite case manager, or key worker, continuity and consistency of care is difficult to achieve. 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 clinic or pharmacy.

See NSW Health /Families NSW Supporting Families Early Package: http://www0.health.nsw.gov.au/policies/pd/2010/pdf/PD2010_017.pdf

http://www0.health.nsw.gov.au/policies/pd/2010/pdf/PD2010_016.pdf

http://www0.health.nsw.gov.au/policies/gl/2010/pdf/GL2010_004.pdf

3.3.14 Communication

Pregnant women who engage in substance use may access antenatal care intermittently. To support the woman to remain in care, systematic communication strategies and protocols should be established between members of the multidisciplinary 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

Level of evidence: Consensus

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

3.3.15 Ongoing clinical assessment and treatment planning at each visit

As the pregnancy progresses, the following issues must be reviewed at each appointment for women who have been identified as substance users:

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

The following are particular considerations during pregnancy for women who are substance users:

Diagnosis and monitoring of the physical sequelae of chronic drug use, which may cause significant complications during pregnancy

- Signs of chronic liver disease, caused by longstanding alcohol abuse
  Liver disease and cirrhosis place severe stress on mother and baby. Regardless of viral hepatitis status, women with clinically evident liver disease should be referred to an appropriate liver specialist or centre for management.
- Signs of valvular cardiac disease caused by bacterial infection
  The woman may require referral to a tertiary maternity facility during pregnancy for monitoring and treatment

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

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 in labour.

Oral health

Opioid-dependent pregnant women may be unaware of pain associated with cavities or infection. Women should be advised to seek dental care during pregnancy as treatment can be safely provided during pregnancy.

Level of evidence: Consensus

3.3.16 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 the 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.

3.3.17 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 3.4, Labour and birth)
- timing and mode of birth, taking account of the risk indicators present, such as presence of blood-borne viruses
- advisability of presenting early in labour to minimise the need for self-medication and to monitor substance use.

Postnatal period

- choices for infant feeding
- benefits and risks of breastfeeding, taking into account any substance use, medications and the presence of blood-borne viruses (see section 3.5, Breastfeeding)
- neonatal abstinence syndrome and treatment options (particularly for the opioid-dependent mother)
- possibility of extended hospital stay for the infant and mother
- risk factors for sudden infant death and safe sleeping practices
- the effects of environmental tobacco smoke (see section 3.6, Breastfeeding, and section 4.2.12, Environmental tobacco smoke)
- parenting education and the option of participating in classes for substance-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.
- advice and links to child and family health services for ongoing support and developmental child health checks as per the '*My personal health record' (Blue Book)*
- where possible it is beneficial to introduce women to a child and family health nurse, to build rapport and establish a relationship to support ongoing child health surveillance.

Level of evidence: Consensus

3.3.18 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 substance-dependent women may have immediate issues or chaotic lifestyles 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.

3.1.19 Out of hours emergency presentations

It is not unusual for pregnant women who use drugs or alcohol to present in crisis to emergency services or birth units after hours, either intoxicated, 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.

Level of evidence: Consensus

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

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 that can. If the woman is not admitted, appropriate support services and referrals, including pregnancy care follow-up, should be arranged.

Level of evidence: Consensus

SUMMARY SECTION

3.4 Labour and birth

Labour and birth care for women with substance use issues is provided by midwives and obstetricians who are part of the multidisciplinary team providing overall maternity care.

3.4.1 Labour and Birth Summary

Early admission in labour

- Women should be advised to attend early once they go into spontaneous labour.

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

Monitoring fetal growth

- It is important to monitor fetal growth to determine which obstetric protocols to follow, as there is an increased risk of reduced fetal growth in women who use alcohol, tobacco and other drugs.

Out of hours emergency presentations

- Each health care service requires clear protocols to manage out of hour emergency presentations so that women are not lost to follow-up.

Protocols should include which practitioner is to be notified, and clear guidelines on stabilisation and psychosocial management.

Induction of labour

- There is no need for an induction of labour if the baby is showing normal growth.
- If induction of labour is planned, preferably arrange for this to occur early in the week when experienced staff and neonatal specialists are available to observe the infant for signs of neonatal abstinence syndrome.

Anaesthetic assessment

- Analgesic needs and potential crisis situations should be assessed and anticipated in the third trimester.

Appropriate forms of pain relief

- All forms of pain relief, including non-pharmacological means, should be offered in labour after assessing the woman's needs.

Comment
There is a tendency to underestimate the amount of pain relief needed by substance-dependent women during labour. Total analgesic requirements may be increased in women with a history of substance use.

Intractable pain

- Pain caused by an unknown pathology may be masked by substance use.
- Both common (e.g., pyelonephritis) and uncommon (e.g., sacroiliac joint abscess) conditions should be considered when the woman's pain cannot be controlled.

Specific anaesthetic agents to avoid

- Among women using, or suspected of using, psychostimulants, ketamine should be avoided where possible.

Difficulty with venous access

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

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.

3.4.2 Admission in labour

It is suggested that women be advised to attend early once they go into spontaneous labour.

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 substance use. It is suggested as a proactive management strategy.

Some women who are substance-dependent will present for the first time in labour, without previous antenatal care. 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.

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 induction or surgery.

3.4.3 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

3.4.4 Women on an opioid treatment program

When a woman on a methadone or buprenorphine program presents to give birth, 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, explore recent substance use by taking a substance use history.
- For women on a methadone or buprenorphine program, their usual dose will not relieve the pain of labour. Women must receive their usual dose on time, but labour pain must be assessed as a separate issue.

On discharge, the authorised prescriber and the opioid treatment dosing point must be informed, in advance of the discharge, of the dose and the date of last dose in hospital to ensure that appropriate arrangements are in place to continue the patient on the buprenorphine or methadone program.

If there is a need to continue opioid analgesia after discharge, the patient's authorised buprenorphine or methadone prescriber should be advised in addition to their general or treating practitioner prior to discharge.

Level of evidence: Consensus

3.4.5 Appropriate forms of pain relief

All forms of pain relief, including pharmacological and 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

Difficulty with venous access

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

Level of evidence: Consensus

Comment
There is a tendency to underestimate the amount of pain relief needed by substance-dependent women during labour. Total analgesic requirements may be increased in women with a history of substance 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.

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. Morphine 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; methadone is not sufficient to alleviate the pain of childbirth.

Women on a buprenorphine program in labour

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 (e.g., morphine) may be less effective due to the pharmacology of buprenorphine (μ opioid agonist with high receptor affinity). The use of regional anaesthesia should be considered for the management of pain in labour.

Level of evidence: Consensus

Alternative causes of pain

Women in whom pain is continuous and difficult to control at any stage of pregnancy, birth or in the postnatal period 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 substance use. Other causes of pain including common (e.g., pyelonephritis) and uncommon (e.g., sacroiliac joint abscess) conditions should be considered when the woman's pain cannot be controlled.

3.4.6 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
High dose psychostimulant use is associated with cardiovascular and cerebrovascular complications which can be exacerbated by the use of anaesthetic agents.

SUMMARY SECTION

3.5 Postnatal care

3.5.1 Postnatal Care Summary

Timing of discharge

- Early discharge is not usually appropriate for substance-dependent women.

Prepare opioid and sedative-dependent women for a postnatal stay of five or more days to allow assessment of neonatal abstinence syndrome (NAS).

Contraception

- Options for contraception should be discussed before discharge and information should be provided.

Sudden Unexpected Deaths in Infancy (SUDI)

- SUDI is defined as the death of an infant less than 12 months of age and was sudden and unexpected.

Sudden Infant Death Syndrome (SIDS) and tobacco

- All parents should be advised of the association between infant exposure to environmental tobacco smoke and SIDS, and offered smoking cessation support.

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

Shared sleeping practices

- All women should be informed of the risks of co-sleeping and about safe sleeping practices before discharge.

Aboriginal women

- Health care workers should be aware that it is common practice in some Aboriginal communities for family members to sleep with infants. Culturally appropriate education on the risks should be provided.

Sedating substances and sleeping accidents

- Any person responsible for caring for the baby should be informed about the risks of using sedating substances (e.g., alcohol, prescription medication) and safe sleeping practices both verbally and in writing.

Safe sleeping practices

- All women should be provided with a SIDS brochure and information on D&A use and sleeping practices.

Preparing for discharge

- The discharge plan, which should be written during the antenatal stage, must be reviewed with the woman and care providers before discharge, and each person must receive a copy of the plan.

Assertive follow-up

Inpatient services

- At 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.

Community services

- Community services must be active in engaging families and ensuring arrangements are followed up, including assessing the well-being and safety of the infant and/or other children at all points of contact.

Home visiting

- Families should be assessed individually as to the appropriateness and likely benefits of in-home visits.

Early intervention programs

- It may be important to intervene early for children affected by parental substance use, particularly children diagnosed with fetal alcohol syndrome (FAS).

All children at high risk for development concerns require intensive developmental surveillance.

3.5.2 Timing of discharge

Early discharge is not usually appropriate for substance-dependent women. Opioid and sedative-dependent women should be prepared for a postnatal stay of five or more days of their babies to allow assessment of Neonatal Abstinence Syndrome. See also section 5.10, Safe discharge.

Level of evidence: Consensus

3.5.3 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, ideally long-acting forms of contraception. Condoms prevent sexually transmissible infections (STIs).

Level of evidence: Consensus

3.5.4 Sudden unexpected deaths in infancy (SUDI)

SUDI is defined as the death of an infant less than 12 months of age, where the death was sudden and 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 deaths due to sudden infant death syndrome (SIDS) and to other ill-defined causes (such as sleeping accidents).

Sudden Infant Death Syndrome (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 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 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, 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. See section 4.2.12, Environmental tobacco smoke.

Level of evidence: IV

Shared sleeping practices

Co-sleeping, 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.

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

Level of evidence: Consensus

Aboriginal women

All health care workers should be aware that mothers or other family members sleeping with infants is a common practice in Aboriginal communities. Culturally appropriate education should be provided in relation to the risks.

'*Sids and Kids'* provides an Indigenous brochure on safe sleeping practices at http://www.sidsandkids.org/safe-sleeping/indigenous-safe-sleeping/

Level of evidence: Consensus

Sedating substances and sleeping accidents

If an adult has used any form of sedating substance that 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
- she may not wake for the baby's next feed, or if the baby becomes distressed
- to arrange a 'safety plan'; have another responsible adult 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 safe sleeping practices.

See PD 2012_062 *Safer Sleeping for Babies in NSW Public Health Organisations*

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 section 4.2.12, Environmental tobacco smoke.

Safe sleeping practices

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

- Put baby on their 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.
- Keep baby smoke free.

Level of evidence: Consensus

3.5.5 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 focusing on:

- parenting ability
- stability and psychosocial issues
- mental health
- progress in substance use treatment
- 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. In some cases a Perinatal Coordinator may be available provide liaison between maternity services and child and family health nursing services, to ensure appropriate ongoing care and follow up.

Level of evidence: Consensus

For a discharge checklist, see Appendix 4: Example of a discharge assessment checklists.

Transfer of care from hospital to community-based 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 for example, 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 based services (including child and family health services, general practitioners, developmental clinics and family support services) that will be continuing care, and referrals and supports must be in place. Ideally handover of care will actively involve the family.

The case manager, or key worker responsible for coordinating the care of the woman and her baby, should arrange for priority follow-up and ensure that this has occurred. In accepting the referral, the community provider/service should be aware that families with substance use issues may be difficult to engage in care. Community based services such as Child and Family Health 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 well-being of the mother and baby, and to identify ongoing developmental issues.

Further detail in relation to the process of transition of care from the maternity services to early childhood services can be found in the '*Maternal and Child Health Primary Health Care Policy*' (NSW Health 2009).

Level of evidence: Consensus

Community based services

Comment
At all points of contact, there should be ongoing risk assessment regarding the well-being and safety of the infant and/or other children. This may involve referral to child protection services (see section 3.8,

Protecting the safety, welfare and well-being of the unborn or newborn child).

3.5.6 Home visiting

A home assessment may be required before discharge, but most families will not receive home visits on an ongoing basis. Families should be assessed individually as to the appropriateness and likely benefits of home visits. Prior to home visiting a risk assessment should be completed to ensure potential risks and safety concerns are identified. http://www0.health.nsw.gov.au/policies/ib/2013/pdf/IB2013_024.pdf

Level of evidence: Consensus

Comment
Although there is currently insufficient evidence regarding the efficacy of sustained home visiting in women with serious substance misuse, 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.

3.5.7 Early intervention programs

It may be important to intervene early for children affected by parental substance use, particularly children diagnosed with fetal alcohol syndrome (FAS). 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. Under the SAFE START model early assessment of psychosocial risk and depressive symptoms and timely access to appropriate interventions for pregnant women, new mothers and their families are founding principles of appropriate management.

SUMMARY SECTION

3.6 Breastfeeding

3.6.1 General Principles of Breastfeeding Summary

Background information

For mother

- Early suckling minimises bleeding after birth.
- Breastfeeding may reduce the risk of pre-menopausal breast, ovarian and endometrial cancers.
- Breastfeeding may lead to stronger bones and less osteoporosis.

For child

- Breast milk meets all your baby's nutritional needs for the first six months.
- Regular skin-to-skin contact and close interaction during breastfeeds encourages responsiveness and attachment.
- Breast milk contains many anti-infective factors that help protect your baby from sickness.

NHMRC Infant Feeding Guidelines (2012) state that 'maternal use of nicotine, alcohol, amphetamines, ecstasy, cocaine and related stimulants has been demonstrated to have harmful effects on breastfed infants'. These are noted to be 'maternal conditions that may justify permanent avoidance of breast-feeding'. Smokers are less likely to breastfeed but they should be encouraged to do so.

If a woman who breastfeeds chooses to use substances, a harm minimisation approach is recommended, provided that:

- the woman is informed about the likely effects on the infant of the substances she is, or may, use.
- the woman is assisted to plan minimum exposure of the infant to the effects of these substances.

Appropriate support for substance-dependent women who wish to breastfeed requires integrated services from drug and alcohol services, paediatrician, lactation consultant or other health professional with breastfeeding expertise.

Breastfeeding and blood-borne viruses

Human immunodeficiency virus (HIV)

- To reduce the risk of HIV transmission to the infant, HIV-positive mothers should completely avoid breastfeeding and use formula milk instead.
- It is important that women who are not breast feeding be informed of the benefits to the infant of skin-to-skin contact.

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.

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.

Role of lactation advice

- Seek advice from a child and family health nurse, a lactation consultant, or midwife with drug and alcohol experience if there is uncertainty on how to advise the substance-dependent mother about breastfeeding.

More information

- NSW Health's 'Breastfeeding your baby' should be given to all women who are breastfeeding or considering breastfeeding. Visit <www.health.nsw.gov.au/pubs/2011/pdf/breastfeeding_your_baby_w.pdf>.
- Breastfeeding recommendations for specific substances are detailed in the guidelines and the summary sheets for each substance.
- NHMRC Infant Feeding Guidelines: Information for Health Workers http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/n56_infant_feeding_guidelines.pdf

3.6.2 General principles

There is very strong evidence of the protective health effects of breastfeeding across a wide range of short-term and longer-term health outcomes in infants and mothers. However, the NHMRC Infant Feeding Guidelines (2012) state that 'maternal use of nicotine, alcohol, ecstasy, amphetamines, cocaine and related stimulants has been demonstrated to have harmful effects on breastfed infants'. These are noted to be 'maternal conditions that may justify permanent avoidance of breastfeeding'. Smokers are less likely to breastfeed but they should be encouraged to do so.

Appropriate support for substance-dependent women who wish to breastfeed requires integrated services from drug and alcohol services, paediatrician, lactation consultant or other health professional with breastfeeding expertise.

Level of evidence: Consensus NHMRC Infant Feeding Guidelines

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.

Australian Guidelines, such as the National Infant Feeding Guidelines, recommend that not drinking and not using substances while breastfeeding is the safest option.

For women who choose to use alcohol or other substances while breastfeeding, appropriate precautions following a harm minimisation approach are described in the following statements:

- 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 routinely advised against breastfeeding.

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

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

Level of evidence: Consensus

Professionals should be guided by the following information:

- NHMRC "Infant Feeding Guidelines: Information for health workers' (2012) Section 6: Breastfeeding in specific situations which provides specific advice on breastfeeding in relation to tobacco, alcohol and other drugs
- http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/n56_infant_feeding_guidelines.pdf
- NSW Health Breastfeeding in NSW: Promotion, Protection and Support. This document is consistent with the *Australian National Breastfeeding Strategy 2010-2015* and can be downloaded from: http://www0.health.nsw.gov.au/policies/pd/2011/PD2011_042.html
- NSW Health's *'Breastfeeding your baby'* should be given to all women who are breastfeeding or considering breastfeeding. The document can be downloaded from: <www.health.nsw.gov.au/pubs/2011/pdf/breastfeeding_your_baby_w.pdf>.

3.6.3 Breastfeeding and alcohol

The Australian Guidelines to Reduce Health Risks from Drinking Alcohol recommend that:

For women who are breastfeeding, not drinking is the safest option.
www.nhmrc.gov.au/guidelines/publications/ds10>

For women who choose to drink alcohol while breastfeeding, alcohol intake should be limited to no more than two standard drinks a day; women should avoid drinking immediately before breastfeeding and women who wish to drink alcohol should consider expressing milk in advance. There is no need to express and discard milk after drinking; however a breastfeeding mother should wait until her blood alcohol returns to zero before feeding her baby again. Alcohol enters the breast milk and may persist in the milk for several hours after alcohol consumption.

See NHMRC Infant Feeding Guidelines for Health Workers http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/n56_infant_feeding_guidelines.pdf

Consumption of two or more standard drinks per day in lactation appears to be associated with decreased lactational performance, earlier cessation of breastfeeding, deficits in infants' psychomotor development, and disrupted infant sleep-wake behavioural patterns.

See The NHMRC National Infant Feeding Guidelines, and the LactMed Database.

See Appendix 5: Guidelines to Reduce Health Risks from Drinking Alcohol

3.6.4 Breastfeeding and tobacco

Smoking is not contraindicated with breastfeeding; mothers who smoke should be encouraged to breastfeed while encouraged also to cease smoking. The effect of nicotine exposure via breast milk on infant morbidity is an area of continual debate, because it is difficult to disentangle pre- and postnatal effects. 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 300g per day in mothers who smoke
- mothers who smoke are less likely to start breastfeeding than non-smokers
- mothers who smoke tend to breastfeed for a shorter time
- it is believed that exposure to nicotine from breast milk impairs infant arousal processes which may increase the risk of SIDS.

Level of evidence: Consensus in BMA, 2004; Bittoun & Fernia, 2010

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.

Care should be taken to avoid excess weight gain in those who do cease smoking.

Level of evidence: III-2 Hector, Hebden, Innes-Hughes & King, 2010

Comment
Practical tips for mothers to minimise the impact of tobacco use while breastfeeding:

- *smoking during breastfeeding should be avoided completely. Feed and settle the baby before having a cigarette*
- *smoke away from the baby, as the second-hand smoke is even more harmful than the smoke that the mother is taking in*
- *try to decrease the amount of cigarettes smoked daily*
- *smoke an hour before a feeding and not just before a feed, as it takes 95 minutes for half of the nicotine to be eliminated from the mother's system*
- *smoke outside the home and ventilate the home frequently*
- *if the mother is breastfeeding and trying to cut down or stop smoking, it may be preferable for her to use nicotine replacement therapy if clinically appropriate*
- *wear a removable "smoking shirt" to limit the baby's exposure to toxic effects of degrading smoke when breastfeeding as particulate matter from smoke settles on clothing.*

3.6.5 Breastfeeding and nicotine replacement therapy (NRT)

Women who wish to breastfeed while continuing to use NRT should be advised to breastfeed first, then, as soon as possible after feeding, use one of the intermittent delivery methods of NRT (inhalator, gum, lozenge or mouth spray). 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% 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: III-2 Dempsey & Benowitz, 2001

3.6.6 Breastfeeding and opioids

Mothers who are stable on OST (both methadone and buprenorphine) should be supported if they choose to breastfeed. The level of methadone in breast milk is low when the mother is on a methadone maintenance program and does not affect the infant's blood level of methadone.

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 breast milk is small and considered to be clinically insignificant.

Level of evidence: Consensus

Mothers who are unstable, continuing to use short acting opioids such as heroin, or using multiple drugs (especially other sedatives including alcohol and benzodiazepines), should be encouraged not to breastfeed, and attention should be paid to assisting them to stabilise their lifestyle. This group may benefit from intensive support (e.g., inpatient admission, admission to a mother baby unit, admission to substance rehabilitation services that can address these issues with a medical team).

Level of evidence: Consensus

Comment
An unstable pattern of substance use may raise child protection concerns (see section 3.8, Protecting the safety, welfare and well-being of the unborn or newborn child).

3.6.7 Breastfeeding and cannabis

There is evidence that cannabis is excreted in breast milk. Using cannabis while breastfeeding may cause the baby to be unsettled and disrupt feeding cycles and the long-term effect from this exposure is not known. Rather than interrupting plans to breastfeed, women should be advised that they should not take cannabis while they are breastfeeding. While the benefits of breastfeeding may outweigh the potential risks, in certain cases

women should consider not breastfeeding if they plan to continue their high level use of cannabis.

Early studies report that levels of Δ9 tetra-hydro-cannabinol (THC), the main ingredient of cannabis, found in breast milk was dependent on the amount of cannabis that was being used. In addition it was reported that one hour following cannabis use, there was an eightfold accumulation of THC in breast milk compared to that measured in maternal blood. As an infant's brain is still developing postnatally, ongoing exposure via breast milk could theoretically affect normal brain development in these breastfed infants. There is some evidence smoking cannabis during pregnancy may be associated with learning problems during childhood, however, the role of other factors on development cannot be excluded.

Cannabis is a long acting, highly fat soluble drug that may be contaminated with pesticides or other substances, so advice to refrain from using the drug until after a breastfeed (as for alcohol) is not useful. Current advice given to women ranges from supporting the decision to breastfeed to advising against it.

Level of evidence: Consensus

Women are advised not to smoke cannabis while they continue to breastfeed.

Further advice to women and others should be not to be intoxicated around baby and as for tobacco: that is, smoke away from the infant, out of the house, and not in the car, and wear a removeable smoking shirt to limit the exposure of the infant to particulate matter from smoke.

Level of evidence: Consensus

3.6.8 Breastfeeding and benzodiazepines

Benzodiazepines are used both licitly and illicitly, and also in complex polydrug combinations. The pattern and dosage of use (e.g., binging compared to regular use) is likely to significantly impact on its consequences. 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.

Breastfeeding women who choose to use benzodiazepines should be advised not to breastfeed immediately after taking a dose because of the risk of her falling asleep and potentially smothering the infant. 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 3.5.4, Sudden Unexpected Deaths in Infancy).

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 4.5, Benzodiazepines) and will not be taking benzodiazepines while breastfeeding.

3.6.9 Breastfeeding and psychostimulants

Pschyostimulants are one of the substances that the NHMRC Infant Feeding Guidelines advises against using during breastfeeding because it has been found to have harmful effects on breastfed infants.

Breastfeeding mothers who choose to use psychostimulants rarely, or in binges, may be advised that:

- not using psychostimulants is the safest option and informed of the risks
- educated in how to minimise 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 24-48 hours after the use of amphetamine-type stimulants, ecstasy or cocaine. Although cocaine has a shorter duration of action than amphetamine-type stimulants, the illicit drug may be mixed with other unknown substances.

Level of evidence: Consensus

Comment
Milk amphetamine levels have been shown to be up to 7 times higher than maternal plasma.

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 breast milk. It is not known when it

is safe to reinstate breastfeeding after use but 24 hours may be sufficient.

3.6.10 Breastfeeding and inhalants

The National Infant Feeding Guidelines advise that the use of inhalants is one of the maternal conditions that may justify permanent avoidance of breastfeeding due to the harmful effects that inhalants have on infants.

Many solvents pass readily into breast milk. Given that the newborn's nervous system continues to develop after birth, they may be more sensitive to the neurotoxic effects of solvents.

Breastfeeding mothers who choose to use inhalants rarely, or in binges, must be:

- Advised that not using inhalants is the safest option
- informed of the risks
- educated in how to minimise the harmful effects to the baby, that is:
- to not breastfeed while intoxicated on inhalants
- to express and discard the breast milk after inhalant use (not to simply stop breastfeeding)
- to have a supplementary feeding plan ready for such eventualities.

Mothers of infants who regularly use inhalants should be advised against breastfeeding.

3.6.11 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 makes an informed decision. The information that should be provided includes:

- *that the virus does appear in breast milk*
- *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.

3.6.12 Role of lactation advice

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

Level of evidence: Consensus

SUMMARY SECTION

3.7 Vertical transmission of blood-borne viruses

3.7.1 Vertical Transmission of Blood-Borne Viruses Summary

General considerations

- The OH&S of staff should be considered when managing people with blood-borne viruses.
- Normal body fluid precautions should be taken.
- All women of childbearing age should receive information about blood-borne viral infections and pregnancy.

Human immunodeficiency virus (HIV)

Antiretroviral therapy

- Antiretroviral therapy reduces the risk of 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.

Birthing considerations

- Short courses of certain antiretroviral medicines are effective in pregnancy and are not associated with any safety concerns in the short term. Elective caesarean section can reduce the risk of perinatal transmission to the infant before labour and before ruptured membranes and is effective among women with HIV not taking antiretrovirals or taking only zidovudine.

Antiretroviral therapy and the newborn

- Antiretroviral therapy for the infant is recommended immediately after birth and for the first 6 weeks of life.

Immunisation

- Advice on immunisations should be sought from a paediatric HIV specialist or infectious diseases specialist.

Monitoring

HIV status monitoring by PCR testing to exclude vertical transmission should occur for the first 18 months.

- Advice from a paediatric HIV specialist should be sought in line of evolving new evidence.

Hepatitis C virus

Caesarean section

- Caesarean section has not been shown to reduce HCV transmission.

Monitoring

Currently infants are tested for hepatitis C at 18 months, but PCR testing may be offered from 4-6 months.

- Any testing of babies should be accompanied by thorough counselling of parents before and after the test.
- The woman's primary health carer is responsible for following this up (typically her GP)

Managing vertical transmission

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

Hepatitis B virus

Caesarean section

- Elective caesarean section to reduce risk of vertical transmission is not justified.

Vaccination

- Women who are HBsAb negative should be offered HBV vaccination after birth.
- It is public health policy in Australia that all newborns receive HBV immunisation, and babies of HBsAg positive mothers are given immunoglobulin.

3.7.2 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

See section 3.3.6, Screening.

Breastfeeding

See section 3.6, Breastfeeding.

3.7.3 Human immunodeficiency virus

Antiretroviral therapy

Antiretroviral therapy reduces the risk of 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: Consensus

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% risk in the placebo group to 8% 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.

Birth considerations

Short courses of certain antiretroviral medicines are effective in pregnancy and are not associated with any safety concerns in the short term. Elective caesarean section can reduce the risk of perinatal transmission to the infant before labour and before ruptured membranes and is effective among women with HIV not taking antiretrovirals or taking only zidovudine.

Level of evidence: Consensus in Clinical Practice Guidelines Antenatal Care Module I

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

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 (i.e., 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.

3.7.4 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

Pregnant women identified as HCV RNA positive should be referred to a hepatologist or infectious diseases physician to discuss the latest care and treatment information.

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

Level of evidence: Consensus

3.7.5 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

Monitoring

Mother-to-child transmission is demonstrated by the detection of anti-HBs three months after the completion of the hepatitis B vaccination course (and not before nine months of age).

Vaccination

All infants born to mothers with HBV should receive hepatitis B immunoglobulin and hepatitis B immunisation within 12 hours of birth. The infant will also need routine immunisation, including the remaining HBV immunisations as per the recommended schedule for infants.

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.

SUMMARY SECTION

3.8 Protecting the safety, welfare and well-being of the unborn or newborn child

3.8.1 Protecting the Safety, Welfare and Well-Being of the Unborn or Newborn Child Summary

Responding to risk of harm prenatally

- A person who has reasonable grounds to suspect before the birth that a child may be 'at risk of significant harm' (ROSH) after his/her birth may make a prenatal report to the Child Protection Helpline.
- Making a prenatal report is not mandatory in NSW
- Health professionals should liaise closely with all agencies involved in the provision of services during the antenatal and postnatal periods for each pregnant woman, including attending case meetings/reviews.
- Where appropriate, concerns may be discussed with clients, so that they understand why there mayneed to talk with others and initiate referrals to other services.

Under Chapter 16A, services can exchange information without parental consent where a child is suspected to be at ROSH. However, 16A does not apply to unborn children unless a prenatal report has been lodged.

- Health professionals must have the pregnant woman's consent to exchange information about an unborn child unless a prenatal report has been lodged for ROSH concerns to the Child Protection Helpline.

SAFE START

- SAFE START assesses women expecting or caring for an infant, and assists in identifying and supporting those who may be experiencing or at risk of mental health problems (e.g., postnatal depression).
- All pregnant women booked in for routine antenatal care can access SAFE START.

Responding to safety, welfare and well-being concerns about newborns

- Where risk factors have been identified, drug and alcohol and maternity services should work closely to ensure that services and supports are in place to secure the best possible outcome for a newborn child.
- Workers should consult the Mandatory Reporter Guide along with using their professional judgement to determine what initial action should be taken to protect newborns in response to identified risks.
- Where suspected ROSH is identified after the birth of a child, as mandatory reporters, health workers are required by law to report their concerns to the Child Protection Helpline.

Mandatory reporters' identities are protected by law. Making a report cannot be seen as breaching professional ethics or as a departure from acceptable standards of professional conduct.

Child Well-being Units

- NSW Health Mandatory reporters can also call the NSW Health Child Well-being Units (CWUs) to discuss whether concerns warrant a risk of significant harm report being made.

Referral services

- Where the child is not exposed to risks of significant harm, consider referring the woman to a Family Referral Service or community based support services that may assist with support needs (e.g., parenting skills).

More information

- The NSW Health Prenatal Reporting Guidelines is available at <www.health.nsw.gov.au/policies/gl/2011/pdf/GL2011_008.pdf>.
- The NSW Mandatory Reporter Guide is available at <sdm.community.nsw.gov.au/mrg/>.
- Child Protection Helpline is open 24/7. Telephone 133 627 (mandatory reporters) or 132 111 (general public).

3.8.2 Introduction

Every Health worker who comes in contact with a child or young person has a responsibility to protect their health, safety, welfare and wellbeing. This responsibility may include providing additional services and support to pregnant women whose unborn child may be at risk of significant harm when born. Prenatal Harm refers to a parent's circumstances or behaviours during pregnancy that may reasonably be expected to produce a substantial and demonstrably adverse impact on the child's safety, welfare or wellbeing when born.

When a Health worker has concerns about the safety, welfare or wellbeing of a child or young person they are to use the Mandatory Reporting Guide (MRG) prior to reporting to the Child Protection Helpline. The MRG will assist Health mandatory reporters in making a decision about the level of risk and in deciding whether to report their concerns.

If a Health worker is concerned that a child or young person in another State who does not ordinarily live in NSW or is not present in NSW is at ROSH they should notify the Child Protection Helpline. Health workers may also notify the Helpline if they are concerned that the unborn child of a pregnant woman who is not normally a resident of NSW, may be at ROSH when born. Although Community Services is unable to intervene in these matters directly, they can refer the information on to the relevant interstate authority.

Information Exchange

Chapter 16A of the (1998) the Department of Family and Community Services (Community Services) enables health workers to provide and receive information that promotes the safety, welfare or well-being of children or young people. Health workers may only share information under Chapter 16A regarding an unborn child where a pre-natal report has been made to the Child Protection Helpline or to a Child Wellbeing Unit. Before providing information about an unborn child Health workers should telephone the local Community Services Centre, Child Protection Helpline or Health Child Wellbeing Unit to establish whether a pre-natal report has been made to Community Services.

Under Chapter 16A or section 248 of the *Care Act (1998)* the Department of Family and Community Services can issue NSW Health services with an Unborn Child High Risk Birth Alert (HRBA) where a risk of significant harm to the child, when born, is identified. The HRBA will be issued to the Local Health District / Speciality Network Central Contact Point.

3.8.3 Review of the evidence

- Carer drug and/or alcohol issues were listed in 22.9% of reports referred by the NSW Community Services Child Protection Helpline for further assessment in 2009/10.
- In 2013, substance use by a carer was the primary concern regarding 16.8% of those children reported by Health workers to the Health Child Wellbeing Unit.
- Substance abuse, domestic violence and mental health are the three most common concerns reported to the Health Child Wellbeing Unit about unborn children.
- Substance use by a carer was the primary issue in 13.5% of ROSH assessed reports lodged by health workers to Community Services in 2009/10.
- Of the 83 children and young people reported to Community Services in 2012 who subsequently died, parental substance use was reported as a risk factor in 39% of cases.
- In 2005, 14 children born to mothers who used dangerous levels of drugs or alcohol during their pregnancy died before the age of 12 months in NSW.
- While in 2005 three children died in NSW due to methadone poisoning, between 2006 and 2009 no child deaths related to methadone poisoning were reported. This decrease may be part explained by improved safe storage education, improved information on the risks of prescribing and dispensing methadone in take away doses, and the increased availability of Suboxone (buprenorphine-naloxone).
- A meta-analysis found that women subjected to domestic violence are almost six times more likely than non-abused women to misuse alcohol and five and a half times more likely to misuse licit or illicit drugs than other women.

Level of evidence: III-2 (Golding, 1999), Department of Human Services Annual Statistical Report 2011/12, Annual Report 2012, WellNet Database

3.8.4 Responding to risk of harm prenatally

NSW Health workers are uniquely positioned to identify vulnerabilities in pregnant women so that health services and other supports can be put in place with the aim of preventing the unborn child from being at risk prenatal harm, or risk of significant harm when born.

Prenatal harm refers to a parent's circumstances or behaviours during pregnancy that may reasonably be expected to produce a substantial and demonstrably adverse impact on the child's safety, welfare or wellbeing when born. Misuse of alcohol or drugs by parents, particularly by pregnant women is an indicator of prenatal harm.

Health workers should be aware of the following procedures for engaging vulnerable pregnant women in the NSW Health system and identifying cases where an unborn child may be at risk of significant harm after his or her birth.

Making a Prenatal Report

Pre-natal reports are not mandatory under the Care Act and Health workers should make every effort to engage vulnerable pregnant women in health services and other supports to address their needs. If there are sufficient grounds for making a prenatal report, however, the Mandatory Reporter Guide will prompt the worker to do so. Health workers may make a prenatal report about an unborn child under section 25 of the Care Act to help facilitate assistance and support to the pregnant woman and reduce the likelihood that her child, when born, will need to be placed in out-of-home care.

A prenatal report may be made to the Child Wellbeing Unit or to the Child Protection Helpline Reporting may occur where a worker has reasonable grounds to suspect that the child may be at risk of significant harm after his or her birth. Pre-natal reporting can be a valuable process for the provision of early assistance to mothers and their babies. By alerting Community Services to potential risks, NSW Health and Community Services are able to work collaboratively to ensure that all available preventative and early intervention strategies are in place to reduce the risk of harm to a child when born. Prenatal reporting may be particularly helpful in situations where the pregnant woman is in a gender based violence situation, or where there are unmanaged or ongoing mental health concerns for a member of the household or hazardous drug and/or alcohol misuse and these situations are likely to continue after the birth of the child. It is also appropriate to make a prenatal report where a parent has previously demonstrated significant harm to other children.

High Risk Birth Alerts (HRBA)

A High Risk Birth Alert (HRBA) is a procedure which may follow a prenatal report to the Child Protection Helpline. HRBAs are issued by Community Services to NSW Health and/or other agencies where it is determined that there may be a risk of significant harm after the child's birth.

The Prenatal Reporting Service Delivery Model aims to ensure that Health Services attempt to engage a pregnant woman who is the subject of a HRBA in support services regardless of where the woman presents in the Health system before the birth.

Comment
Under Chapter 16A, services can exchange information without parental consent where a child is suspected to be at ROSH. However, 16A does not apply to unborn children and in the case of pregnant women, health workers must have the woman's consent to exchange information unless a prenatal report has been lodged for ROSH concerns to the Child Protection Helpline. Health workers should note that services other than NSW Health services may have lodged a prenatal report and should ascertain directly from the Child Protection Helpline whether a prenatal report has been made. Child Well-being Units are well placed to advise whether a prenatal report has been lodged.

Supporting families early SAFE START strategic policy

The NSW Health / Families NSW Supporting Families is an initiative that promotes an integrated approach to the care of women, their infants and families in the perinatal period. The first part of the package is the Supporting Families Early Maternal and Child Health Primary Health Care Policy. It identifies a model for the provision of universal assessment, coordinated care, and home visiting, by NSW Health's maternity and community health services, for all parents expecting or caring for a new baby. The SAFE START model aims to enhance the mental and physical health of parents and their infants by providing a consistent model for psychosocial assessment and depression screening for women expecting or caring for an infant, and by supporting the development of local networks of services, which will work collaboratively to support families. The SAFE START model also aims at early identification of parental mental health problems, reduction of relapse rate and lowering of the impact of parental mental illness on the infant, whilst preserving the family unit.

All pregnant women booked in for routine antenatal care with a health service can access SAFE START. Health professionals may contact the SAFE START Consultation Liaison Worker to investigate any

opportunity for a coordinated case management of the pregnant woman through a SAFE START Multidisciplinary Case Discussion meeting.

3.8.5 Responding to safety, welfare and well-being concerns about newborns

Where risk factors have been identified, drug and alcohol and maternity services should work closely to ensure that services and supports are in place to secure the best possible outcome for a newborn child.

Workers should consult the Mandatory Reporter Guide along with using their professional judgement to determine what initial action should be taken to protect newborns in response to identified risks, including whether a suspected 'risk of *significant* harm' (ROSH) report should be made to the Child Protection Helpline.

Where suspected ROSH is identified after the birth of a child, as mandatory reporters, health workers are required by law, under the *Children and Young Persons (Care and Protection) Act 1998* to report their concerns to the Child Protection Helpline. This includes where the newborn child is likely to be exposed upon discharge from the maternity unit to significant gender based violence, neglect, sexual assault or psychological harm.

Child Well-being Units

NSW Health Mandatory reporters can also call the NSW Health Child Well-being Units (CWUs) to discuss whether concerns warrant a risk of significant harm report being made (including where they have consulted the Mandatory Reporter Guide and remain unsure as to whether a report should be made).

CWUs may also be able to:

- identify whether another health worker or agency, including Community Services, has reported concerns or is working with a particular child, young person or family and whether this information impacts on the level of risk
- identify whether Community Services has issued a High Risk Birth Alert
- provide advice and assistance in planning what referrals and services may be offered to assist the child, young person and family
- conduct a cumulative risk appraisal (where previous concerns have been recorded).

3.8.6 Checklist for assessing and responding to child protection issues

- Adopt a family sensitive approach to practice:
- Always be alert to the possibility of harm to the unborn and the newborn child. All substance use assessments should include an assessment of any children or young people in the parent's care and the impact that substance use may be having on the safety, welfare and well-being of all children concerned (including the child to be born), whilst also identifying protective and resilience factors.
- Discuss concerns with clients, so that they understand why you may need to talk with others and initiate referrals to other services.
- Exchange information with other professionals involved in the care of the pregnant woman with the client's consent. Under Chapter 16A of the *Care Act*, client consent is not required to exchange information on prenatal concerns where a prior ROSH report has been made to the Helpline. Assess the risks of harm to the unborn/newborn child using the Mandatory Reporter Guide
- Contact a Child Well-being Unit or Child Well-being Area Coordinators for advice
- Report risk of significant harm to the Child Protection Helpline
- Where the child is not exposed to risks of *significant* harm consider referring the pregnant woman/new mother to a Family Referral Service or to community based support services that may assist with immediate support needs including parenting skills and counselling.

Summary of key documents

The Children and Young Persons (Care and Protection) Act 1998

- Summary of key changes resulting from the amendments to the Act:
- The mandatory reporting threshold being raised from 'risk of harm' to 'risk of significant harm'.
- Alternative referral options for mandatory reporters in major government reporting agencies for those children assessed as at risk of harm (but not at risk of significant harm).
- Chapter 16A allows government agencies and NGOs who are 'prescribed bodies' to exchange information that relates to a child or young person's safety, welfare or well-being, whether or not the child or young person is known to Community Services and whether or not the parent of the child or young person consents to the information being exchanged. Knowledge of a prior ROSH report is a requirement for prenatal information exchange under 16A. These changes

are in addition to the existing rules governing the exchange of information between Community Services, other government agencies and NGOs contained in Section 248. Professionals concerned about the safety, welfare or well-being of children now have two means to obtain information related to a child (Chapter 16A and Section 248).
- Removal of legal penalties for not reporting.
- Allowing disclosure of the reporter's identity to a law enforcement agency investigating a serious offence against a child or young person.
- Please see Ch 4 of *PD2013_007 Child Wellbeing and Child Protection Policies and Procedures* for NSW Health
- More information on information sharing is available from the *Child Well-being and Child Protection – NSW Interagency Guidelines* published by Family and Community Services available at <www.community.nsw.gov.au/kts/guidelines/info_exchange/info_index.htm>, and the *NSW Heath Child Protection and Well-being Information Exchange Policy* available at <www.health.nsw.gov.au/policies/pd/2011/pdf/PD2011_057.pdf>.

Further information on Keep Them Safe and changes related child protection is available at <www.health.nsw.gov.au/initiatives/kts/index.asp>.

The NSW Health Prenatal Reporting Guidelines

These Guidelines have been developed to provide the principles and steps to engage a vulnerable pregnant woman with the NSW Health System. The Guidelines are to be referenced by Local Health Districts when developing local response mechanisms.

This policy is available at <www.health.nsw.gov.au/policies/gl/2011/pdf/GL2011_008.pdf>.

The 2006 NSW Health Policy Directive – Information Sharing – NSW Health & Family and Community Services (Opioid Treatment – Responsibility) Children under 16

This policy is intended to support appropriate child protection responses by facilitating information sharing between Community Services and health practitioners. It is intended to support a shared approach to monitoring risks related to children's potential exposure to methadone or buprenorphine, which is dispensed to their parents or carers as registered opioid treatment clients.

This policy is available at <www.health.nsw.gov.au/policies/pd/2006/pdf/PD2006_085.pdf>.

For more information see:

PD2013_007 Child Wellbeing and Child Protection Policies and Procedures for NSW Health operationalise the responsibilities of NSW Health under the *NSW Children and Young Persons (Care and Protection) Act 1998 (Care Act)* and the *Child Wellbeing and Child Protection Interagency Guidelines (2011).*

Child Protection Helpline 13 36 27

Health Child Wellbeing Unit 1300 480 420 or <www.health.nsw.gov.au/initiatives/kts/contact.asp>

Contact details for all Community Services Centres can be found on the Community Services website www.community.nsw.gov.au.

The Mandatory Reporter Guide (MRG) is available at http://sdm.community.nsw.gov.au/mrg/

Resources for a family sensitive approach <nceta.flinders.edu.au/workforce/publications_and_resources/nceta-workforce-development-resources/family-sensitive-policy-and-practice-toolkit/>.

- For information on Family Referral Services access NSW Health Keep Them Safe webpage <www.health.nsw.gov.au/Initiatives/kts/frs.asp>.

Summary child protection guide <sdm.community.nsw.gov.au/mrg/app/summary.page>).

SUMMARY SECTION

3.9 Additional considerations for special populations

3.9.1 Caring for pregnant women with problematic substance use in custodial settings summary

General considerations

- All women of child-bearing age are to be pregnancy tested on entry into custody and again after one month.
- If substance use problems are present, the drug and alcohol doctor on call should be consulted promptly.

Pregnancy choices

- If a woman requests termination of pregnancy, this should be facilitated in a supportive and non-judgmental manner whilst maintaining strict confidentiality and professional attitudes.

Withdrawal management

- Women experiencing withdrawal should be closely monitored at frequent intervals, particularly those with mental or intellectual disabilities, and medications titrated appropriately.

Treatment options

- Pregnant, substance-using women should be offered drug and alcohol counselling and psychosocial support.
- Methadone treatment is offered to opioid dependent women. However, pregnant women entering custody on buprenorphine should generally be maintained on this if medically appropriate.

Labour and birth care

- Women in custody are transferred to Westmead Public Hospital or Nepean Public Hospital at labour onset.
- Correctional centre staff may be present at the hospital for the duration of the woman's stay.

Post delivery care

- The Justice and Forensic Mental Health Network (JFMHN) midwife completes a Community Services (CS) report on all pregnant women in custody.
- The hospital social worker assists women to plan for the care of their baby and liaises with CS NSW.

Breastfeeding

- JFMHN promotes and supports breastfeeding and/or expressing breast milk.

Bonding and attachment

- Hospital staff can assist with bonding and attachment by helping women to feel connected to their babies (e.g., giving the woman a photograph of their newborn, having regular visits with the baby).

Release planning and reintegration

Continuity of care should be a key goal for the management of pregnant, substance-using women who come into a custodial setting.

- If a woman is released prior to giving birth, they should be booked into a hospital in the area in which they are going to be living.
- For women on methadone maintenance, a community prescriber should be found prior to their release.
- If the mother and baby are leaving prison together, there is a particular need to ensure that maintenance prescribing is sufficient to protect against a return to illicit opioid use.

Contraceptive advice and pregnancy planning

- When substance-dependent women enter custody, 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 custody, who need advice about reliable and easy to use methods of contraception.

Long term contraception is offered to all women by JFMHN, which may include the use of Implanon (a sub-dermal implant).

3.9.2 Considerations for substance use in custodial settings

Women entering custody in NSW have a very high incidence of substance use estimated at:

- 40% of women drinking at harmful levels
- 78% using illicit substances.
- 80% of women are current tobacco smokers
- levels of prescription opioid analgesic and benzodiazepine dependence appear to be increasing.

Once incarcerated, women who are pregnant and also have problematic substance use are at high risk of substance use withdrawal. Pregnant women entering custody with substance use issues are also likely to have co-morbid mental health issues and/or intellectual disabilities. These need to be taken into consideration when managing a woman's withdrawal and antenatal care.

As with their non-custodial counterparts, women in custody require access to safe, high quality, compassionate maternity services. Despite having high risk pregnancies, they are often not engaging with health services in the community and have received minimal, if any, antenatal care before entering custody. This lack of antenatal care can have adverse health outcomes on the mother and baby, and often prison health care professionals will have to urgently organise medical attention for these women upon entry, such as booking in blood tests and ultrasounds.

However, while prison health care is provided in a challenging environment, it also provides a unique opportunity to improve the health status of this group. Additionally, pregnancy is often a period when women are more receptive to engaging in drug and alcohol treatment.

See Indig et al., 2010, Justice Health Inmate Survey 2009.

General considerations and assessment

All women of childbearing age are to be pregnancy tested on entry into custody and again after one month. This is because women may present with amenorrhea (absence of menses) or uncertain menstrual history due to drug and psychosocial problems and not be aware of a pregnancy. If a woman reports that she is pregnant, she should be asked to sign a release of information form to allow for collateral information to be collected from health services with whom the woman was engaged (if any) prior to incarceration. If substance use problems are present, the drug and alcohol doctor on call should be consulted promptly to commence a treatment plan and decrease the risk of adverse pregnancy outcomes for the woman and fetus alike.

Pregnancy choices

Pregnant women in custody have the same rights of choice as they would have in the community. It is essential to recognise that women are likely to be in an emotional crisis at the time of incarceration with much to consider and limited support. Where possible, they should be given the opportunity to liaise with their partner, family or other support people. If a woman requests termination of pregnancy, even if she is more than 12 weeks pregnant, this should be facilitated in a supportive and non-judgmental manner whilst maintaining strict confidentiality and professional attitudes.

Withdrawal management

Pregnant women who experience acute drug withdrawal (in particular alcohol or opioid withdrawal) are at risk of miscarriage, premature labour, and fetal hypoxia and distress. The stabilisation of women experiencing withdrawal should be in accordance with the guidelines outlined in section 3.10, Caring for pregnant women who are experiencing, or at risk of, acute substance withdrawal. Women should be closely monitored at frequent intervals, particularly those with mental or intellectual problems, and medications titrated appropriately.

Treatment options

The majority of female offenders are either serving short sentences of less than three months or are on remand. This makes program delivery especially challenging. However, pregnancy is often a strong patient motivation for change. Pregnant women who use substances should be offered drug and alcohol counselling and psychosocial support. Psychological treatment and education options offered by Corrective Services NSW (CS NSW) after stabilisation include programs such as Getting Smart. The Justice and Forensic Mental Health Network (JFMHN) also offers a quit smoking programme and nicotine patches are available.

All pregnant women placed into custody are moved to a custodial setting in Sydney, as there are no rural settings that cater for pregnant women. As most pregnancies are considered to be high risk, women need to be located close to the specialised services offered in Sydney. This move may result in women from rural and remote

settings feeling isolated, as there are reduced opportunities for the woman's family and support network to visit her. Further, the general lack of access to services in rural or remote communities, particularly antenatal and postnatal care is problematic for rural or remote pregnant women when released from custody.

The stabilisation of opioid-dependent women should be in accordance with the guidelines outlined in section 4.3, Opioids. JFMHN offers methadone treatment for opioid dependent women. Methadone is the most common treatment in custodial settings. The availability of buprenorphine is limited, as it is frequently diverted for illicit use and has predominantly been replaced with buprenorphine-naloxone (the safety of which has not been established in pregnancy). However, pregnant patients entering custody on buprenorphine should generally be maintained on this if medically appropriate.

Labour and birth care

All pregnant women in custody are transferred to either Westmead Public Hospital or Nepean Public Hospital depending on where they are incarcerated at the onset of labour. The care during labour and birth is provided by the hospital staff. Depending on the classification level (maximum, medium, minimum security), there may be correctional centre staff at the hospital for the duration of the woman's stay.

Post delivery care

Currently, the JFMHN midwife completes a Community Services report on all pregnant women in custody. The social worker at the hospital assists women to plan for the care of their baby and liaises with CS NSW regarding 'risk of significant harm' issues and whether a report is required when a woman in custody gives birth. The CS NSW Mothers' and Children's Program enables mothers with a minimum security classification in minimum security facilities to be housed with their children. Ideally, women ineligible for this program will elect a family member to care for the baby if possible. If babies are being housed with their mothers in custody and require medicated withdrawal management, they need to have completed treatment prior to discharge from hospital. Many women fear losing their child to Family and Community Services (FaCS) due to their substance use and/or incarceration and JFMHN is obligated to refer all pregnant women to FaCS so that they can conduct a thorough assessment of the safety and well-being of the child. In instances where a child has been removed from a mother in custody, she may require additional support.

Breastfeeding

Where possible, women should be encouraged to breastfeed. Rates of successful breastfeeding amongst incarcerated women in NSW improved significantly during 2010-2011 following more intensive support, such as maternity bras and breast pumps.

When the baby is discharged from the hospital and living in the community, transport of EBM is arranged by the woman's family or significant others.

See NSW Health's *Breastfeeding in NSW: Promotion, Protection and Support*

See PD2011_042, which is consistent with the Australian National Breastfeeding Strategy 2010-2015.

See 'Breastfeeding your baby', which can be downloaded from <www.health.nsw.gov.au/pubs/2011/pdf/breastfeeding_your_baby_w.pdf>.

Bonding and attachment

Bonding and attachment can be severely disrupted when the mother is incarcerated. If appropriate, hospital staff can assist this process by helping women to feel connected to their babies. For example, feedback from women who have given birth while in custody suggests that being given a photograph of their newborn and other mementos (such as the baby's arm band) can be helpful. Regular visits with the baby are also very important and it is appropriate for health care providers to advocate with CS NSW to arrange for mothers to visit their babies if they are hospitalised. Where this is not possible, the mother may wish to provide a recording of her reading stories or singing nursery rhymes, which can be played for her baby.

Parenting programs in partnerships with NGO's have been successful.

Release planning and reintegration

Continuity of care should be a key goal for the management of women who are pregnant and substance dependant and who come into a custodial setting. Those who have served short sentences are often a neglected group. In NSW approximately 50% of the 'flow through' prison population has served a sentence of six months or less. Therefore, partnerships between the criminal justice system and health services in the community

are critical for improving the health status of the inmate population in NSW.

Continuity of care is critical but connecting women into health and welfare services upon release is challenging. Difficulties experienced by staff when planning continuative care include:

- women being released from custody unexpectedly
- dealing with stigma from community services
- not knowing where to pre-book appointments for women who do not know where they will live when released, and
- women not attending pre-booked appointments after release.

If women are released prior to giving birth, they should be booked into a hospital in the area in which they are going to be living. For women on methadone or buprenorphine maintenance, a community prescriber should be found prior to their release. These arrangements should be made well in advance to ensure continuity of treatment and support upon release. If the mother and baby are leaving prison together, there is a particular need to ensure that maintenance prescribing is sufficient to protect against a return to illicit opioid use. The JFMHN Connections Program can provide additional support post release to help women link into community health and welfare services. Unfortunately, women are sometimes released unexpectedly (usually by the courts) and there is little time for release planning.

See Baldry, McDonnell, Maplestone & Peeters, 2003.

Contraceptive advice and pregnancy planning

When substance-dependent women enter custody, their health and therefore their fertility is likely to improve. This may increase the risk of unplanned pregnancy on release. This possibility should be discussed with women entering custody, who need advice about reliable and easy to use methods of contraception. Long term contraception is offered to all women by JFMHN, which may include the use of progesterone implants (e.g. Implanon) (a sub-dermal implant).

Shared Care Model

Shared care antenatal models between justice health and maternity hospital based services increase pathways to care for women in custody.

3.9.3 Caring for pregnant women with problematic substance use in rural and remote settings summary

Barriers to effective service delivery	Recommendations to overcome
Lack of availability of services	■ Consult with women in rural communities to find local solutions to increase service availability and access. ■ Adopt a holistic, multidisciplinary team approach using a combination of public and private sector resources. ■ Assign a case manager to each woman for consistency of care. ■ Provide transport assistance to/from services.
Lack of knowledge, training and support	■ Encourage professional networking and mentoring. ■ Engage in distance learning for ongoing education. ■ Update online learning modules with relevant clinical information. ■ Conduct trainings on how to screen and assess substance use amongst pregnant women.
Difficulty recruiting staff	■ Train and retain multi-skilled workers. ■ Adopt a case managed, multidisciplinary team approach, with the appropriate use of interactive mediums. ■ When a rural worker resigns, organise an immediate replacement, ideally before the worker leaves so they can do a hand-over to the new rural worker. ■ Consider offering better employment packages; avoid short term contracts; consider alternative methods of recruitment, such as advertising interstate or internationally and developing Aboriginal identified clinical and trainee positions; Study why some towns prosper and others always have difficulties.
Stigma	■ Gain rapport with women and support from the community. ■ At the first antenatal presentations, engage the woman and her partner, family and/or community member or support person through a non-judgemental, professional, trusting and empathic relationship.

Barriers to effective service delivery	Recommendations to overcome
Concerns of privacy and confidentiality	■ Advise women about their right to access services confidentially, as well as the limits to confidentiality. ■ Health and welfare services may consider sending workers into communities so women can access services with anonymity. ■ Alternatively, drug and alcohol workers could arrange to meet women at a neutral location (e.g., local GP office).

3.9.4 Considerations for rural and remote settings

Research on substance use during pregnancy has largely focused on urban populations. However, in 2007 the usual residence of almost 12% of all women giving birth in Australia and almost half of Aboriginal and Torres Strait Islander women was in an outer regional, remote or very remote area. There are substantial substance use problems in rural populations and the prevalence and frequency of use may differ from urban populations.

A range of barriers to both seeking and obtaining help in the perinatal period are associated with living in regional, rural or remote areas. While some of these issues may not be unique to the management of substance use in pregnancy or specifically to managing pregnancy in a geographically isolated location, the interaction of these issues appears to result in increased risk. Women in rural and remote areas were less likely to have antenatal care prior to 20 weeks gestation, were more likely to have their first gestational visit after 30 weeks, had significantly higher rates of still birth, and had babies that were small for their gestational age (rural Aboriginal mothers).

See Helliwell, Reilly, & Rippingale, 1992; Laws & Sullivan, 2009; Logan, Walker, Nagle, Lewis, & Wiesenhahn, 2003; Sloan, 1992;

Level of evidence: Consensus

Level of evidence: II Heil, Sigmon, Jones, & Wagner, 2008); (IV Roberts & Algert, 2000).

General considerations

Availability of services

Despite a higher fertility rate, women in rural and remote areas have significantly less access to maternity services. This limited access is partly due to services, particularly speciality treatment services, not being located in these communities. This is particularly the case for crisis, which typically occur outside of normal business hours. As they are less accessible, people in rural and remote areas have longer distances to travel which is costly. These services also tend to have long waiting lists.

Treatment services specifically for substance use or mental illness are often less affordable, as incomes are generally lower in rural and remote areas. As with women in metropolitan areas there is an increased likelihood of comorbid mental health issues including depression and anxiety. The identification and treatment of these problems is, however, more difficult due to the limited health services available, and/or the difficulty of recruiting specialist staff to these services.

Women are often advised to access larger regional centres to give birth, particularly if their pregnancy is deemed high risk. However, travelling long distances for the birth of a child can cause financial hardship and social disruption for both the woman and her family. Consequently, women may not present for antenatal care for fear of being identified as pregnant and being referred to out of town services. This may result in women presenting at the health centre when in well advanced labour.

See Kildea, 2003; Helliwell et al., 1992; Richardson, Bolisetty, & Ingall, 2001.

Level of evidence: IV Passey, Sheldrake, Leitch, & Gilmore, 2007

Comment

- *Consistent with current obstetric best practice, pregnant women should be involved in decisions regarding where they give birth.*
- *Interventions for pregnant women in rural or remote settings should be targeted towards increasing the availability of and access to treatment. The benefits of continuity of care and carer when providing maternity services are well documented.*
- *A holistic, multidisciplinary team approach using a combination of public and private sector resources is the ideal method to address the complex medical and social challenges faced by rural and remote women with substance use problems*
- *Australian research indicates a case management based approach can improve access to health services, reduce substance use, improve self-esteem and decrease women's sense of isolation*

- *Services should assist women and their families with transport as required.*
- *Risks assessments may be useful to alert service providers to issues that may require special attention during pregnancy, but should not be a substitute for ongoing clinical assessment.*

Lack of knowledge, training and support

In rural/remote areas, non-specialists usually function as the early pregnancy management and assessment services or rely on visiting maternity provision. Barriers to treating pregnant women with alcohol and other substance use problems by rural antenatal care providers include lack of knowledge, training, support and comfort with assessment.

Interventions should be in place to increase the skills and capacity of generalist health providers to deal with substance use problems during pregnancy. However, it should also be noted that some rural and remote areas find it very difficult to recruit staff and experience a high staff turnover. This leaves longer term staff often overworked within their normal responsibilities with less capacity to respond to substance use issues. Therefore, a case managed, multidisciplinary team approach, with appropriate use of interactive mediums is the optimal service delivery model, including case plans for clients with regular reviews and weekly case conferences. Optimal workforce development options:

- Assessing pre-pregnancy substance use as part of the initial antenatal visits to identify at-risk pregnant women. See section 3.3.6, Screening.
- Professional networking to increase support for workers in rural areas.
- Professional development via interactive mediums or through distance learning. Online learning modules should be made available and updated with new clinical recommendations and medication advice when necessary.
- An ongoing relationship with an experienced colleague who is readily available for advice, as well as providing training and clinical work
- Training on screening and assessment to increase professional confidence and ability of clinicians to identify substance use in pregnancy.

See Elliott, Payne, Haan, & Bower, 2006; Sturmey, 1994; Payne, Elliott, D'Antoine, O'Leary, Mahony, Haan, & Bower, 2005.

Level of evidence: Consensus in Shakeshaft, 2010

Comment
Stigma

Substance use disorders amongst women are often seen as particularly socially unacceptable, with substance use during pregnancy attracting even more intense stigma. This stigma may be increased in rural communities where self-referral by substance using pregnant mothers is much lower than in metropolitan settings. Consequently, women may be reluctant to seek appropriate treatment or antenatal care, because they fear they will be labelled, regarded as incompetent, or their baby and/or other children will be removed.

- *The first antenatal presentation, wherever it may occur, is an opportunity to engage the pregnant woman and her support people.*
- *The aim of engagement is to establish a non-judgemental, professional, trusting and empathic relationship, which assists the woman to continue to engage with services (see section 3.3.3, Engagement skills). See section 3.8.1, Protecting the safety, welfare and well-being of the unborn or newborn child, for a discussion of child protection issues.*

Comment
Concerns regarding privacy and confidentiality

Women in rural and remote areas with small populations may have particular concerns about privacy and confidentiality when disclosing substance use in pregnancy.

- *Women should be advised about their right to access services confidentially, as well as the limits to confidentiality.*
- *Where stigma in accessing services occurs, an alternative model is for workers to come in from outside a community, so that a service can be accessed with anonymity. Alternatively, where this is not possible, drug and alcohol workers could arrange to meet women at a neutral location (e.g., local GP office) for consultations, as a way to protect the woman's privacy in smaller communities.*

3.9.5 Caring for pregnant Aboriginal women with problematic substance use summary

Gaps In Service Delivery	Recommendations To Address
Engaging Aboriginal women into antenatal care	■ Offer flexible services, such as home visits. ■ Ensure that clinical settings are culturally appropriate. ■ Focus on continuity of care, whereby women see the same health care professional at each visit. ■ Employ Aboriginal clinicians and trainees ■ Employ Aboriginal workers to work in equal partnership with clinical specialists. ■ Treat women with respect and work with their strengths.
Increasing knowledge about substance use in pregnancy	■ Provide culturally appropriate information to the wider community. ■ Educate pregnant women in an encouraging, non-judgemental way. ■ Acknowledge women's desires to have a healthy baby. ■ Affirm women for positive steps they have already taken to reduce their use. ■ Link women with specialist services.
Strengthen skills through collaboration	■ Ensure that all health professionals have access to: – culturally safe referral services – educational resources for clients, and – ongoing professional development. ■ Health professionals should develop their cultural understanding by completing the 'Respecting the Difference' on-line training, developing links with Aboriginal communities including having a cultural mentor ■ Make substance control a community responsibility through community activities.
Service Delivery Challenges	**Recommendations to Address**
Challenging environments	■ Work with women to: – identify their environmental stresses – equip them with ways to cope and handle stress without substances – address the social determinants of health e.g. housing, education, employment and other lifestyle issues, such as housing – develop supportive social structures – establish trust and continuity of care. ■ Health professionals should also work in partnership and collaborate with health providers in Aboriginal and mainstream government and non-government health services and local Aboriginal community members

3.9.6 Considerations for Aboriginal women

Overall Aboriginal people carry a far greater burden of poorer health than the rest of the population. Despite this maternal and infant mortality and morbidity has improved over the last ten years. In 2000-2002, there were 10.4 Aboriginal infant deaths per 100,000 live births in NSW, compared to 4.9 per 100,000 live births for non Aboriginal infants. There were 3.9 Aboriginal infant deaths per 100,000 live births in NSW in 2010, and 3.8 non-Aboriginal infant deaths per 100,000 live births.

However, in 2011 in NSW, perinatal mortality with an Aboriginal mother was 17.9 per 100,000 births compared to 4 per 100,000 for non Aboriginal births in NSW. This indicates clearly that further improvement is required to close the gap between Indigenous and non-Indigenous health outcomes. Low birth weight is a key risk factor of perinatal mortality. The rate of Aboriginal low birth weight is double that of the rest of the population. Smoking during pregnancy reduces birth weight; 52.2% of Aboriginal women in NSW report that they smoke during pregnancy in comparison with 19.8% of the non-Aboriginal Australian population.

Alcohol, tobacco and cannabis are the most commonly used substances amongst Aboriginal (and non-Aboriginal) people. Patterns of substance use vary. Although Aboriginal people are less likely to drink as often as non-Aboriginal people, they are more likely to binge drink. The context of substance use also varies with social use being more common.

Research has shown a strong relationship between regular antenatal care and positive child health outcomes. In NSW culturally appropriate maternity and child and family health care is provided by services delivered predominately in Local Health Districts, Aboriginal Community Controlled Health Services and Medicare Locals. Maternity services designed specifically for the Aboriginal community includes the Aboriginal Maternal and Infant Health Service (AMIHS) which covers approximately 75% of births to Aboriginal women in NSW. This service has been shown to increase the number of Aboriginal women accessing maternity services. The number of Aboriginal women in NSW accessing antenatal care early (before 14 weeks) has improved from 56.4% in 2005 to 61.2% 2011

(71.7% of the non-Aboriginal Australian population access antenatal care before 14 weeks). With almost 50% of Aboriginal women living in a regional, rural or remote location, an understanding of the challenges of service delivery in these areas is essential (see section 3.9.4, Caring for pregnant women with problematic substance use in rural and remote settings). Note that The Building Strong Foundations for Aboriginal, Children, Families and Communities (BSF) follows a similar model to AMIHS with a child and family health nurse working with an Aboriginal Health Worker. BSF services provides culturally appropriate child and family health care up until the child starts school.

See Health NSW. Aboriginal Maternal and Infant Health Strategy Evaluation. Final report 2005. Available at: http://www.health.nsw.gov.au/pubs/2006/pdf/evaluation_maternal.pdf

Note that the *NSW Strong Women, Strong Babies Pregnancy Diary* is a culturally appropriate resource for Aboriginal families that promotes healthy pregnancies and breastfeeding with a strong focus on prevention and early intervention including alcohol and other drugs. The resource is available in hard copy to services providing maternity care to Aboriginal communities in NSW. It is also accessible on the internet at http://www0.health.nsw.gov.au/pubs/2011/aboriginal_pregnancy_diar.html

See Australian Institute of Health and Welfare 2011; Centre for Epidemiology and Research, 2009; Health Statistics NSW; NSW Department of Health, 2003.

General considerations

The importance of early antenatal access

The earlier a pregnant woman presents for antenatal care, the greater the opportunity of improving health outcomes. This is particularly relevant for women who need help with substance use management. Early identification and intervention are key principles to be applied.

Between 2005 and 2009, the proportion of Aboriginal or Torres Strait Islander mothers who commenced antenatal care at less than 14 weeks gestation rose from 56.4% to 69.2%, and the proportion that commenced antenatal care at less than 20 weeks gestation rose from 74.9% to 83.4%. While more Aboriginal women are accessing services, there still needs to be improvements made to close the gap, as the proportion of non-Aboriginal Australian mothers starting antenatal care at less than 14 weeks gestation rose from 68.1% to 78.9%.

A number of factors that contribute to this gap include difficulties in transport to health facilities, beliefs regarding the necessity of antenatal care, existing family commitments, language barriers, racism and reduced cultural safety. Additionally, with many Aboriginal women living in rural, regional or remote settings, there are often fewer health facilities and substance treatment options available locally.

In 1998, a review of maternity services identified that traditional service delivery did not meet the needs of Aboriginal women. The AMIHS was piloted and has grown from seven sites to the provision of targeted service provision in 52 locations in NSW. The key to Aboriginal service delivery is a trusted partnership between the people and a health team that includes an Aboriginal Health Professional as well as clinical specialists.

See Centre for Epidemiology and Research, 2009; Centre for Excellence in Indigenous Tobacco Control CEITC, 2010; Wood, France, Hunt, Eades, & Slack-Smith, 2008;.

Recommendations

Research has shown that service flexibility is required to maximise access opportunities for Aboriginal women. Mainstream health clinics are often alienating and unwelcoming for Aboriginal women. Given this, it is suggested that:

- Continuity of care is made a priority. Women should be seen by the same health professionals during each visit, with the same Aboriginal health worker and clinical specialist being critical. Introduction of other service providers into the trusted team should occur in a timely manner with the woman's permission.
- Antenatal and postnatal care is delivered in the woman's home or within her community. If it is necessary to travel to a health clinic, the clinical setting is made comforting through a culturally appropriate environment
- Research has shown that Aboriginal health professionals are a vital link to gaining the trust and access to pregnant Aboriginal women. Clinical specialists, such as midwives and drug and alcohol workers, must work in partnership with an Aboriginal health professional by including them in all visits in an equal working relationship.

- Provide early access to preconception care and antenatal care.
- Health professionals: engage with the woman's close family and friends to explain the health benefits of not engaging in substances themselves, as well as the negative implications that these substances can have on the woman and her child, whether it be through direct or passive substance consumption.
- Offer flexible service delivery, including home visiting, booking into the maternity unit from home, blood collection at home and transport support. Where possible Aboriginal pregnant women should be referred to the local Aboriginal Maternal Infant Health Service.

See Morgan, Slade and Morgan 1997

Knowledge: The essential ingredient of change

Knowledge of the effects of substances during pregnancy is not universal amongst Aboriginal women. The provision of clear information on the effects of substance use during pregnancy therefore remains a key strategy to improving health outcomes. In communicating this information health professionals should also discuss any accepted myths around substance use; for example, that smoking cessation can stress the unborn baby because they will miss the cigarettes.

Comment
Optimal service provision involves:

- *Working in a model that utilises the woman's strengths and set achievable goals.*
- *Promoting preconception care and education as part of community development activities,*
- *Providing culturally appropriate information about the effects of substance use to all women who are in the age range of falling pregnant.*
- *Providing education in an encouraging, non-judgemental way that includes as much information as possible. Pregnant women should be assessed in accordance with the stages of change model to make sure they are ready.*
- *Acknowledging desires to have a healthy baby, and affirm any positive steps they may have already taken to reduce substance use.*
- *Encouraging women who are struggling to stop using substances completely to reduce their intake and have 'substance-free days'.*
- *Linking women in with specialist services. Work with fellow colleagues who may have training in, for example, motivational interviewing or Smoke Check training. Utilise their skills and expertise in a primary health care, collaborative model of care.*

Collaboration strengthens skills

Health professionals often feel that they lack the skills and resources to support and provide advice to pregnant Aboriginal women with substance use issues. Seek the help and support of a service that has the expertise and confidence, and is known to be providing a successful service. Contacting an Aboriginal Maternal and Infant Health Service (AMIHS) or Aboriginal Medical Service (AMS) may be a starting point. Seek the help of an Aboriginal health professional in your health service (TSU has a list of all AMIHS & AMS who host AMIHS services).

See France, Henley, Payne, D'Antoine, Bartu, O'Leary, Elliot, Bower, 2010.

Resources and Professional Development for Health Professionals

- Have ongoing professional development in the use of culturally safe assessment and screening tools, which is essential for a healthier clinician but also provides a healthier outcome for the client.
- Complete 'Respecting the Difference' online training.
- Develop a current list of contact details and referral information for local health services that would be suitable for pregnant Aboriginal women who ask for substance use treatment.
- Have access to educational resources for pregnant women, their families and the community on the effects of substance use, such as flip charts or online modules.
- Develop links with the Aboriginal community in partnership with local Aboriginal health professionals by engaging with clients through community engagement via the vouching process.
- Develop a community development activity to promote healthy women, strong babies – make substance control a community responsibility.

Challenging environments

Pregnant Aboriginal women face the challenge of having a healthy pregnancy in an environment where the burden of chronic disease, mortality, poor education, and poverty are much greater than the rest of the population. These women face more challenging social issues than other women; domestic violence and incarceration are much higher in Aboriginal communities than non-Aboriginal Australian communities. These issues must be understood so that health professionals enter the provision of care of these women with insight and understanding.

Aboriginal women may have a number of competing stressors in their lives; therefore it is recommended that strategies to reduce substance use take into account the range of issues affecting the individual, not just the pregnancy itself. Strategies include:

- Identifying environmental stressors for the pregnant woman,
- Equipping women with alternative stress reduction and coping methods
- Encouraging social structures that are supportive of the woman not using substances during or after pregnancy and that will minimise stressors within the immediate environment
- Establishing trusting relationships and continuity of care,
- Working in partnership with other health and non-government providers,
- Engaging with the partner or support person of the Aboriginal woman,
- Engaging with the Aboriginal community and Elders.

See Gilligan, Sanson Fisher, D'Este, Eades & Wenitong 2009; and Wood et al., 2008.

Level of evidence: Consensus in CEITC 2010; II Johnston, Thomas, McDonnell, & Andrews, 2011.

SUMMARY SECTION

3.10 Caring for pregnant women who are experiencing, or at risk of, acute substance withdrawal

3.10.1 Caring for Pregnant Women who are Experiencing, or at Risk of, Acute Withdrawal Summary

Substance-dependent women who present intoxicated

- Pregnant women who present intoxicated or with symptoms consistent with drug dependence (i.e., there is a risk of withdrawal) may require inpatient admission to an appropriate facility.

When dependent drug use is abruptly ceased (e.g., during a period of incarceration or a hospital admission) pregnant women should be closely monitored for withdrawal and treated early and assertively, to decrease the risk of adverse pregnancy outcomes.

General considerations and assessment

- Once it is established that the pregnant woman is substance dependent and at risk of substance withdrawal, a number of factors need to be assessed and/or investigated (e.g., current substance use pattern).

Setting of withdrawal

- It is important to determine the most suitable location for the pregnant woman's withdrawal management.
- Have a discussion with the woman about this, while keeping in mind a number of factors, such as what trimester the women is in, the type of drug withdrawal and child protection issues.

Withdrawal management plan and care

- A comprehensive management plan should address issues of substance use, general health, mental health and social needs.

After withdrawal management

- Health professionals need to consider a number of options for after withdrawal management of pregnant women, including referral to a specialist team for drug relapse prevention, engaging in a short term rehabilitation program, ongoing assessments of child safety, and preparing the mother, partner and home environment for the baby's birth.

Risks from maternal drug withdrawal

- Pregnant women, who experience acute drug withdrawal, in particular those experiencing alcohol or opioid withdrawal, are at risk of miscarriage, premature labour, and fetal hypoxia and distress.

Many dependent drug using women experience complex health and social problems (e.g., poor nutrition, homelessness, domestic violence, mental health issues), which can add to the risk of poor obstetric outcome.

There is the added risk of these women relapsing into substance use in order to avoid the withdrawal process.

Polydrug use

- Polydrug use is common, therefore a woman may be withdrawing from several substances concurrently.

Validated withdrawal tools cannot be fully relied on and assessment by a skilled clinician is essential.

- It is not uncommon for pregnant women to under report their substance use for fear of losing their child, however once rapport with the woman has been established, it may be advisable to retake substance use history.

More information

- Withdrawal information for specific substances is detailed in the guidelines and the summary sheets for each substance.

Pregnant women who present intoxicated or with symptoms consistent with substance dependence (i.e., there is a risk of withdrawal) may require inpatient admission to an appropriate facility to: assess maternal health and safety and fetal well-being; comprehensively assess their alcohol, tobacco and other drug use; and plan and further manage their care.

Women who are under emotional or nutritional stress, and/or use substances such as opioids, may have irregular menses and may be unaware that they are pregnant. Consideration should be given to performing pregnancy testing of all women of child-bearing age who are at risk of acute withdrawal.

When dependent-type substance use is abruptly ceased (such as during a period of incarceration or a hospital admission) pregnant women should be closely monitored for withdrawal and treated early and assertively, to decrease the risk of adverse pregnancy outcomes.

Level of evidence: Consensus

3.10.2 General considerations and assessment

Once it is established that the pregnant woman uses substances, assess the following in order of need. The woman's:

- current substance use pattern and method of administration, amount, and time since last use (consider quantity and frequency of use from the woman's last menstrual period date)
- evidence of neuroadaptation or that the woman meets ICD 10 criteria for substance dependence (and consider urine drug screening)
- quantity and frequency of substance use from the woman's last menstrual period date
- general health, physical consequences of substance use, nutritional status, infection risk and risk of injury or potential further substance related harms
- mental health and other psychological factors
- social stability (accommodation, physical safety, income) and other psychological stressors and supports
- pregnancy gestation and obstetric needs
- previous obstetric history (including complications)
- fetal well-being
- knowledge of possible pregnancy effects from continued substance use and from abruptly quitting
- access to supportive family members and non-using friends
- dependent children, their safety and need for temporary child care
- history with child protective services, where relevant
- whether the pregnancy is planned/unplanned and wanted/unwanted – decisions in regard to pregnancy choices are best delayed until acute withdrawal has resolved.

Level of evidence: Consensus in Guidelines for the treatment of alcohol problems

3.10.3 Setting

There are obstetric risks for women who are experiencing or at risk of severe substance withdrawal, and there is a need for observation and monitoring.

It is important to determine the most suitable location for the pregnant woman's withdrawal management. Location options are:

- Outpatient/ambulatory;
- D&A Withdrawal unit (residential or hospital); or
- Obstetrics ward.

Discuss this issue with the woman, and consider:

- gestation
  - women with a first trimester pregnancy or a pregnancy of less than 20 weeks gestation may not require admission into a maternity hospital
  - women with an advanced pregnancy, a pregnancy complication/obstetric risks or who are not accessing antenatal care may require admission into a maternity unit
- type of drug withdrawal
  - a slow medication reduction (e.g., weaning off benzodiazepines) could be conducted as an outpatient provided the woman's general considerations are met and she is agreeable to regular prescriber review
  - alcohol withdrawal, especially from significant amounts (i.e., more than 6 standard drinks per day) or where there is a history of complications, may need to occur in a supervised setting
- motivation
  - pregnancy is often a period when women are more receptive to engaging in harm reduction or abstinence oriented treatment
- child protection issues
  - consider the unborn child and other children.

Level of evidence: Consensus in Guidelines for the treatment of alcohol problems

3.10.4 Withdrawal management plan and care

A comprehensive management plan should address substance use, general health, mental health and social needs. In addition, the following components should be addressed:

- Regular fetal (cardiac) monitoring and obstetric liaison throughout the woman's admission (if not in a maternity setting) as appropriate for gestational age. Liaison should occur with the treating obstetric team.
- Regular monitoring for maternal withdrawal symptoms using a validated scoring tool.
- Attenuate the woman's withdrawal symptoms with suitable medication as required, frequently titrating dosages according to clinical presentation. Use a reducing medication regimen when there is a risk of acute physical withdrawal symptoms or significant emotional or psychological problems developing.
- For opioid dependent women, opioid substitution will typically be a safer option than opioid withdrawal (though use of other substances may still necessitate inpatient care). Consider the need for a prescriber and dosing site once the woman leaves your care.
- Dietary and vitamin supplementation requirements.
- If admission is outside of a specialist withdrawal facility, contact a specialist service for advice and support, and consider developing a contract between the woman and the service to address limiting visitors, limiting time out of the ward, quitting tobacco use or providing Nicotine Replacement Therapy (NRT), and receiving the woman's assurance to take only hospital prescribed medication.
- If incarcerated, the woman should be housed in a section of the correctional centre where she can be regularly assessed by nursing staff experienced in drug and alcohol treatment. If this cannot be provided, consideration should be given to hospital admission.

Level of evidence: Consensus

3.10.5 Antenatal care

During the provision of care to substance-dependent pregnant women, consider the following:

- Confirm pregnancy and gestation.
- Contact, refer and transfer as required to an appropriate health facility if pregnancy complications are evident (this includes but is not limited to the symptoms list below, relevant to woman's pregnancy gestation).
- reduced fetal movements
- any vaginal bleeding
- headache and/or blurred vision
- fainting
- persistent vomiting and diarrhoea
- abdominal or back pains
- if the woman thinks that she is in labour
- if the woman's 'waters' break (i.e. membranes rupture)
- a feeling that something is wrong with the pregnancy
- any physical change as observed by staff.
- Ensure a maternity hospital booking is in place and encourage regular antenatal care.
- Initiate pregnancy antenatal blood tests and other investigations (include sexual health) if not already done.
- Ensure effective communication between agencies involved in the woman's care.

Level of evidence: Consensus

3.10.6 After withdrawal management

Consider the following after withdrawal management for the pregnant woman:

- Referral to a specialist team for her substance use for drug relapse prevention or ongoing management (e.g., methadone or buprenorphine).
- A short term residential or day care rehabilitation program (several take people on methadone or buprenorphine).
- Assertive follow-up for antenatal care and substance misuse treatment.
- Ongoing assessment around potential child safety concerns.
- Preparation for baby's birth and home environment, social and parenting supports.
- Referral for baby follow-up if exposed to substances in-utero.
- Educate on Sudden Infant Death Syndrome (SIDS) and safe sleeping guidelines (see <www.sidsandkids.org/safe-sleeping/>).
- Actively seek to engage the woman's partner. If the pregnant woman's partner is using substances also, they should be prioritised into treatment to decrease the risk of the pregnant woman's ongoing substance use.

Level of evidence: Consensus

3.10.7 Risks from maternal drug withdrawal

Pregnant women, who experience acute drug withdrawal, in particular those women experiencing alcohol or opioid withdrawal, may be at risk of miscarriage, premature labour and fetal hypoxia and distress. Many dependent substance-using

women experience complex health and social problems (e.g., poor nutrition, homelessness, domestic violence, mental health issues), which can add to the risk of poor obstetric outcome. There is the added risk of these women relapsing into substance use in order to avoid the withdrawal process. This is not a reason to avoid withdrawal, but rather to encourage withdrawal to occur in an appropriate setting.

Level of evidence: Consensus

3.10.8 Specific substance withdrawal considerations

Alcohol

A pregnant woman at risk of moderate to severe alcohol withdrawal may be admitted into hospital, at any gestation, due to the additional risks to her health and that of her fetus at this time as well as longer-term health and social support.

Risk of significant alcohol withdrawal can be ascertained typically when the woman is reporting drinking six standard drinks or more on most days and/or symptoms of neuroadaptation that is, tolerance/dependence are reported (criteria for alcohol dependence syndrome). Women may under-report the quantity of alcohol consumption due to fears of child being removed from their care.

Alcohol withdrawal usually commences within 6–24 hours of the last drink and may last 2–12 days. Withdrawal symptoms include increasing anxiety and agitation, gross tremor, perspiration, fluid and electrolyte imbalance, nausea and vomiting, fever, tachycardia, hypertension, disturbed sleep, confusion, disorientation, paranoia and delirium tremens.

Level of evidence: Consensus

The woman will need:

- close observation using a withdrawal scale and/or trained staff
- nursing and medical care to reduce the risk of complications for her and baby
- at least a five day inpatient stay after the onset of withdrawal
- nutritional intervention including:
  - parenteral thiamine
  - folate replacement (minimum 400 mcg daily and to continue to term)
  - iron levels assessment
  - assessment for other dietary needs
- a reducing diazepam regimen may be given to control alcohol withdrawal symptoms.

Level of evidence: Consensus in Guidelines for the treatment of alcohol problems

After withdrawal management:

- recommend and support ongoing abstinence during pregnancy and lactation
- pharmacotherapy to maintain abstinence from alcohol cannot be routinely recommended during pregnancy due to insufficient safety data.

Appendix 2 provides some examples of assessment scales that can be used to monitor alcohol withdrawal symptoms.

Fetal and neonatal effects

If the woman has been drinking heavily shortly before baby's birth or has undergone withdrawal during labour or birth, the neonate is at risk of acute alcohol withdrawal. Onset of withdrawal for the newborn may begin 24–48 hours after delivery, depending on the time of the mother's last drink.

Management of babies with neonatal alcohol withdrawal should be undertaken in consultation with a specialist unit.

Babies born to women who have consumed alcohol regularly during pregnancy should be carefully assessed for fetal alcohol spectrum disorders (FASD) by a paediatrician aware of the maternal history with further management directed by the appropriate experts.

Level of evidence: Consensus

Opioids

Early reports of pregnant women undertaking acute opioid withdrawal found particular risks including miscarriage, premature labour and distress.

Women already on Opioid Substitution Treatment (OST)

Withdrawal from methadone or buprenorphine is usually associated with a high risk of return to dependent illicit opioid use with associated harms and should not be encouraged during pregnancy.

Ascertain whether the woman is on an OST. If so, contact the prescriber to discuss withdrawal off OST. Specialist care by an obstetrics team in combination with drug and alcohol specialists is required to counsel and manage pregnant women

who have decided after a detailed conversation of the risks and benefits of withdrawing off opioids during pregnancy, particularly in the second or third trimester This should include the opportunity to re-stabilise on methadone or buprenorphine if the pregnant woman later decides to do so. There is evidence to support opioid withdrawal using a reducing methadone dose regimen in the instance of withdrawal off opioids during pregnancy. In non-pregnancy settings, there are benefits to short courses of buprenorpheine.

Level of evidence: Consensus in Dashe et al, 1998; Luty et al, 2003.

Women not on Opioid Substitution Treatment

If a woman is withdrawing from heroin or other opioid drugs, a comprehensive substance use history must be taken. The history taken also informs decisions about opioid replacement therapy (if indicated).

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 or buprenorphine maintenance. Inpatient induction allows for more rapid induction than outpatient induction, but with close monitoring.

Commencing the woman onto methadone or buprenorphine maintenance should generally be done in consultation with an addiction specialist. See section 3.4.4, Women on an Opioid treatment program.

Level of evidence: Consensus

Fetal and neonatal effects

Neonatal Abstinence Syndrome (NAS) is a syndrome of substance withdrawal observed in babies of women physically dependent on a variety of drugs (most commonly opioids), manifested by non-specific symptoms and signs in the baby.

Opioid dependent pregnant women should be advised of the risk of NAS. Babies of all women taking opioids for a prolonged period during pregnancy should be monitored for NAS. See section 5, Management of Neonatal Abstinence Syndrome (NAS).

Cannabis

No research has yet been conducted which specifically considers withdrawal from cannabis during pregnancy. However, clinical studies in the general population have produced evidence for a cannabis withdrawal syndrome. Symptoms typically emerge after one to three of days of abstinence, peak between days two and six, and last from four to 14 days. Appetite and sleep disturbance predominate with symptoms of restlessness, anxiety, irritability and a number of less common moderate physical complaints. The severity of withdrawal symptoms has been linked with difficulty achieving abstinence.

Level of evidence: Consensus in Budney et al, 2004;: (Budby & Hughes, 2006).

Patients should be advised that withdrawal signs are actually signs that the body is recovering from cannabis use and as with nicotine withdrawal, there is no known impact of maternal cannabis withdrawal on the fetus. There is no evidence-based pharmacological approach for cannabis withdrawal, therefore the default management approach is accurate information provision, psychological support, sleep hygiene advice, minimal medication provided using a symptoms focussed approach (and considering any contraindications in pregnancy), and nicotine replacement where indicated. The majority of cannabis smokers in Australia smoke tobacco either in combination with their cannabis (91%) or separately as cigarettes (43%)

The most commonly used strategies for dealing with cannabis withdrawal are psychosocial brief interventions based on CBT and motivational interviewing. The 4 D's can be used to manage cravings during withdrawal. These are:

- Delaying: Putting smoking off for as long as possible; postponing using for about an hour and, during that time, engaging in other activities.
- Distracting: Doing something else such as going for a walk, calling a friend who does not smoke, or re-engaging in activities that may have stopped or reduced as a consequence of cannabis use.
- De-catastophising: Remembering that the symptoms are not the end of the world, they will pass.
- De-stressing: Doing something relaxing.

Level of evidence: III-I Copeland et al., 2001.

An inpatient setting may provide patients with time away from home and the removal of behavioural cures associated with cannabis use. For people dependent on other substances (especially alcohol) or people with psychiatric comorbidity of premorbid aggressive traits, inpatient admission may be advisable.

Level of evidence: Consensus

Appropriate measurement of cannabis withdrawal is necessary in order to tailor clinical interventions and thereby improve the likelihood of continued abstinence. The Cannabis Withdrawal Scale (CWS) (see Appendix 6) can be used to provide a sum total score for both the intensity of cannabis withdrawal symptoms and for the associated functional impairment (both have a theoretical range of 0–190 for any 24 hour period). If administered at regular intervals the scale can be used to monitor the severity and progression of cannabis withdrawal. It can also potentially be used as a psychoeducation feedback mechanism to demonstrate to clients that withdrawal symptoms are decreasing. There are no norms currently available for the CWS and the validity and reliability of the scale has not been tested on a pregnant population.

Benzodiazepines

There are two broad and overlapping populations of benzodiazepine using patients. The first includes patients who have taken benzodiazepines long-term for a disorder such as anxiety or insomnia, but do not take more than the agreed or prescribed amount. The other populations include patients who misuse a prescribed amount (e.g., taking more than prescribed, or the whole prescription in one dose, often followed by an enforced abstinence period) or acquire benzodiazepines for high risk or illicit use including injecting use. Individuals in either category may be dependent, and it should be remembered that polydrug use is common (e.g., alcohol withdrawal manifesting as anxiety, treated with benzodiazepines, and ongoing tobacco and caffeine use).

Abrupt cessation of previously regular benzodiazepine use can cause the following withdrawal symptoms: anxiety and agitation; insomnia; tremor; dizziness and low mood; in addition to muscle aches and pains; anorexia; tinnitus and risk of seizure activity.

The recommended management of a pregnant woman dependent on benzodiazepine is transfer to a single long-acting benzodiazepine (e.g., diazepam) and gradually reduce the dose, with a view to being drug-free at birth. This can be done in an outpatient setting if there is agreement and compliance, or withdrawal may commence in an inpatient setting for stabilisation, particularly if there is polydrug use, followed by a longer outpatient period. While this is the ideal goal of treatment, clinicians must work individually with each woman to set goals that are achievable for her, respect her choices, but also protect the fetus.

Comment
Pregnant women who have a history of regular benzodiazepine use should be assessed for dependence. Those who are dependent and who require antenatal admission should have continued reducing medication and psychosocial support during the admission.

Level of evidence: Consensus n NCETA, 2004.

Babies born to women with third trimester benzodiazepine use may experience floppy baby syndrome and/or neonatal withdrawal. These babies should be observed for at least one week in hospital before discharge, and should have an outpatient review weekly during the first month of life. The modified Finnegan scale may be used to identify NAS associated with benzodiazepines. Regular and/or high dose use and the use of long half-life benzodiazepines can lead to a delayed onset of NAS. Exposed babies may require medication to manage their withdrawal symptoms (see section 5, Management of Neonatal Abstinence Syndrome (NAS).

Level of evidence: Consensus in McElhatton, 1994.

The Clinical Institute Withdrawal Assessment Scale-Benzodiazepines (CIWA-B) (See Appendix 7) is a 22-item instrument designed to assess and monitor the type and severity of symptoms of benzodiazepine withdrawal.

Psychostimulant drugs

Pregnant women with a history of recent psychostimulant substance use may require a medically supported inpatient setting to assist them in stopping their drug use. Withdrawal symptoms that may occur on abrupt cessation of psychostimulants are uncommon in pregnant women. Short term use of benzodiazepines may occasionally be needed.

Level of evidence: Consensus
Level of evidence: III-2

Pregnant women:

- are advised to quit their psychostimulant drug use
- require an individual need assessment
- may benefit from interventions including counselling, relapse prevention and support
- may require assistance with managing of any comorbid mental health issues.

Level of evidence: Consensus

The Amphetamine Withdrawal Questionnaire (AWQ) (see Appendix 8) is a 10-item self-report instrument based on DSM-IV criteria for amphetamine-type stimulant withdrawal. While not a validated instrument, it is a useful guide for monitoring an amphetamine-type stimulant (ATS) withdrawal syndrome.

Caffeine

Caffeine has similar stimulant properties to other psychostimulant substances. As such, pregnant women should be advised to limit their daily intake of caffeine and may need to be monitored for signs of caffeine withdrawal. It remains unclear if babies exposed to caffeine in utero are at risk of developing NAS.

Level of evidence: Consensus

Polydrug use

Polydrug use is an inadequate diagnosis for pregnant women. There needs to be an assessment for hazardous use and dependence, drug by drug.

It is common for a woman to use more than one substance, therefore a woman may be withdrawing from several substances concurrently. In such cases, validated withdrawal tools, whilst still having value, cannot be fully relied on and assessment by a skilled clinician is essential. It may be advisable to retake substance use history over several days, especially if withdrawal symptoms appear to be more severe than what would be expected from their reported substance use. It is not uncommon for pregnant women to under report their substance use for fear of losing custody of their child, however once rapport with the woman has been established, she may be more likely to accurately disclose her substance use.

If a woman is dependent on alcohol and benzodiazepines, she is likely to require higher doses of diazepam to manage both her alcohol and benzodiazepine withdrawal than would be required with alcohol use alone.

Level of evidence: Consensus

SECTION FOUR

Specific Drugs in Pregnancy

SUMMARY SECTION

4.1 Alcohol

4.1.1 Alcohol Summary

Background information

Possible harmful effects of using alcohol:

During pregnancy
- miscarriage
- stillbirth

For the child
- Fetal Alcohol Syndrome (FAS) (FASD)
- physical abnormalities
- intellectual disabilities

Clinical implications

- All pregnant women should be asked about their level of alcohol consumption.

If a woman is consuming alcohol during pregnancy, then a full assessment of alcohol intake should be undertaken and appropriate referrals should be made.

- Incorporating a validated alcohol screening tool into antenatal assessment is likely to increase the detection rate of women using excessive amounts of alcohol.

NHMRC Guidelines (Australian Guidelines to Reduce Health Risks from Drinking Alcohol)

Guideline 4: Maternal alcohol consumption can harm the developing fetus or breastfeeding baby.

A. For women who are pregnant or planning a pregnancy, not drinking is the safest option.

B. For women who are breastfeeding, not drinking is the safest option.

- The 'standard drink' measure of 10 grams of alcohol should be used in assess alcohol consumption.
- Pregnant women consuming risky levels of alcohol should have priority access to alcohol treatment services, including assessments, withdrawal, and therapeutic options.
- Women withdrawing from alcohol should be supported with medication, nutritional and vitamin supplementation, and have access to appropriate maternal and fetal monitoring.
- Neonates whose mothers have engaged in risky levels of drinking or have given birth previously to a baby with FAS, should be assessed at birth and at six months for FASD.

Few affected babies have clear physical signs of FAS at birth and diagnosis is difficult. In suspected cases, the infant should be reassessed and undergo intensive developmental surveillance.

- Infants/young children who demonstrate signs of FASD should be followed up regularly in the community by an appropriately trained health professional up to at least 7 years of age.

Aboriginal women

- Health professionals should be aware that patterns of alcohol consumption vary markedly in Aboriginal communities from non-Aboriginal Australian communities.

Breastfeeding

- For women who are breastfeeding, not drinking is the safest option for the baby.
- For women who wish to breastfeed, the following practical advice should be given:
  - Women should avoid alcohol in the first month after delivery until breastfeeding is well established.
  - Alcohol intake should be no more than two standard drinks a day.
  - Women should avoid drinking immediately before breastfeeding.
  - Women who wish to drink alcohol should consider expressing milk in advance.
  - There is no need to express and discard milk after drinking, however a breastfeeding mother should wait until her blood alcohol returns to zero before feeding her baby.

More information

Alcohol and Drug Information Service (ADIS) is a 24-hour confidential information, advice and referral telephone service for all substances. If in Sydney, call 02 9361 8000. If in regional NSW, call 1800 422 599

4.1.2 Harmful effects of alcohol

Drinking alcohol during pregnancy increases the risk of miscarriage, stillbirth, premature birth and low birth weight. Alcohol is a teratogen and may impair development of the brain and other organs, resulting in Fetal Alcohol Spectrum Disorder (FASD), birth defects, cerebral palsy, and impaired growth, development and learning in childhood and beyond.

In this document, the term Fetal Alcohol Spectrum Disorder (FASD) is used to encompass the full range of possible effects of fetal exposure to alcohol, while the term Fetal Alcohol Syndrome (FAS) is used to encompass the severe effects, typically characterised by central nervous system damage, characteristic facial features and growth deficits.

- Fetal alcohol syndrome (FAS) is where a child has problems with growth and learning, and has distinctive facial features and structural abnormalities due to alcohol exposure during pregnancy
- Partial FAS is where a child has some, but not all, features reported in FAS
- Alcohol-related neuro-developmental disorders (ARND) – refers to children with problems with learning and behaviour related to alcohol exposure
- Alcohol-related birth defects (ARBD) – refers to abnormalities in organs such as the heart or kidneys related to alcohol exposure.

The threshold for safe/unsafe use is not known. Harm may be done before the woman realises that she is pregnant.

Level of evidence: II

4.1.3 Screening

See section 3.3.6, Screening. It is important to note that many women underreport their levels of drinking in pregnancy, and that any substance use identified in screening should be a cause for further investigation by the health care provider.

Determining risk in the individual pregnancy is difficult and will vary according to the pattern of drinking and a range of maternal and fetal factors including increasing maternal age, nutritional status and body composition (decreased maternal mass). The risk is increased in young women of lower socio-economic status and in educated women over the age of 30 years. Women who drink at risky levels before pregnancy, who smoke, and whose partners and household members drink alcohol, are more likely to drink during pregnancy. There is an increased risk of FASD for women who drink in pregnancy who have had a previous child with FASD. These factors should be screened for and appropriate referrals made.

A child protection assessment should be made when it is considered that there is neglect or risk of harm to the child, particularly if the mother continues to drink alcohol. (See section 3.8, Protecting the safety, welfare and well-being of the unborn or newborn child).

All pregnant women should be screened for alcohol or other substance consumption as part of the SAFESTART program, and offered brief interventions where appropriate, or referred to drug and alcohol treatment if ongoing substance use in pregnancy is identified.

Level of evidence: II

4.1.4 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 safe level of alcohol consumption has been determined for the fetus. The risks of FASD should be clearly outlined to all pregnant women.

However, pregnancy can be a highly stressful time when women are anxious about the health of their baby and how their behaviour will impact upon this. When a woman has drunk a minimal amount of alcohol during pregnancy and is anxious and concerned, she should be reassured that the likelihood of damage to the fetus is minimal but that not drinking in pregnancy is the safest option.

Comment
The Australian Guidelines to Reduce Health Risks from Drinking Alcohol 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.

- NHMRC Guidelines (Australian Guidelines to Reduce Health Risks from Drinking Alcohol)
- **Guideline 4**: Maternal alcohol consumption can harm the developing fetus or breastfeeding baby.
- For women who are pregnant or planning a pregnancy, not drinking is the safest option.

- For women who are breastfeeding, not drinking is the safest option.
- For more information, see Appendix 5: Australian Guidelines to Reduce Health Risks from Drinking Alcohol.

These guidelines align 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.

The 'standard drink' measure of 10 grams 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 grams of alcohol). In addition, there is a need for health care workers to receive specific education about the Australian Guidelines to Reduce Health Risks from Drinking Alcohol. Information about standard drinks and how to calculate the alcohol content of different alcoholic drinks can be found at <www.nhmrc.gov.au/guidelines/publications/ds10>.

Health care providers should discuss the importance of safe sex and contraception with women of child bearing age in order to prevent unplanned pregnancies

4.1.5 Aboriginal women

- The 2008 National Aboriginal and Torres Strait Islander Social Survey (NATSISS) found that 80% of mothers of Indigenous children 0-3 years did not drink during pregnancy, and 16% drank less alcohol. Only 3.3% drank the same amount or more alcohol during pregnancy.

4.1.6 Access to treatment

Pregnant women identified as consuming risky levels of alcohol (as defined in the Australian Alcohol Guidelines) or other substances should have priority access to alcohol treatment services, including comprehensive assessment and withdrawal, as well as therapeutic options such as brief intervention, cognitive behavioural therapy and group sessions. There is some evidence that home-visits after the birth increase the engagement of women in drug and alcohol treatment but there is insufficient evidence to determine whether the health of the mother or baby was improved.

Level of evidence: Consensus

The need for withdrawal may be an indication for inpatient admission and treatment. Pregnant women who require alcohol withdrawal may 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

4.1.7 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. Follow-up to assess Fetal Alcohol Spectrum Disorders (FASD) is recommended.

Level of evidence: Consensus

Comment
Babies will withdraw 24 to 48 hours after birth if the mother is intoxicated at birth. See section 5 Management of Neonatal Abstinence Syndrome.

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 FASD should be assessed at birth for signs of FASD, and followed up for at least the first 6 months by a health professional with specialist knowledge of FASD.

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. Children who are born to women who have had high risk substance use in pregnancy should have intensive development surveillance at least to the age of 7.

Infants/young children who demonstrate signs of FASD or whose mothers have given birth previously to a child with 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 USA to suggest that early intervention for infants with FAS improves long term educational outcomes.

Children with FASD 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

FASD 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.

4.1.8 Naltrexone

See section 4.3.5, Naltrexone.

4.1.9 Breastfeeding

See section 3.6, Breastfeeding.

4.1.10 Safe sleeping practices

See section 3.5.4, Sudden unexpected deaths in infancy (SUDI).

SUMMARY SECTION

4.2 Tobacco

4.2.1 Tobacco Summary

Background information

Possible harmful effects of smoking:

During pregnancy
- miscarriage
- premature birth
- stillbirth

For the child
- death from SIDS
- breathing illnesses and infections
- poor attention and learning problems

Clinical implications

- Not smoking early on in pregnancy will give the greatest benefit to mother and fetus.

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

- Deciding to quit smoking at any point during pregnancy is beneficial.
- Smoking information and quit options should be encouraged by all services dealing with sexual, reproductive and child health, including at all antenatal and clinic visits.

Start the conversation

- Establish a rapport with the woman.

A non-judgemental attitude and sensitive questioning by the health care worker will help to facilitate full disclosure by pregnant women.

- Discuss in a collaborative way the benefits/risks of smoking and deciding to stop smoking for the mother and baby. Also discuss the options and support available for quitting smoking.
- Complete a comprehensive (or brief) assessment, which may include information about their degree of nicotine dependence, motivation to quit and barriers to cessation.
- Assess willingness to quit and appropriate intervention.
- The type of intervention will depend on the woman's willingness to quit and their current tobacco use. Interventions include psychosocial (e.g., the '5 As' program) and pharmacotherapy (e.g., Nicotine Replacement Therapy [NRT]).

Consider pharmacotherapy only after psychosocial intervention has failed.

- Continue to reinforce the pregnant woman's decision to quit smoking, and encourage her partner and family to also quit smoking to reduce the environmental tobacco.

Breastfeeding

If the mother is smoking:

- Encourage the mother to breastfeed while encouraging her to also cease smoking.
- Mothers should not smoke the hour before feeding to reduce the amount of nicotine in breast milk.
- Babies should be fed and settled before the mother has a cigarette.
- Smoking should occur away from the baby, and preferable outside of the house.

If the mother is on NRT:

- Encourage the mother to breastfeed.
- As soon as possible after feeding, advise the mother to use one of the intermittent delivery methods of NRT (e.g., gum, lozenge, inhalator, mouth spray) to reduce the baby's exposure to nicotine.

More information

- QUIT Helpline offers support services and information packs. Phone 13 7848 or visit <www.quitnow.gov.au/>.

Alcohol and Drug Information Service (ADIS) is a 24-hour confidential information, advice and referral telephone service for all substances. If in Sydney, call 02 9361 8000. If in regional NSW, call 1800 422 599.

Harmful effects of tobacco

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

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 7000 other toxins, including mutagens and carcinogens, which are conveyed to the fetus in the blood. Studies show an increased risk of sudden unexplained death in infancy (SUDI) among offspring of women who smoke during pregnancy.

Level of evidence: Consensus in British Medical Association review of the evidence on smoking and reproductive life, 2004; US Surgeon General's Reports, 2001 & 2004

It has also been documented that children born to women who smoke during pregnancy may have cognitive impairment, impaired attention, poor impulse control and learning deficits.

Comment
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: I US Surgeon General's Report, 2004

4.2.2 Interventions

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: I British Medical Association review of the evidence on smoking and reproductive life, 2004; US Surgeon General's Reports, 1990 & 2004

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 review of the evidence on smoking and reproductive life, 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. Repeated telephone support for up to 12 weeks is more effective than a single telephone counselling session.

Level of evidence: I Miller & Wood, 2002

Comment
The Quitline is a confidential telephone information and advice service, available throughout Australia. The Quitline can be contacted on 13 7848 or 13 QUIT for the cost of a local call (except mobiles) from anywhere in Australia. There is a free call back service in NSW. The calls can be tailored to meet the needs of the quitting smoker.

Telephone counselling for smoking cessation is very effective and can form the 'Arrange follow-up' section of the '5 A's' intervention model (see section 4.2.6, The '5 As').

4.2.3 Screening

See section 3.3.6, Screening.

4.2.4 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 Fagerstrom 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) 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 10 cigarettes or more per day are likely to have more difficulty in quitting and may require more intensive support.

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.

4.2.5 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

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 clinically appropriate, and the risks of passive smoking, especially if her partner smokes.

Implementing clinical 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: II Miller & Wood, 2002

Level of evidence: Consensus

Comment
Screening, assessment of willingness to quit, 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.

4.2.6 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. This level of intervention would involve strategies such as the identification of high risk environments for smoking and strategies to implement in these situations.

Level of evidence: Consensus

The 5As

The 5As approach is a brief intervention approach supported by a strong evidence-base and designed to be used with all smokers regardless of intention to quit smoking. The 5As was originally proposed by the US Clinical Practice Guideline 2008 and has since been adopted or modified and used as the basis for a number of international brief intervention guidelines including the Royal Australian College of General Practitioners (RACGP) Guidelines, 2012.

Level of evidence: Consensus in Fiore et al 2008

1. ASK all women

- Which of these best describes you?
  - I smoke every day, about the same as before finding out I was pregnant
  - I smoke every day, but I've cut down since finding out I was pregnant
  - I smoke every once in a while
  - I quit less than a year ago (recent quitter)
  - I don't smoke / I haven't smoked for more than a year (non-smoker)
- Record smoking status.

2. ADVISE

- All smokers should be advised to quit in a way that is clear but non-confrontational (e.g., *'The best thing you can do for your health and the health of your baby is to quit smoking'*).

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.

4. ASSIST

The assistance provided depends on willingness to quit:

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 (e.g., Quit Kit) and referral to Quitline 13 7848.

ASSIST (Ready):

- Affirm and encourage.
- Provide a Quit Kit and discuss a quit plan.
- Refer nicotine dependent smokers to a health care professional to discuss pharmacotherapy.
- Discuss relapse prevention.
- Offer referral to Quitline 13 7848, 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 (e.g., Quit Kit) and referral to Quitline 13 7848.
- Evidence-based behavioural tips:
  - Everyone smokes outside of home.
  - Do not smoke in the car.
  - Reduce caffeine intake.
  - Reduce alcohol intake.
  - Exercise during acute urges.

5. ARRANGE follow-up

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

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.

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 increase cessation rates of smokers at six months or more.

Level of evidence: I Miller & Wood, 2002

4.2.7 Nicotine replacement therapy (NRT) in pregnancy

There is limited evidence of the effectiveness of NRT in helping pregnant women stop smoking. The main benefits of using NRT are the removal of the other toxins contained in tobacco smoke and the lower dose of nicotine delivered by NRT compared to tobacco smoke. However, NRT should be considered when a pregnant woman is nicotine dependent, otherwise unable to quit, and when the likelihood and benefits of cessation outweigh the risks of NRT and potential continued smoking.

Before any form of NRT is recommended, pregnant women should be clinically assessed including checking for contraindications, precautions and possible drug interactions. If NRT is deemed clinically appropriate, an intermittent form of NRT (gum, lozenge, inhalator, mouth spray) is preferable as it more closely mimics nicotine levels from smoking and delivers a lower dose. However for nicotine dependent pregnant women who cannot tolerate oral forms of NRT due to gum and throat irritation or pregnancy related nausea, transdermal patches should be recommended and used for 16 hours rather than 24 hours (16 hour patch or 24 hour patch removed overnight).

Level of evidence: Consensus in Zwar et al, 2012 and Therapeutic Guidelines, 2013

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. However, there is increasing consensus that NRT is likely to be much safer for the pregnant woman and the fetus than continuing smoking. Most recommendations are to consider pharmacotherapy only after psychosocial intervention has failed (such as cognitive behavioural therapy, counselling, group support). NRT is classified as a Category D product during pregnancy because it contains nicotine, a poison, as do cigarettes. The Therapeutic Goods Administration notes that 'Short term exposure during the first trimester is unlikely to cause a hazard to the fetus.' However, NRT does not contain any of the other 7000+ harmful substances in cigarette smoke.

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

Monitoring the pregnant woman's use of NRT

If the pregnant woman in consultation with her clinician, decides to use NRT, the clinician should consider:

- monitoring urine cotinine levels or expired air carbon monoxide concentration to assess the level of drug delivery
- using medication doses that are at the low end of the effective dose range (but see below)
- choosing an appropriate delivery system – preferably an intermittent form of NRT (gum, lozenge, inhalator, mouth spray), however transdermal patches can be used if a woman cannot tolerate oral forms of NRT due to gum and throat irritation or pregnancy related nausea (16 hour patch, or 24 patch removed overnight).

Level of evidence: Consensus

The total time to completion of NRT should be monitored and should not exceed the recommended regimen. *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 the 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.

4.2.8 Bupropion and smoking cessation

The use of bupropion during pregnancy or lactation is listed as a precaution in MIMS (2005). More research is necessary in order to make recommendations for the use of bupropion during pregnancy.

Level of evidence: Consensus Consensus in Bittoun & Femia, 2010

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 brand of bupropion available in Australia.

4.2.9 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 & Wood, 2002

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: II Miller & 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, 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 review of the evidence on smoking and reproductive life, 2004; Miller & Wood, 2002

Comment
About 25% of women quit smoking once they become pregnant. A quarter of these will relapse to smoking during pregnancy. Relapse in the post-partum 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% of relapse.

4.2.10 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 woman 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

4.2.11 Aboriginal women

Health care workers, in providing interventions and pregnancy care, should be aware that tobacco use is common in some Aboriginal 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 women to stop smoking, health care providers should support the development of achievable goals, which will take into account the woman's family and community.

Level of evidence: Consensus

4.2.12 Environmental tobacco smoke

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

Level of evidence: Consensus

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 neurobehavioural impairment.

Maternal smoking during pregnancy is a major cause of SIDS and other well-documented health effects, including reduced birth weight and decreased lung function. ETS exposure among non-smoking pregnant women can cause a decrease in birth weight and that infant exposure to ETS may contribute to the risk of SIDS and SUDI (see section 3.5.4, Sudden unexpected deaths in infancy (SUDI).

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.

See The World Health Organization's International Consultation on Environmental Tobacco Smoke (ETS) and Child Health in 1999.

4.2.13 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 review of the evidence on smoking and reproductive life, 2004; US Surgeon General's Reports, 2001 & 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 due to compensatory smoking 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.

4.2.14 Breastfeeding

See section 3.6, Breastfeeding.

SUMMARY SECTION

4.3 Opioids

4.3.1 Opioids Summary

Background information

Possible harmful effects of using opioids:

During pregnancy
- miscarriage
- premature birth
- stillbirth

For the child
- withdrawal in the newborn
- death from SIDS
- reduced growth

Clinical implications

- Withdrawal from opioids and opioid substitution treatment (i.e., methadone or buprenorphine maintenance) during pregnancy is not recommended.

Opioid Substitution Treatment

- Opioid Substitution Treatment (OSTs) are safe and effective during pregnancy for both mother and neonate.
- An opioid-dependent pregnant woman should be offered a place within an OST, combined with drug and alcohol counselling and psychosocial support.

Methadone (MMT)	Buprenorphine (BMT)
■ May have better retention rate in treatment ■ No risk of precipitating withdrawal ■ Patients with very high tolerance to opioids	■ Probably less severe NAS ■ Reduced risk of overdose during induction ■ Possibly reduced risk of overdose in women who also use sedatives ■ Reduced risk of overdose if children exposed to take-away doses

- Vomiting is a serious concern in pregnant women on OST, as vomiting of a MMT dose may lead to withdrawal in both mother and fetus. If a pregnant woman on MMT is vomiting, staff should follow protocols in place. If there is no protocol, then the prescriber should be notified.
- Transfer of a pregnant woman already on MMT to BMT is strongly advised against, but the transfer from BMT to MMT is a possibility if BMT is not proving a suitable treatment option.
- The safety and efficacy of buprenorphine-naloxone in pregnancy is not established.

Consider whether the woman could be weaned off the opioid or if the dose could be reduced. After birth, babies must be screened for withdrawal (same period as for heroin: 7 days).

Breastfeeding

- Mothers who are stable on OST (both MMT and BMT) should be supported if they choose to breastfeed.
- The National Infant Feeding Guidelines recommend that not using illicit substances is the safest option when breastfeeding
- Women who are stable on an OST, but occasionally use heroin in a 'one-off' pattern, should be advised that not using illicit substances is the safest option when breastfeeding. If they choose to use illicit substances, they should be advised to express and discard breast milk for a 24-hour period afterwards, then return to breastfeeding. They should also be encouraged to have a 'safety plan' in place for the infant on such occasions.
- Mothers who are unstable, continuing to use 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.

More information

- NSW Department of Health website offers information about heroin and its potential harms. Visit <www.health.nsw.gov.au/factsheets/drugAndAlcohol/heroin.html>. Methadone Advice & Conciliation Service (MACS) telephone helpline provides opiate pharmacotherapy information (including methadone and buprenorphine), referrals, advice and a forum for pharmacotherapy concerns. Phone 1800 642 428 (toll free) from Monday to Friday 9.30am-5.00pm.
- Alcohol and Drug Information Service (ADIS) is a 24-hour confidential information, advice and referral telephone service for all substances. If in Sydney, call 02 9361 8000. If in regional NSW, call 1800 422 599.
- Prescription opioids, such as morphine, oxycontin, tramadol and hydrocodone, as well as illicit heroin, can be used for non-medical purposes (i.e., for their intoxicating effects). Codeine is an opioid that is available over the counter at pharmacies. Individuals who are dependent on any of these substances may benefit from Opioid Substitution Treatment (OST).

4.3.2 Heroin and other illicit opioid dependence

Observational studies have found that heroin use in pregnancy is associated with fetal harms such as intrauterine growth restriction (IUGR), low birth weight and neonatal death.

Level of evidence: III-2

Furthermore, injecting opioid use is associated with harms such as blood borne viruses, non-viral infections including cellulitis, endocarditis and septicaemia, and overdoses (fatal and non-fatal).

Level of evidence: III-2

4.3.3 Withdrawal from opioids

Withdrawal from heroin

Withdrawal from heroin (and other opioids) during pregnancy is not routinely encouraged as evidence for safety and effectiveness of this approach is very limited. There is no data to suggest that the risk of relapse is reduced per se by pregnancy. In addition, there is minimal success with withdrawal treatment during pregnancy.

Theoretical concerns on the effect of heroin withdrawal during pregnancy are that in the first trimester withdrawal may precipitate uterine contractions, and thus increase the risk of spontaneous abortion and withdrawal. In the third trimester withdrawal may be associated with an increased risk of intrauterine growth restriction, premature labour or fetal death.

Heroin withdrawal is associated with fetal stress, in utero meconium aspiration, and an increase in the oxygen requirement of the infant. The principal cause of fetal death is thought to be hypoxia.

In summary, due to the risk of relapse into heroin use, it is important for pregnant heroin-dependent women to be stabilised and maintained on opioids such as methadone or buprenorphine as part of a structured treatment program. Relapse to illicit heroin use is more likely to pose a significant risk of morbidity and mortality to the mother and infant than neonatal opioid withdrawal, which, once identified, can be managed.

Level of evidence: Consensus

Withdrawal from opioid substitution treatment

Withdrawal from opioid substitution treatment (i.e., methadone or buprenorphine maintenance) is generally recommended against during pregnancy due to the risk of relapse, the risk of placing the fetus in withdrawal, and the risk of destabilising a patient who has previously been stable on opioid substitution. A structured attempt at withdrawal at some stage after pregnancy is preferred.

Level of evidence: Consensus

Withdrawal from prescribed opioids

Pregnant women may already be prescribed schedule 8 opioids (e.g., morphine or oxycodone) for chronic non-malignant pain problems. A risk-benefit assessment should be made with regards to the management of chronic pain problems during pregnancy, including the advantages and disadvantages of continuing prescription opioids during pregnancy or a structured withdrawal off opioids. Consultation with a pain specialist is recommended.

Level of evidence: Consensus

See also section 4.3.7, Pain and prescription opioid use.

4.3.4 Opioid Substitution Treatment

Methadone and buprenorphine maintenance in pregnancy is associated with improved fetal development and infant birth weight, and reduction in neonatal mortality. Options in pregnancy include methadone and buprenorphine maintenance. An opioid-dependent pregnant woman should be offered stabilisation through induction onto an OST, combined with drug and alcohol counselling and psychosocial support.

Note: Methadone and buprenorphine maintenance will be considered together as OST. Where there are important differences between the two medications this will be noted. Methadone is always given in liquid form for the treatment of addictive disorders. Buprenorphine is a tablet administered sublingually.

Efficacy of opioid treatment programs

OSTs are safe and effective during pregnancy for both mother and neonate. OSTs are associated with improved fetal development and infant birth weight, and reduce the risk of perinatal and infant mortality in heroin-dependent women. This effect

may be reduced by continued use of heroin and/or other substance use including tobacco, benzodiazepines or amphetamine-type stimulants (ATS) during pregnancy or very late stabilisation on OSTs during pregnancy.

Level of evidence: III-2

Although methadone has been studied for a longer period than buprenorphine in pregnancy, the MOTHER study, a recent multi-site, blinded, randomised study comparing the effectiveness of methadone maintenance treatment (MMT) and buprenorphine maintenance treatment (BMT), confirmed the safety profile for both treatments in pregnancy. BMT was found to result in shorter duration of withdrawal symptoms in newborns. Currently available data do not indicate that BMT during pregnancy is associated with greater risk to the mother, embryo or fetus than MMT.

Level of evidence: II

Fetal exposure to methadone or buprenorphine during pregnancy does not appear to be associated with adverse postnatal development in children of opioid-dependent women. However, it is very difficult to separate out the effects of confounding factors from those of the drug on infant development. Other factors that may impact on the development of this group of children include, but are not limited to, socioeconomic factors, poor physical and psychological environment, exposure to violence, and poor nutrition and educational opportunities.

Level of evidence: II

Choice of pharmacotherapy

Both methadone and buprenorphine can be considered first line medications to be used for opiate maintenance during pregnancy. While methadone has been used for a longer period of time and there are many more observational reports on the effectiveness of methadone in pregnancy, the literature on the use of buprenorphine in pregnancy is, on balance, supportive.

Level of evidence: Consensus

Key issues to be considered in choosing pharmacotherapy for a heroin-dependent pregnant woman not currently on treatment include the woman's preference, previous stability on treatment, and a range of factors described in the table below. Decisions should be based on individual clinical assessment involving the pregnant woman in the decision-making process.

Table 1. Considerations in the clinical management of the opioid-dependent pregnant woman. Considerations specific to methadone and buprenorphine are listed on the left and right, respectively.

Heroin (or other opioid) dependent

OST

Methadone	Buprenorphine
Previous stabilisation on methadone	Previous stabilisation on buprenorphine
Patient preference for methadone	Patient preference for buprenorphine
May have better retention rate in treatment	Probably less severe NAS
No risk of precipitating withdrawal	Reduced risk of overdose during induction
Patients with very high tolerance to opioids	Possibly reduced risk of overdose in women who also use sedatives (e.g., benzodiazepines, alcohol).
	Reduced risk of overdose if children exposed to take-away doses
	More take-aways available in Australian jurisdictions

Induction onto an opioid treatment program

Heroin-dependent pregnant women should have priority access to OST. 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 an Opioid Substitution Treatment. A partner's use of heroin may increase the woman's risk of relapsing into heroin use.

Level of evidence: Consensus

Dosing issues

Methadone or buprenorphine dose during pregnancy should be titrated to a level clinically associated with a marked reduction in, or cessation of, heroin use (i.e., usually 80mg or above methadone, 16mg or above buprenorphine, although patients may stabilise on lower doses).

During pregnancy, dose increases may be required due to increased metabolism and increased volume of distribution. A dose review should be conducted during the third trimester.

Level of evidence: Consensus

Relationship between dose and Neonatal Abstinence Syndrome

Multiple factors may 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 or buprenorphine and risk of NAS.

The MOTHER study found that MMT and BMT resulted in similar maternal and fetal outcomes, however BMT led to lower severity of NAS symptoms, thus requiring less medication (1.1mg versus 10.4mg) and less time in the hospital for their babies (10 days versus 17.5 days).

Level of evidence: II

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.

Split dosing

There is insufficient evidence to say whether split dosing with methadone is routinely 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. Split dosing should 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

Jurisdictions should develop policy guidelines that allow for split dosing of methadone when there is a clinical need. The guidelines should allow the second part of the dose to be provided as a take-away, 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 take-away 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, and the woman's involvement in paid work.

Level of evidence: Consensus

Women on BMT may be less likely to require split dosing, due to the way the drug is metabolised.

Management of vomiting in pregnant women on opioid treatment programs

Vomiting is a serious concern in pregnant women on MMT. 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 an anti-emetic (e.g. 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 (e.g., urinary tract infection).
- Consider need for intravenous rehydration.
- Consider need for pharmacotherapy (e.g., oral or parenteral metoclopramide, oral or parenteral rectal prochlorperazine, or parenteral ondansetron).
- Consider need for improving nutritional status (e.g., improved diet, vitamin/iron supplements).

Vomiting is generally less of a concern with regards to absorption of buprenorphine as it is administered sublingually.

Level of evidence: Consensus

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
- 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. Liaison should be facilitated by the case manager (regardless of where the case manager is located).

Level of evidence: Consensus

Transfer of pregnant women between MMT and BMT

Transfer of a pregnant woman already on MMT to BMT is advised against, because of the risks of precipitated withdrawal. 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.

However, the transfer of a pregnant woman already on BMT to MMT is a possibility if BMT is not proving a suitable treatment option.

Note: Hospitalisation and a period on a standard acting morphine preparation may be considered.

Level of evidence: Consensus

4.3.5 Buprenorphine-naloxone (suboxone)

The safety and efficacy of buprenorphine-naloxone in pregnancy is not established. Human studies regarding the effects of buprenorphine-naloxone in pregnancy are very limited. Buprenorphine-naloxone should not be offered in pregnancy, except in the context of clinical trials. Women on buprenorphine-naloxone should be transferred to buprenorphine.

Level of evidence: Consensus

Follow-up of babies exposed to buprenorphine-naloxone in utero is recommended, such as a comprehensive developmental assessment by a paediatrician at 2 years of age.

Level of evidence: Consensus

If a woman of child bearing age is planning a family, buprenorphine should be considered over buprenorphine-naloxone.

4.3.6 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. It is recommended that a record of the patient giving consent is obtained. 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.

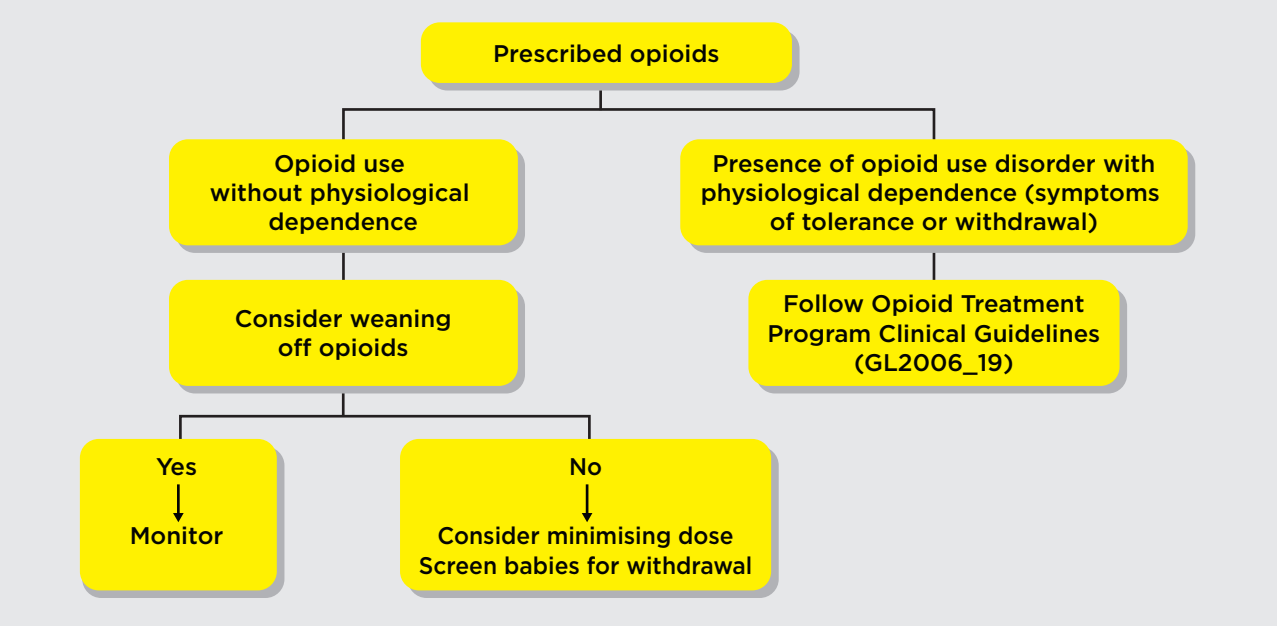
Level of evidence: Consensus

4.3.7 Pain and prescription opioid use

Pregnant women who are taking prescription opioids should be assessed for dependence, risk of withdrawal, and possible need for opioid treatment.

The following table shows a flowchart of assessment issues for prescribed opioid use:

Figure 1. Assessment issues in the management of prescription opioid use in pregnancy



SUMMARY SECTION

4.4 Cannabis

4.4.1 Cannabis Summary

Background information

Possible harmful effects of using cannabis:

During pregnancy
- premature birth
- longer labours
- respiratory problems for mothers
- mood and other psychological problems for the mother

For the child
- some evidence of developmental delays
- some evience of reduced memory and performance

Clinical implications

- Women should be advised to stop using cannabis prior to, and during, pregnancy.
- Women should be offered support for cessation and relapse prevention early in pregnancy, and as a routine apart of each antenatal, child health or clinic visit.

Women who are heavily dependent on cannabis and report physical and psychological symptoms when they try to stop their drug use should be referred to their GP or specialist D&A agency.

Women with mood or perceptual disturbances, either from continued use or since stopping cannabis, should be referred to their GP or mental health facility.

Brief intervention

As a minimum, women should be offered:

- feedback relating to their presentation and where their cannabis use fits in
- education regarding the impact of cannabis use
- education regarding the short- and long-term harms to mother and fetus from cannabis use.

If possible, it is also important to:

- assist the woman to identify problems areas and high risk situations
- discuss reasons and strategies for change
- discuss withdrawal and coping with cravings
- discuss goal setting.

The 5 As of Intervention (Ask, Advise, Assess, Assist, Arrange) may encourage patients to quit cannabis. Psychosocial interventions should also be made available to these women.

Breastfeeding

- There is evidence that cannabis is excreted in breast milk.
- Rather than interrupting plans to breastfeed, women should be advised that they should not take cannabis while they are breastfeeding.
- While the benefits of breastfeeding may outweigh the potential risk, in certain cases women should consider not breastfeeding if they plan to continue their high level use of cannabis.
- Further advice to women and others should be not to be intoxicated around baby and as for tobacco: that is, smoke away from the infant, out of the house, and not in the car.

More information

- The National Cannabis Information and Helpline is a confidential information and support line for cannabis users that provides counselling, information and referrals. Phone 1800 30 40 50 (toll free).
- Alcohol and Drug Information Service (ADIS) is a 24-hour confidential information, advice and referral telephone service for all substances. If in Sydney, call 02 9361 8000. If in regional NSW, call 1800 422 599.

4.4.2 Risks

Cannabis is one of the most commonly used illicit drugs by pregnant women. For the woman, the use of cannabis is associated with increased risk of respiratory problems, alteration of mood and other psychological problems, and financial and social difficulties. There is evidence showing that the use of cannabis during pregnancy and breastfeeding poses a risk to both the woman and her baby.

Cannabis comes from the cannabis plant (*Cannabis sativa L.)* and acts on specific brain receptors causing dose-related impairment, mild sedation and hallucinogenic effects. Cannabinoids, including THC being extremely fat soluble accumulate in fatty tissues in the body, reaching peak concentrations in 4-5 days and are then slowly released back into other body compartments. Complete elimination from a single dose may take up to 30 days. Repeated dosing results in high levels of cannabinoids accumulating in the body and high concentrations are reached in the neocortical, limbic, sensory and motor areas. National and international studies report on the adulteration of cannabis, particularly that which is grown indoors, being found to contain pesticides and other substances.

Maternal and fetal affects of cannabis use:

Prenatal cannabis exposure was found to be associated with fetal growth restriction. Maternal cannabis use can affect fetal growth via the following:

- Cannabis metabolites directly affects the brain and body by altering the cannabinoid and related neurotransmitter or neuroendocrine systems, leading to lower insulin levels and impaired growth.
- Phenomena associated with maternal cannabis use, for example, maternal stress, use of other substances or poor nutrition.
- Tobacco use, which causes fetal oxygen deprivation. Cannabis is often taken mixed with tobacco, and the harms associated with nicotine in pregnancy are considerable.
- The regular inhalation of smoke, including both cannabis and tobacco.

In addition, the use of cannabis during pregnancy was associated with an increased risk of adverse birth outcomes (i.e. low birth weight, preterm labour, small for gestational age and admission into the neonatal intensive care units). There is low level evidence of a mild neonatal withdrawal from sole cannabis use. This is not usually apparent until at least the second week postnatally. Infants with mild withdrawal effect are unlikely to require care in the neonatal nursery or separation from the mother and it is rare for infants to require pharmacological treatment for NAS due to cannabis. It is important parents are taught supportive settling techniques. See section 5.5, Supportive therapies for babies.

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

There is evidence suggesting long term adverse effects on children who were exposed to maternal cannabis use in utero. Cannabis use during pregnancy is related to subtle but consistent deficits in neuro-behavioural and cognitive outcomes in offspring, including inattention, impulsivity, deficits in learning, memory and executive function. Genetic, environmental and social factors can also influence neuro-behavioural deficits and have not been excluded in these studies.

Level of evidence: III-2

4.4.3 Assessment of dependence

Ask women about the frequency of their cannabis use (see section 3.2.6, Screening).

4.4.4 Supporting cannabis cessation

Pregnant women are advised to stop using cannabis. Women should be offered support for smoking cessation and relapse prevention early in pregnancy, and as a routine apart of each antenatal, child health or clinic visit. Findings suggest that the effects of cannabis exposure, even restricted to early pregnancy, may not be reversible. As such, where possible, women should be advised to quit prior to conception.

Pregnant women should be advised of the possible physical, psychological and social implications for themselves and their infant from regular cannabis use. If a pregnant woman is identified as a regular cannabis user, she should be offered a range of interventions to help her stop, including information, brief intervention, withdrawal, counselling and psychologically based treatment for cannabis dependency.

Enquire about women's cannabis and other substance use at every antenatal contact.

Women who are heavily dependent on cannabis, and who report physical and psychological symptoms when they try to stop their substance

use, should be referred to their general practitioner or specialist alcohol and drug agency.

Level of evidence: II

4.4.5 Brief intervention

As a minimum, women should be offered:

- feedback relating to their presentation and where their cannabis use fits in
- education regarding the impact of cannabis use
- education regarding the short term and long term harms to mother and fetus that are related cannabis use.

If possible, it is also important to:

- assist the woman to identify problems areas and high risk situations
- discuss reasons and strategies for change
- discuss withdrawal and coping with cravings
- discuss goal setting.

4.4.6 The '5 As'

The 5 As of Intervention (Ask, Advise, Assess, Assist, Arrange) can be a useful framework for encouraging patients to quit cannabis use. However, extended psychosocial interventions that exceed minimal advice to quit should be made available for pregnant women.

1. ASK: All pregnant women should be asked about their cannabis use.

2.ADVISE: This involves strong direct personal advice by the provider to the pregnant woman to cease cannabis use. Education about the impact of the fetus and mother should be provided.

3.ASSESS: Determine how willing the woman is to change her behaviour after hearing the provider's advice.

- Stress the importance of understanding the reasons for smoking and wanting to make changes.
- Prompt the client to identify 'pros and 'cons' of smoking and to rate them on a scale if 0 to 10.
- Work through the same process for the 'pros' and 'cons' of change.

4.ASSIST: This refers to helping the patient make a change if she appears ready.

- Explain what triggers are (i.e., specific feelings or events which prompt strong thoughts about wanting to smoke).
- Ask the client if she has attempted to stop previously and if so ask what she found helpful.
- Explain why high risk situations need to be avoided and suggest they work develop a relapse prevention plan with you.
- Stress the normality of urges/cravings. They rarely last more than 30 minutes.
- Give examples of some techniques that may be of assistance for withdrawal and/or cravings (e.g., distraction, delay, de-catastrophising, distressing. Also see section 3.10, Caring for pregnant women who are experiencing, or at risk of, acute substance withdrawal).

5.ARRANGE: Refer the patient for further assessment and treatment, and set up follow-up appointments. Interventions including counselling, relapse prevention and support are appropriate. Women may also benefit from alternate therapies and relaxation techniques.

4.4.7 Mental health assessment

For women who report symptoms relating to alteration of mood or perceptual disturbances either from continued use or since stopping cannabis, a referral should be made to their GP or mental health facility for assessment of mental health and need for medication support.

Level of evidence: Consensus

SUMMARY SECTION

4.5 Benzodiazepines

4.5.1 Benzodiazepines Summary

Background information

Possible harmful effects of using benzodiazepines:

During pregnancy
- pre-term birth

For the child
- low birth rate
- withdrawal in the newborn
- death from SIDS
- poor neonatal outcomes

Clinical implications

- Ideally, benzodiazepines should be avoided during pregnancy.

For pregnant women with mood disorders or other health problems, conduct a risk-benefit assessment and consult the guidelines for the use of benzodiazepines in the general population.

- Long-acting benzodiazepines should be avoided as much as possible.
- For severely anxious pregnant women, short-acting benzodiazepines may be considered while awaiting the onset of action of a safer drug.
- The goal for benzodiazepine-using pregnant women is to be substance-free at, or before, birth.
- Polydrug use is common for people taking benzodiazepines.

It is recommended that benzodiazepine-dependent pregnant women are transferred to a single long-acting benzodiazepine (e.g., diazepam) and their dose is gradually reduced, while receiving psychosocial support.

- The modified Finnegan scale can be used to identify if a newborn is in withdrawal.

Babies born to benzodiazepine-dependent women should be observed for at least one week in hospital before discharge, and have an outpatient review weekly during the first month of life.

- During the hospital stay, parents should be educated to watch for signs of withdrawal after discharge, and encouraged to present the newborn back to the hospital if concerned.

Breastfeeding

- The safety of benzodiazepines in breast milk is not known.
  - Short-acting benzodiazepines may be considered while awaiting the onset of action of a safer medication, but long-acting benzodiazepines should be avoided.
  - The National Infant Feeding Guidelines advise that benzodiazepines through breast milk can sedate the baby.

Conduct a risk-benefit assessment of breastfeeding when the mother is using benzodiazepines.

- Mothers taking benzodiazepines and wishing to breastfeed should be advised:
  - to undergo supervised gradual withdrawal of benzodiazepines rather than abruptly stopping.
  - not to breastfeed immediately after taking a dose because of the risk of her falling asleep and smothering the infant
  - if breastfeeding while drowsy, the mother should be securely seated in a chair, with the baby also well supported, so that if she falls asleep the baby will be safe.

More information

- NSW Department of Health website offers information about benzodiazepines and its potential harms. Visit <www.health.nsw.gov.au/factsheets/drugandalcohol/benzodiazepines.html>.
- Alcohol and Drug Information Service (ADIS) is a 24-hour confidential information, advice and referral telephone service for all substances. If in Sydney, call 02 9361 8000. If in regional NSW, call 1800 422 599.

Benzodiazepines are sometimes used to treat anxiety and other disorders (e.g., pre-eclampsia). They are also used illicitly, sometimes in large doses and/or binges, and by injection. In combination with alcohol and other drug use, they can lead to increased risk taking, and increased morbidity and mortality.

4.5.2 Risks

Findings of studies into the effects of benzodiazepine use in pregnancy are summarised below.

- Birth defects: In contrast to earlier retrospective studies, more recent prospective, controlled studies have not shown an increase in orofacial cleft defects resulting from use of benzodiazepines in pregnancy.
- Obstetric outcomes: The use of benzodiazepines in pregnant women may increase the risk of preterm birth and low birth weight.
- Neonatal outcomes: Use of benzodiazepines and hypnotic benzodiazepine receptor agonists in pregnancy may increase the risk of adverse neonatal outcomes (e.g., low Apgar score after late exposure). Regular benzodiazepine use in pregnancy is associated with NAS, which may be of delayed onset and is sometimes prolonged.
- Long-term neurodevelopment of infant: No conclusions have been drawn regarding long-term neurobehavioral outcomes associated with in-utero benzodiazepine exposure.

Level of evidence: III-2

- Intoxication: 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.

Level of evidence: Consensus

4.5.3 Screening

See section 3.3.6, Screening.

4.5.4 Management

Ideally the use of benzodiazepines should be avoided altogether during pregnancy. Long-acting benzodiazepines should be avoided as much as possible.

When considering the use of benzodiazepines for mood disorders or other health problems in pregnancy, the possible benefits to the mother and the possible risks to the infant should be considered. Guidelines for the use of benzodiazepines in the general population should be consulted.

Level of evidence: IV

In the case of benzodiazepine-dependent pregnant women, the recommended management is transfer to a long-acting benzodiazepine (e.g., diazepam) under close supervision and gradual dose reduction, with a view to being drug-free at, or before, the birth, ideally during the second trimester. While this is the ideal goal of treatment, clinicians must work individually with each woman to set goals that are achievable for her. Clinicians should bear in mind that complex polydrug use is common as both an expression of, and contributor to, complex psychosocial problems. Alcohol use may present as mood disturbance, anxiety or sleep disturbance, and this possibility must be borne in mind.

Level of evidence: Consensus

Babies born to benzodiazepine-dependent women should be observed for 1 week or more 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 NAS associated with benzodiazepines (see section 5, Management of NAS and Appendix 11). 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 may be used. See section 5, Management of NAS

Level of evidence: IV

4.5.5 Risks of untreated depression in pregnancy and postnatally

Depression in pregnancy and after childbirth occurs in about 10% of women. When depression is severe, it may be associated with suicidal behaviour, poor self-care, inadequate nutrition, excessive use of alcohol and cigarettes, and poor antenatal care. Some studies suggest that maternal depression is also associated with increased rates of prematurity, low birth weight and irritability in newborns. It is now thought that depression and anxiety in pregnancy alter the hormonal environment in which the baby is developing with possible longer term effects on both the physical and emotional health of the child. Women who cease antidepressants early in pregnancy or pre-conception have a five-fold increased chance of relapse into depression by the time they deliver. Mothers who are depressed after the birth will find it harder to adjust to parenting, thus potentially impacting on their care of the baby and the mother–baby relationship.

More information

PANDA (Post and Antenatal Depression Association) offers information, support and referrals to women and their families who are suffering from post and antenatal depression. Phone 1300 726 306 from Monday to Friday 9:00am-7.00pm, or visit <www.panda.org.au>.

Beyond Blue offers information on depression, anxiety and related disorders and referrals. Phone 1300 22 46 36 or visit <www.beyondblue.org.au>.

Alcohol and Drug Information Service (ADIS) is a 24-hour confidential information, advice and referral telephone service for all substances. If in Sydney, call 02 9361 8000. If in regional NSW, call 1800 422 599.

SUMMARY SECTION

4.6 Amphetamine-type stimulants

4.6.1 Amphetamine-Type Stimulants Summary

Background information

Possible harmful effects of using amphetamine-type stimulants (ATS):

During pregnancy
- women may develop nutritional deficiencies (e.g., anaemia) or psychiatric illnesses
- miscarriage
- premature birth
- stillbirth

For the child
- reduced growth
- stroke or heart failure in newborn
- withdrawal in the newborn
- death
- cognitive problems
- delays in motor development

Clinical Implications

- Aim to identify and engage ATS exposed mothers early on in pregnancy.

Pregnant women using ATS are likely to be polydrug users and not be engaged in D&A services

- Provide health education to women on the risks/benefits of ATS use and cessation, as well as other important information such as breast-feeding and safe sleeping guidelines.

Pregnant women with a history of recent ATS use may require a medically supported inpatient setting to assist them in stopping their drug use.

- Health professional should familiarise themselves, and other members of the team, on the adverse consequences of ATS use in pregnancy and the ongoing risk of relapse.

Re-screen for blood-borne viral infections near birth if the woman injected drugs during pregnancy.

- Case manage women's care and be assertive in follow-up when women fail to attend for antenatal care, including alerting clinical areas/hospitals and the partner if appropriate.

Use of ATS are associated with mental illness, so mental health should be monitored and managed.

- Address child safety concerns as early as possible (for both newborn and siblings).
- After birth, discourage early discharge, assess the physical and psychological health of mother and newborn, provide midwifery support, and have family/social supports in place.

Breastfeeding

- Mothers who are stable and not using ATS should be supported if they choose to breastfeed.
- Breastfeeding mothers who use ATS rarely, or in binges, should be:
  - recommended to abstain from substance use
  - informed of the risks
  - educated in how to minimise the harmful effects to the baby, that is:
- to express and discard the breast milk after ATS use (not to simply stop breastfeeding)
- to have a back-up feeding plan ready for such events
- advised not to breastfeed for 24-48 hours after the use of ATS.
- Mothers who are regular ATS users or are unstable should be advised against breastfeeding.

More information

Alcohol and Drug Information Service (ADIS) is a 24-hour confidential information, advice and referral telephone service for all substances. If in Sydney, call 02 9361 8000. If in regional NSW, call 1800 422 599.

In Australia, the powder traditionally known as 'speed' is generally methamphetamine rather than amphetamine. The more potent forms of methamphetamine are known by terms such as base, paste, crystal, ice, shabu and meth. In NSW during 2010, 29% of regular ecstasy users reported methamphetamine use in the preceding six months, and 1.6% of the general population reported usage in the last twelve months.

'Speed' is typically manufactured in Australia and ranges in colour from white to yellow, orange, brown or pink, due to differences in the chemicals used to produce it. It is usually of relatively low purity. Speed is the most common form of methamphetamine used in NSW, with 29% of regular ecstasy users and 1.3% of the general population reporting recent use.

'Base' is thought to be an oily or gluggy, damp, sticky, powder that often has a brownish tinge. Base, like speed, it thought to be manufactured in Australia. In 2010, it was reported that 18% of regular ecstasy users and 0.8% of the general population in NSW used base recently (preceding six and twelve months, respectively).

'Crystal' (also called ice, shabu, or crystal meth), is a crystal or course powder that ranges from translucent to white but may also have a green, blue or pink tinge. Crystal is thought to be manufactured in Asia and imported, although there have been reported increases in the extent of domestic production of crystal methamphetamine in recent years. Although crystal is more commonly used amongst NSW regular ecstasy users (21%) than base, it is the least common form used within the general population (0.6%).

4.6.2 Risks

Studies on the effects of amphetamine-type stimulant drugs that include amphetamine, methamphetamines and methylene-dioxy-methamphetamine (MDMA) on human infants are only now emerging and the limited results confirm these drugs can have serious negative impact on pregnant users and their unborn infants.

Level of evidence: Consensus in review (Moore, Turner, Goodwin, Fulton, Singer & Parrott, 2011; Chen, Craig, Lui, Abdel-Latif & Oei, 2011)

Amphetamine-type stimulants (ATS) used in pregnancy can cause harmful effects on the woman and can lead to poor obstetric outcomes. In particular, methamphetamine use in pregnancy results in more morbid maternal and neonatal outcomes when compared with the general obstetric population.

Animal studies have reported a level of risk in the use of these drugs during pregnancy with a number of adverse effects on the offspring including teratogenic effects, behavioural alterations, memory impairments, decreased physical growth and delayed motor development.

In studies of exposure of these types of drugs to human infants, there are isolated reports of congenital anomalies, including cardiac defects, limb formation defects from MDMA drugs and cleft lip, and biliary atresia from ATS. Studies also report reduced growth and increased fetal distress, prematurity, placental abruption risk, small for gestational age, and low apgars and fetal and neonatal mortality. Low birth weight is a consistent finding in known ATS exposed infants when compared to population norms.

Infants of women who used ATS in pregnancy are at risk of withdrawal after birth and may present with disturbed sleep states, feed poorly and are less likely to be breast fed.

Alterations in certain brain regions have been demonstrated in children with a history of fetal MDMA or methamphetamine exposure. Moore et al. (2011) postulates that these children are more likely to perform poorly on overall measures of cognition, language, emotional functioning and behavioural competence, and may show differences in motor skills than non-exposed children.

Women who use these drugs in pregnancy are at risk of developing anaemia or other nutritional deficiencies. In addition, other maternal medical disorders can occur and result in pregnancy complications including pregnancy-induced hypertension and birth problems such as preterm birth, meconium stained amniotic fluid, premature rupture of membranes and precipitate labour.

Women users are at an increased risk of experiencing psychiatric disorders, including anxiety and depression, in addition to showing deficits in memory, executive functioning and emotional intelligence. Such deficits are risk factors for infant development. Women who used ATS in pregnancy had a higher incidence of co-morbid psychiatric illnesses compared with women using other substances in pregnancy.

These drugs are associated with medical disorders that may complicate the treatment of pregnant women such as cerebrovascular disorders, strokes and seizures. Injecting drug use also leads to further potential adverse harm, such as cerebrovascular accident, systemic bacterial infections and blood borne viral infections, and these conditions impact on both the woman and fetus.

ATS use in pregnancy is associated with poor antenatal care and adverse, short-term social outcomes. Further, women using these drugs are more likely to be unemployed, use other drugs of abuse and have higher rates of domestic violence and adoption when compared to a controlled group, and are more marginalised and more likely to have child protection services being involved in their children's ongoing care.

Level of evidence: III-2

4.6.3 Screening

See section 3.3.6, Screening.

4.6.4 Management

Routine comprehensive assessment (including assessment of recent and current substance use) for all pregnant women.

- Early identification and engagement:
- ATS exposed mothers often present late in pregnancy, are more likely to be polydrug users, and are less likely to be engaged in drug and alcohol services.
- Early antenatal care is important to minimise adverse outcomes.

Health education and recommendation for drug abstinence:

- Women should be encouraged to moderate and cease ATS use.
- A pregnant woman using ATS should be advised of the potential health risks to herself and to her baby.
- Women should be encouraged to stop tobacco smoking and other drug use.
- Women should be prepared for birth.
- Education should include fetal development, pregnancy health, mother-crafting, baby's engagement/disengagement cues and parenting, and safe sleeping guidelines and other child safety advice.
- Breastfeeding and postnatal depression; smoke-free environment.

Clinicians should familiarise themselves with the adverse consequences of ATS use during pregnancy:

- All members of the treating team should be informed of the potential adverse consequences when caring for these women and be aware of the ongoing risk of substance use relapse.
- Enquire about recent substance use at all contacts.
- Re-screen for blood borne viral infections around birth if the woman continues to inject drugs during her pregnancy.

Case manage women's care and assertive follow-up when women fail to attend for antenatal care:

- Alert to all clinical areas for woman to have psychosocial assessment at any hospital contact.
- Engage partner if appropriate.

Multidisciplinary and multi-agency care:

- Care should be provided within a multidisciplinary framework.
- Liaise with community services such as Child and Family Health services that may have access to the woman.
- Use of ATS are associated with mental illness, and mental health should be monitored and responded to.
- Assess woman's shelter and nutritional needs.

Respond to emergency presentations:

- Some women present unwell and report (or it is suspected by staff) recent substance use.
- All maternity hospitals should have adequate guidelines to respond to women who present intoxicated from substance use. These may include but are not limited to the following description:
  - Respond to, support and stabilise maternal physical and obstetric status.
  - Enquire recent substance use and respond to woman's presentation of anxiety, agitation or concern.
  - Offer and provide medication (e.g., sedation) as appropriate.
  - Monitor woman and unborn baby until woman's condition stabilises.
  - Refer to relevant agencies for ongoing support for substance use relapse prevention on discharge.

Complex care and management plan documented in woman's health record:

- Ensure there is a documented plan of care for women for antenatal, intrapartum and postnatal care.

- This is particularly important for women with mental health problems who may or may not have community mental health case workers involved.

Early response to child safety concerns:

- Assess and notify any child safety concerns to FaCS.
- Refer to appropriate services if there is risk of maternal/infant attachment issues.
- Wherever possible encourage women who have known agencies involved with their other children to make regular contact with these agencies.

Not for early discharge after birth:

- Early discharge planning and referral to relevant community support agencies.
- Psychosocial assessment and liaison with child safety services prior to discharge.
- Provide appropriate monitoring of condition of woman and neonate.
  - The most common presentation of infants exposed to recent amphetamine use is lethargy, somnolence and poor feeding, in a presentation similar to an adult user who experiences profound fatigue and anorexia after an amphetamine 'crash'.
  - Both mother and infant may be difficult to arouse after birth.
  - Using opiate-centric scores to assess the newborn may lead to misdiagnosis and under-treatment, especially when health providers are focused on identifying symptoms and signs that are similar to opiate withdrawal.
  - The majority of amphetamine-exposed infants require only minimal supportive treatment, for example, gavage feeding for about a week. Few have been shown to need pharmacological treatment.
- Paediatric team to be involved in neonate's hospital discharge and follow-up.
- Provide midwifery support with particular emphasis on breastfeeding support and mother-crafting skills.
- Ensure adequate family and social supports are in place.

Level of evidence: Consensus

SUMMARY SECTION

4.7 Cocaine

4.7.1 Cocaine Summary

Background information

Possible harmful effects of using cocaine:

For the mother:
- miscarriage
- premature birth
- detrimental effects on the cardiovascular systems of the mother and fetus

For the child:
- reduced growth
- stroke or heart failure in newborn
- withdrawal in the newborn
- cognitive difficulties

4.7.2 Clinical implications

- The use of cocaine may be associated with increased exposure to HIV, hepatitis and syphilis from intravenous drug use and unprotected intercourse with multiple partners.
- A recent history of cocaine use, particularly intravenous use, should be taken as a marker of a high risk pregnancy.
- 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 and substance abuse treatment integrated with antenatal care.
- Children who have been exposed to cocaine in utero often respond positively to early interventions, educational interventions, and a stimulating and responsive care environment.

Breastfeeding

Mothers who are stable and not using cocaine should be supported if they choose to breastfeed.

Breastfeeding mothers who use cocaine rarely, or in binges, should be:

- recommended to abstain from substance use
- informed of the risks
- educated on how to avoid the harmful effects to the baby, that is:
  - express and discard the breast milk after cocaine use (not to simply stop breastfeeding)
  - to have a back-up feeding plan ready for such events
  - advised not to breastfeed for 24-48 hours after the use of cocaine, as it may be mixed with other unknown substances.
- Mothers who are regular cocaine users or are unstable should be advised against breastfeeding.

More information

- NSW Department of Health website offers information about cocaine and its potential harms. Visit <www.druginfo.adf.org.au/drug-facts/cocaine>.
- Alcohol and Drug Information Service (ADIS) is a 24-hour confidential information, advice and referral telephone service for all substances. If in Sydney, call 02 9361 8000. If in regional NSW, call 1800 422 599.

4.7.3 Risks

Cocaine use during pregnancy is consistently associated with an increased risk of intra-uterine growth restriction, and may be associated with placental abruption and premature rupture of membranes, although findings are not conclusive or consistent. Many maternal and fetal sequelae appear to be related to the drug's detrimental effects on the cardiovascular system. Fetal cocaine exposure has been associated with significant cardiac consequences in animal models, however findings in human studies are limited and inconclusive. Other effects thought to be attributable uniquely to cocaine could also be explained by many concurrent risk factors including alcohol or tobacco use, cannabis use, mother's nutritional status, inadequate prenatal care, infectious diseases or the quality of the environment. Nevertheless, a history of recent cocaine use, particularly intravenous use, should be taken as a marker of a high-risk pregnancy. Additional major obstetric issues associated with the use of cocaine (and other substances) include increased exposure to HIV, hepatitis and syphilis from intravenous drug use and unprotected intercourse with multiple partners.

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. It is not clear if there is real withdrawal or just subtle behavioural changes.

Developmental problems have been observed in children exposed to cocaine in-utero, including subtle cognitive difficulties. There is also evidence that cocaine affects infant development indirectly via alterations in maternal care if the mother does not receive adequate treatment. While many environmental variables have been shown to play a key role, antenatal cocaine exposure has still been shown to have a small but measurable effect after controlling for confounding factors. These findings reflect averages from large groups of children – one cannot predict for any individual child.

4.7.4 Screening

See section 3.3.6, Screening.

4.7.4 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 and substance abuse treatment integrated with antenatal care.

Children at risk for developmental impairments following in-utero exposures often respond to early intervention and other educational interventions, and a stimulating and responsive care-giving environment.

Level of evidence: Consensus

SUMMARY SECTION

4.8 Inhalants

4.8.1 Inhalants Summary

Background information

Inhalants are household, industrial or medical products that are inhaled to produce psychoactive (mind-altering) effects. Although research is limited, possible harmful effects of using inhalants:

During pregnancy
- pre-term birth

For the child
- low birth weight
- developmental delays
- growth delays

Clinical implications

- Health care workers undertaking antenatal screening must be aware of the risk level of inhalant use in their local community and screen accordingly.
- 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 crying, sleeplessness, hyperactive Moro reflex, tremor, hypotonia and poor feeding.

Neonates born to mothers abusing volatile substances should be monitored for withdrawal as scored with the Finnegan Neonatal Abstinence Scoring (FNAS) system.

4.8.2 Risks

Inhalants are household, industrial or medical products that are inhaled to produce psychoactive (mind-altering) effects. Inhalant use is an increasing concern in Australian society, particularly in some rural and remote communities. Limited data has been collected on the prevalence of inhalant use in NSW or about best management strategies. The 2007 National Drug Strategy Household Survey found that 3.1% of the Australian population over the age of 14 have used inhalants before, with 0.4% using inhalants in the twelve months preceding the survey. However, it has been suggested the data is incomplete due to the large number of products under the inhalants category, and because many inhalant users may fall outside of the demographic covered by surveys.

There is evidence to suggest that inhalant use is associated with long term 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.

While it is difficult to disentangle the effects of inhalant use from other risk factors for poor neonatal outcomes, inhalant misuse during pregnancy appears to put the developing fetus at risk as the chemicals cross the placenta. While the evidence is limited, cases of premature delivery, low birth weight, developmental delays and babies with symptoms similar to fetal alcohol syndrome have been reported.

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 crying, sleeplessness, hyperactive Moro reflex, tremor, hypotonia and poor feeding. The term 'fetal solvent syndrome' (FSS) has been proposed for describing this constellation of effects produced by solvents.

Additionally, studies have documented a number of developmental delays and impairments (e.g., language impairments, growth retardation, hyperactivity, cerebellar dysfunction) after inutero exposure to the solvent, toluene.

It is important that health care providers screen for inhalants at the same level as illicit drug use. A pregnant woman reporting heavy inhalant abuse or presenting with signs of inhalant intoxication around parturition indicates the need for newborn monitoring. Neonates born to mothers abusing volatile substances should be monitored for withdrawal as scored with the Finnegan Neonatal Abstinence Scoring (FNAS) system.

Level of evidence: IV

4.8.3 Screening

See section 3.3.6, Screening.

4.8.4 Management

When caring for a pregnant woman who has been using inhalants, health professionals should arrange antenatal care for the woman, such as blood tests and physical examinations, particularly if she has not engaged with health services since falling pregnant. A referral should also be arranged to an obstetrician for a high-risk pregnancy assessment, and to a drug and alcohol specialist.

These women should also be advised of the potential health risks to herself and her baby when using inhalants. Case management should be offered to all pregnant women who have a history of inhalant use. It may also be necessary to recommend residential rehabilitation for inhalant users, particularly if health professionals anticipate that the woman will continue to use inhalants during the pregnancy.

Given that women who use inhalants have high-risk pregnancies, it is important for health professionals to strongly encourage these women to remain in contact with antenatal services for care throughout and beyond the pregnancy.

SECTION FIVE

Management of Neonatal Abstinence Syndrome (NAS)

SUMMARY SECTION

5.1 Management of Neonatal Abstinence Syndrome (NAS) Summary

Detecting NAS

- Infants of all mothers taking opioids or other drugs of dependence associated with NAS for a prolonged period during pregnancy should be monitored for NAS (hospital stay of at least 5 days after birth).

Measuring opioid NAS

- Use the Finnegan or the modified Finnegan scale to assess opioid NAS.

For more information, see the Neonatal Abstinence Syndrome Guidelines GL 2013_008 http://www0.health.nsw.gov.au/policies/gl/2013/GL2013_008.html

5.2 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 substances. 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 substance-dependent pregnant woman, see section 3.3, Antenatal care.

5.3 Monitoring of newborns

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

5.4 Resuscitating the baby of an opioid-using mother

- In the event of respiratory depression in an infant of an opioid-dependent mother, normal resuscitation methods should be used (without naloxone).

5.5 Supportive therapies for babies

- Non-pharmacological management is the first line of treatment for babies born to substance-dependent women (e.g., quit setting, breastfeeding, cuddling, close skin contact by carrying in a sling and other methods).

5.6 Role of parent/s

- Parents should be educated about NAS during the antenatal period, and involved in the management of NAS.

5.7 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.

5.8 Pharmacological treatment choices of opioid withdrawal

Use of opioids for infants with NAS due to opioid withdrawal

- An opioid (morphine) should be used as initial treatment for infants with NAS due to opioid withdrawal.

Use of a sedative in addition to an opiate

- Use of phenobarbitone or clonidine may reduce withdrawal severity in infants treated with an opiate.

5.9 Drug testing of newborn, Day 1

- 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.

5.10 Safe discharge

- All mothers should be assessed adequately before discharge with respect to current substance usage and psychological stability, parent craft abilities, social situation and importantly, the infant's well-being.
- Most infants requiring treatment for NAS caused by opioid withdrawal will reach treatment threshold by 7 days after birth.

5.11 Safe discharge home of baby on pharmacological treatment

- There is insufficient data to determine the safety of discharge of infants on morphine.

5.12 More information

See the Neonatal Abstinence Syndrome Guidelines. Visit http://www0.health.nsw.gov.au/policies/gl/2013/GL2013_008.html

SECTION SIX

Glossary

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

Aboriginal Health Worker: an Aboriginal person employed to provide health services to Aboriginal 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.

ATS: amphetamine-type stimulants.

benzodiazepines: a group of drugs used mainly as sedatives and muscle relaxants, and for the treatment of epilepsy (e.g., diazepam). Dependence on benzo-diazepines 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-substance-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.

cultural vouching: refers to a process whereby a member of an Aboriginal community vouches for or introduces someone, in these guidelines, it is usually a health worker who will be introduced.

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): fetal alcohol syndrome: 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 approximately 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 (e.g., 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 formed 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): previously the peak policy- and decision-making body in relation to licit and illicit drugs in Australia, the Ministerial Council on Drug Strategy brought together Commonwealth, State and Territory Ministers of Health and Law Enforcement, including the Minister responsible for Education. The role of the Council was to collectively determine national policies and programs to reduce drug-related harm. The Ministerial Council ensured that the Australian approach to harmful drug use was nationally coordinated and integrated. Its collaborative approach was designed to achieve national consistency in policy principles, program development and The MCDS met twice a year. For further information, refer to <www.nationaldrugstrategy.gov.au/internet/drugstrategy/publishing.nsf/Content/mcds-lp>. The MCDS was discontinued on 30 June 2011.

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, 2004,

2007 and 2010 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.

Vouching process: a strategy used by health professionals to be invited in and accepted by Aboriginal communities. This is usually through an already existing AHW and/or a community Elder.

SECTION SEVEN

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APPENDIX ONE

Advice for health care workers and consumers on alcohol, tobacco and other drugs and medications in NSW

NSW Drug and Alcohol Specialist Advisory Service (DASAS) 24-hour health professionals telephone service	02 9361 8006 (Sydney) or free call 1800 023 687 (outside Sydney)
National Cannabis Prevention Information Centre (NCPIC) Cannabis information and helpline	1800 30 40 50 www.ncip.org.au
National Drug and Alcohol Research Centre (NDARC)	ndarc.med.unsw.edu.au/
Alcohol Drug Information Service (ADIS) NSW	9361 8000 (Sydney) or free call 1800 422 599 (outside Sydney) yourroom.com.au/
Family Drug Support (FDS) Staffed by volunteers who have first-hand experience of drug dependent family members 24 hours a day	1300 368 186 www.fds.org.au
Methadone Advice and Conciliation Service (MACS) Available Monday to Friday 9.30am-5.00pm	free call: 1800 642 428
Stimulant Treatment Program (STP)	9361 8088 (Sydney) or free call 1800 101 188 (outside Sydney)
NSW Quitline (smoking) Available Monday to Friday 7.00am-10.30pm; Saturday, Sunday and Public Holidays: 9.00am-5.00pm	13 7848 (13 QUIT) www.icanquit.com.au
Mothersafe: Medications in Pregnancy and Lactation Advisory Service The Royal Hospital for Women, Barker Street, Randwick	02 9382 6539 (Sydney) or free call 1800 647 848 (outside Sydney)
Alcohol and Drug Information Service (ADIS) 24-hour counselling, information and referral	02 9361 8000 (Sydney) or free call 1800 422 599 (outside Sydney)
NSW Poisons Information Centre	13 11 26 www.chw.edu.au/poisons/

APPENDIX TWO

Examples of assessment scales for alcohol withdrawal

Example 1: Clinical Institute Withdrawal Assessment of Alcohol Scale, Revised (CIWA–Ar)

Patient: _____	Pulse or heart rate, take for 1 minute: _____
Date: _____ Time: _____	Blood Pressure: _____
Nausea and Vomiting: Ask, "Do you feel sick to your stomach? Have you vomited?"	
Observation:	0 No nausea and no vomiting 1 Mild nausea and no vomiting 2 3 4 Intermittent nausea with dry heaves 5 6 7 Constant nausea, frequent dry heaves and vomiting.
Tremor: Arms extended and fingers spread apart.	
Observation:	0 No tremor 1 Not visible but can be felt fingertip to fingertip 2 3 4 Moderate, with patient's arm extended 5 6 7 Severe, even with arms not extended
Paroxysmal Sweats:	
Observation:	0 No sweat visible 1 2 3 4 Beads of sweat obvious on forehead 5 6 7 Drenching sweats
Tactile Disturbance: Ask, "Have you any itching, pins and needles sensations, any burning, any numbness, or do you feel bugs crawling under your skin?"	
Observation:	0 None 1 Very mild itching, pins and needles, burning or numbness 2 Mild itching, pins and needles, burning or numbness 3 Moderate itching, pins and needles, burning or numbness 4 Moderate severe hallucinations 5 Severe hallucinations 6 Extremely severe hallucinations 7 Continuous hallucinations

Auditory Disturbances: Ask, "Are you more aware of sounds around you? Are they harsh? Do they frighten you? Are you hearing anything that is disturbing to you? Are you hearing things you know are not there?"

Observation:

0 Not present

1 Very mild harshness or ability to frighten

2 Mild harshness or ability to frighten

3 Moderate harshness or ability to frighten

4 Moderately severe hallucinations

5 Severe hallucinations

6 Extremely severe hallucinations

7 Continuous hallucinations

Visual Disturbances: Ask, "Does the light appear to be too bright? Is the colour different? Does it hurt your eyes? Are you seeing anything that is disturbing to you? Are you seeing things you know are not there?"

Observation:

0 Not present

1 Very mild sensitivity

2 Mild sensitivity

3 Moderate sensitivity

4 Moderately severe hallucinations

5 Severe hallucinations

6 Extremely severe hallucinations

7 Continuous hallucinations

Anxiety: Ask, "Do you feel nervous?"

Observation:

0 No anxiety, at ease

1 Mildly anxious

2

3

4 Moderately anxious, or guarded, so anxiety is inferred

5

6

7 Equivalent to acute panic states, as seen in severe delirium or acute schizophrenic reactions

Agitation:

Observation:

0 Normal activity

1 Somewhat more than normal activity

2

3

4 Moderately fidgety and restless

5

6

7 Paces back and forth during most of the interview, or constantly thrashes about

Headache, Fullness in Head: Ask, "Does your head feel different? Does it feel like there is a band around your head?" Do not rate dizziness or lightheadedness. Otherwise, rate severity.

Observation:

0 Not present

1 Very mild

2 Mild

3 Moderate

4 Moderately severe

5 Severe

6 Very severe

7 Extremely severe

Orientation and Clouding of Sensorium: Ask, "What day is this? Where are you? Who am I?" Observation: 0 Oriented and can do serial additions 1 Cannot do serial additions or is uncertain about date 2 Disoriented for date by no more than 2 calendar days 3 Disoriented for date by more than 2 calendar days 4 Disoriented for place and/or person
Total CIWA–Ar Score_____ Maximum possible score = 67 Patients scoring less than 10 do not usually need additional medication for withdrawal. Rater's Initials _____ *Note:* The CIWA – Ar is not copyrighted and may be used freely. This assessment for monitoring withdrawal symptoms requires about 5 minutes to administer. *Source:* Sullivan JT, Sykora K, Schneiderman J, Naranjo CA, Sellers EM, 1989, Assessment of alcohol withdrawal: The revised Clinical Institute Withdrawal Assessment for Alcohol scale (CIWA–Ar), *British Journal of Addiction*, 84, pp 1353-1357.
Tremor (0–3) Anxiety (0–4) Agitation (0–4) Axilla temperature (0–4) Hallucinations (0–4) Orientation (0–4)

Source: NSW Health Department, 1999, New South Wales Detoxification Clinical Practice Guidelines, NSW Health Department, ISBN 0 7347 3034.

APPENDIX THREE

Examples of substance use assessment tools

3.1 Example 1 AUDIT

The AUDIT tool was developed by the World Health Organization as a simple screening tool to pick up the early signs of hazardous and harmful drinking and identify mild dependence.

- Begin the AUDIT by saying "Now I am going to ask you some questions about your use of alcoholic drinks during this past year."
- Read the questions as written. Record answers carefully.
- Explain what is meant by "alcoholic drinks" by using local examples of beer, wine, vodka, etc.
- Code answers in terms of "standard drinks". Select the correct answer number in the box on the right.

The Alcohol Use Disorders Identification Test: Interview Version. Read questions as written.	
1. How often do you have a drink containing alcohol?	0 points – Never 1 point – Monthly or less 2 points – 2 to 4 times a MONTH 3 points – 2 to 3 times a WEEK 4 points – 4 or more times a week
Questioner may skip to Questions 9 and 10 if reply to Question 1 is never, or if both answers to Q 2 and 3 are 0.	
2. How many units of alcohol do you drink on a typical day when you are drinking?	0 points – 1 or 2 drinks 1 point – 3 or 4 drinks 2 points – 5 or 6 drinks 3 points – 7 or 8 or 9 drinks 4 points – 10 or more drinks
3. How often have you had 6 or more units if female, or 8 or more if male, on a single occasion in the last year?	0 points – Never 1 point – Less than monthly 2 points – Monthly 3 points – Weekly 4 points – Daily or almost daily AUDIT-C Score /12 (complete full questionnaire if score is 3 or more)
4. How often during the last year have you found that you were not able to stop drinking once you had started?	0 points – Never 1 point – Less than monthly 2 points – Monthly 3 points – Weekly 4 points – Daily or almost daily
5. How often during the last year have you failed to do what was normally expected from you because of drinking?	0 points – Never 1 point – Less than monthly 2 points – Monthly 3 points – Weekly 4 points – Daily or almost daily
6. How often during the last year have you needed an alcoholic drink in the morning to get yourself going after a heavy drinking session?	0 points – Never 1 point – Less than monthly 2 points – Monthly 3 points – Weekly 4 points – Daily or almost daily

The Alcohol Use Disorders Identification Test: Interview Version. Read questions as written.	
7. How often during the last year have you had a feeling of guilt or remorse after drinking?	0 points – Never 1 point – Less than monthly 2 points – Monthly 3 points – Weekly 4 points – Daily or almost daily
8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?	0 points – Never 1 point – Less than monthly 2 points – Monthly 3 points – Weekly 4 points – Daily or almost daily
9. Have you or someone else been injured as a result of your drinking?	0 points – No, never 2 points – Yes, but not in the last year 4 points – Yes, in the last year
10. Has a relative or friend or a doctor or another health worker been concerned about your drinking or suggested you cut down?	0 points – No, never 2 points – Yes, but not in the last year 4 points – Yes, during the last year

The Alcohol Use Disorders Identification Test (AUDIT) Score = /40

Scores of 8 or more are considered an indicator of hazardous and harmful alcohol use.

AUDIT-C (shortened form)

The AUDIT-C is a shortened version of the above using the first 3 questions only.

www.patient.co.uk/doctor/alcohol-use-disorders-identification-test-audit.

3.2 Example 2: The Alcohol, Smoking and Substance Involvement Screening Test (ASSIST V3.0: WHO)

Source: World Health Organisation ASSIST tool

Clinician ID	Clinic
Patient ID	Date

Introduction (please read to patient. Can be adapted for local circumstances.

(Many drugs and 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 experiences 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 ever used? (NON MEDICAL USE ONLY)	**No**	**Yes**
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc	0	3
b. Alcohol 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, ecstacy, etc)	0	3
f. Inhalants (nitrous, glue, petrol, paint thinner, etc)	0	3
g. Sedatives or Sleeping Pills (Valium, Serapax, 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.	

Question 2

In the past three months, how often have you used the substances you mentioned (FIRST DRUG, SECOND DRUG, ETC?)	Never	Once or Twice	Monthly	Weekly	Daily or almost Daily
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc	0	2	3	4	6
b. Alcohol 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, ecstacy, 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, Serapax, 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 3 months, continue with questions 3, 4, & 6 for <u>each substance</u> used.

Question 3

In the past three months, how often have you had a strong desire or urge to use (FIRST DRUG, SECOND DRUG, ETC?)	Never	Once or Twice	Monthly	Weekly	Daily or almost Daily
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc	0	3	4	5	6
b. Alcohol 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, ecstacy, 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, Serapax, 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

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

If any substances in Question 2 were used in the previous 3 months, continue with questions 3, 4, & 6 for <u>each substance</u> used

Question 4

In the past three months, how often has your use of (FIRST DRUG, SECOND DRUG, ETC?) 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. Alcohol 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, ecstacy, 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, Serapax, 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

In the past three months, how often have you failed to do what was normally expected of you because of your use of (FIRST DRUG, SECOND DRUG, ETC?)	Never	Once or Twice	Monthly	Weekly	Daily or almost Daily
a. Tobacco products (cigarettes, chewing tobacco, cigars, etc	0	5	6	7	8
b. Alcohol 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, ecstacy, 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, Serapax, 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

Question 6

Has a friend or relative or anyone else ever 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. Alcohol 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, ecstacy, etc)	0	6	3
f. Inhalants (nitrous, glue, petrol, paint thinner, etc)	0	6	3
g. Sedatives or Sleeping Pills (Valium, Serapax, 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 ever 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. Alcohol 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, ecstacy, etc)	0	6	3
f. Inhalants (nitrous, glue, petrol, paint thinner, etc)	0	6	3
g. Sedatives or Sleeping Pills (Valium, Serapax, 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 **ever** 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 best course of intervention.

Pattern of Injecting	Pattern of Injecting
Once weekly or less or ➡ Fewer than 3 days in a row	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 Q@c+ Q3c +Q4c + Q5 + 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.				

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 ect)
e. Amphetamine type stimulants (speed, diet pills, ecstasy etc)
f. Inhalants
g. Sedatives or Sleeping Pills (Valium, Serapax, 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 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

Name:	Test Date:	
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		03-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 if use and are likely to be dependent.

Are you concerned about your substance use?

Drug	Condition
a. tobacco	Your risk of experiencing these harms is **Low ❑ Moderate ❑ High ❑ (tick one)** Regular tobacco smoking is associated with: Premature ageing, 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 ❑ Moderate ❑ High ❑ (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 ❑ Moderate ❑ High ❑ (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 ❑ Moderate ❑ High ❑ (tick one)** 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

Drug	Condition
e. amphetamine type stimulants	Your risk of experiencing these harms is **Low ❑ Moderate ❑ High ❑ (tick one)** Regular use of amphetamine type stimulants is associated with: Difficulty sleeping, loss of appetite and weight loss 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 ❑ Moderate ❑ High ❑ (tick one)** 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 ❑ Moderate ❑ High ❑ (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 is used with alcohol, opioids or other depressant drugs
h. hallucinogens	Your risk of experiencing these harms is **Low ❑ Moderate ❑ High ❑ (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 Flashbacks Increase the effects of mental illness such as schizophrenia
i. opioids	Your risk of experiencing these harms is **Low ❑ Moderate ❑ High ❑ (tick one)** Regular use of sedatives is associated with: Itchiness, 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

APPENDIX FOUR

Chemical Use in Pregnancy (CUPS) Discharge Checklist

Chemical Use in Pregnancy (CUPS) Discharge Checklist

- 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 — Indep / Super / Assist
  - Bottle sterilisation — Indep / Super / Assist
  - Breastfeeding — Indep / Super / Assist
- 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:

APPENDIX FIVE

Australian Guidelines to Reduce Harms from Drinking Alcohol

GUIDELINE 4
Maternal alcohol consumption can harm the developing fetus or breastfeeding baby. *For women who are pregnant or planning a pregnancy, not drinking is the safest option.* *For women who are breastfeeding, not drinking is the safest option.*

This guideline applies to women who are pregnant, are planning a pregnancy, or are breastfeeding. It is based on an assessment of the evidence concerning potential harms of alcohol for the developing fetus and for young babies during the breastfeeding period. Apart from adverse pregnancy outcomes, harms to the mother from alcohol consumption during pregnancy are not discussed as the available evidence is limited.

As the risks from maternal alcohol consumption in pregnancy and during lactation differ, these are considered separately.

Pregnancy

Maternal alcohol consumption can result in a spectrum of harms to the fetus. Although the risk of birth defects is greatest with high, frequent maternal alcohol intake during the first trimester, alcohol exposure throughout pregnancy (including before pregnancy is confirmed) can have consequences for development of the fetal brain. It is not clear whether the effects of alcohol are related to the dose of alcohol and whether there is a threshold above which adverse effects occur (RCOG 2006). However, variation in effects can be due to the stage of development of the fetus at the time of exposure and to individual characteristics of the mother.

This uncertainty is reflected in policy regarding alcohol use in pregnancy within Australia and overseas (O'Leary et al 2007). Most policies stress that 'heavy' drinking poses the greatest risk; that the timing of exposure is important; and that not all 'heavy' drinkers will have an affected child. However, several policies emphasise that a safe level has not been established and conclude that not drinking is the safest option.

A 'no-effect' level has not been established, and limitations in the available evidence make it impossible to set a 'safe' or 'no-risk' drinking level for women to avoid harm to their unborn children, although the risks to the fetus from low-level drinking (such as one or two drinks per week) during pregnancy are likely to be low. A conservative, public health approach has therefore been taken in recommending that 'not drinking alcohol is the safest option' for pregnant women and women planning a pregnancy. This decision was not based on the fact that substantial new evidence had emerged since the previous guidelines were published, but on limitations of the existing evidence.

Women who drank alcohol before they knew they were pregnant or during their pregnancy should be reassured that the majority of babies exposed to alcohol suffer no observable harm. The risk to the fetus from low level drinking is likely to be low. Women who find it difficult to decrease their alcohol intake will require support and treatment. It is important that they are referred to the appropriate services.

Breastfeeding

There is a lack of good quality evidence from human studies regarding the effects of maternal alcohol consumption on lactation, infant behaviour and development. As a result, as for pregnancy, it was not possible to set a 'safe' or 'no-risk' drinking level for breastfeeding women. Guideline 4B therefore takes a conservative approach and advises not drinking as the safest option.

It is acknowledged that an abstinence message may discourage breastfeeding. For this reason, although women who are breastfeeding are advised that 'not drinking alcohol is the safest option', practical guidance regarding minimising the risk to lactation and to the breastfed infant is also provided for mothers who choose to drink.

Source: This page in an extract from the Australian Alcohol Guidelines (NHMRC, 2009) available at http://www.nhmrc.gov.au/your-health/alcohol-guidelines

APPENDIX SIX

The Cannabis Withdrawal Scale (CWS)

Instructions: This version of the CWS asks about symptoms experienced over the last 24 hours, and can be administered by an interviewer OR by self report.

The following statements describe how you have felt over the last **24** hours. Please **circle the number** that most closely represents your personal experiences for each statement. For each statement, please rate its negative impact on normal daily activities on the same scale (0 = Not at all to 10 = Extremely), writing the number in the right hand column.

		Not at all			**Moderately**					**Extremely**			**Negative impact on daily activity (0 – 10)**
1	The only thing I could think about was smoking some cannabis	0	1	2	3	4	5	6	7	8	9	10	
2	I had a headache	0	1	2	3	4	5	6	7	8	9	10	
3	I had no appetite	0	1	2	3	4	5	6	7	8	9	10	
4	I felt nauseous (like vomiting)	0	1	2	3	4	5	6	7	8	9	10	
5	I felt nervous	0	1	2	3	4	5	6	7	8	9	10	
6	I had some angry outbursts	0	1	2	3	4	5	6	7	8	9	10	
7	I had mood swings	0	1	2	3	4	5	6	7	8	9	10	
8	I felt depressed	0	1	2	3	4	5	6	7	8	9	10	
9	I was easily irritated	0	1	2	3	4	5	6	7	8	9	10	
10	I had been imagining being stoned	0	1	2	3	4	5	6	7	8	9	10	
11	I felt restless	0	1	2	3	4	5	6	7	8	9	10	
12	I woke up early	0	1	2	3	4	5	6	7	8	9	10	
13	I had a stomach ache	0	1	2	3	4	5	6	7	8	9	10	
14	I had nightmares and/or strange dreams	0	1	2	3	4	5	6	7	8	9	10	
15	Life seemed like an uphill struggle	0	1	2	3	4	5	6	7	8	9	10	
16	I woke up sweating at night	0	1	2	3	4	5	6	7	8	9	10	
17	I had trouble getting to sleep at night	0	1	2	3	4	5	6	7	8	9	10	
18	I felt physically tense	0	1	2	3	4	5	6	7	8	9	10	
19	I had hot flashes	0	1	2	3	4	5	6	7	8	9	10	

Source: Allsop D, Norberg MM, Copeland J, Fu S, Budney A, 2011, The Cannabis Withdrawal Scale development: Patterns and predictors of cannabis withdrawal and distress, *Drug and Alcohol Dependence*, 119(1).

APPENDIX SEVEN

Clinical Institute Withdrawal Assessment Scale-Benzodiazepines (CIWA-B)

Benzodiazepine withdrawal scale (CIWA-B)

UR: NAME: DOB:											
ADDRESS:											
Last Benzodiazepine use: Date: / / Time: AM/PM **Amount last 24 hours:** Name: Dose:											
Date:											
Time:											
BLOOD PRESSURE											
PULSE											
TEMPERATURE per axilla											
RESPIRATIONS											
LEVEL OF CONSCIOUSNESS	1 Alert, obeys, oriented 2 Confused, responds to speech 3 Stuporous, responds to pain 4 Semi-comatose 5 Comatose										
PUPILS + Reacts – No reaction B Brisk S Sluggish	SIZE (in mm)										
	REACTION										
MEDICATION GIVEN?											
NURSE INITIALS											

1 2 3 4 5 6 7 8 SCALE IN MM

APPENDIX EIGHT

Amphetamine Withdrawal Questionnaire (AWQ)

During the past 24 hours: (Circle one answer per question)						
1	Have you been craving amphetamine or methamphetamine?	Not at all	Very little	A little	Quite a lot	Very much
2	Have you felt sad?	Not at all	Very little	A little	Quite a lot	Very much
3	Have you lost interest in things or no longer take pleasure in them?	Not at all	Very little	A little	Quite a lot	Very much
4	Have you felt anxious?	Not at all	Very little	A little	Quite a lot	Very much
5	Have you felt as if your movements are slow?	Not at all	Very little	A little	Quite a lot	Very much
6	Have you felt agitated?	Not at all	Very little	A little	Quite a lot	Very much
7	Have you felt tired?	Not at all	Very little	A little	Quite a lot	Very much
8	Has your appetite increased or are you eating too much?	Not at all	Very little	A little	Quite a lot	Very much
9	Have you had any vivid or unpleasant dreams?	Not at all	Very little	A little	Quite a lot	Very much
10	Have you been craving for sleep or sleeping too much?	Not at all	Very little	A little	Quite a lot	Very much
Scoring Not at all = 0 Very little = 1 A little = 2 Quite a lot = 3 Very much = 4 Possible range of scores is 0-40 with higher score indicating greater severity.						

Source: Srisurapanont M, Jarusuraisin N & Jittiwutikarn J (1999) Amphetamine withdrawal: Reliability, validity and factor structure of a measure. *Australian and New Zealand Journal of Psychiatry* 33:89-93.

APPENDIX 9

Fagerström 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, 1991, The Fagerstrom Test for Nictoine Dependence: A revision of the Fagerstrom Tolerance Questionnaire, *British Journal of Addictions,* 86, pp 1119-1127.

APPENDIX TEN

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 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 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 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 breast milk 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 breast milk 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.

Source: Hale Thomas W, 1992-2004, *Medications and mothers' milk*, 11th edition, Pharmasoft Publishing LP, Amarillo, Texas, p. 18.

APPENDIX ELEVEN

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 substance 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 & 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
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 (e.g., 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.

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

APPENDIX TWELVE

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SHPN (MHDAO) 140396