

NSW PUBLIC HEALTH BULLETIN SUPPLEMENT

NSW Mothers and Babies 2008



Health

NSW DEPARTMENT OF HEALTH

73 Miller Street
Locked Mail Bag 961
NORTH SYDNEY NSW 2060
Tel. (02) 9391 9000
Fax. (02) 9391 9101
TTY. (02) 9391 9900
www.health.nsw.gov.au

Produced by:

Centre for Epidemiology and Research
Population Health Division
Tel: 61 2 9391 9223
Fax: 61 2 9391 9232

This work is copyright. It may be reproduced in whole or in part for study training purposes subject to the inclusion of an acknowledgement of the source. It may not be reproduced for commercial usage or sale. Reproduction for purposes other than those indicated above requires written permission from the NSW Department of Health.

Suggested citation:

Centre for Epidemiology and Research. NSW Department of Health.
New South Wales Mothers and Babies 2008. *N S W Public Health Bull* 2010; 21 (S-2).

© NSW Department of Health 2010

SHPN (CER) 100521
ISSN 1034 767

For further copies of this document please contact:

Better Health Centre – Publications Warehouse
PO Box 672
North Ryde BC, NSW 2113
Tel. (02) 9887 5450
Fax. (02) 9887 5452

Further copies of this document can be downloaded from the
NSW Health website www.health.nsw.gov.au/pubs/a-z/n.html

December 2010

Contents

1. Acknowledgements	7
2. Executive summary	8
3. Methods	10
Data sources	10
Method for estimating level of reporting of maternal Aboriginality	11
Definitions	11
Explanatory notes	12
Map of NSW health areas	14
4. Trends in New South Wales	15
Confinements and births by plurality	15
Table 1: Plurality, NSW 2004–2008	15
Health area of residence	15
Table 2: Maternal health area of residence, NSW 2004–2008	15
Maternal age	16
Figure 1: Mothers aged less than 20 years and 35 years and over, NSW 2004–2008	16
Table 3: Maternal age, NSW 2004–2008	16
Maternal country of birth	17
Table 4: Maternal country of birth, NSW, 2004–2008	17
Maternal Aboriginality	18
Table 5: Maternal Aboriginality, NSW 2004–2008	18
Previous pregnancies	18
Table 6: Previous pregnancies, NSW 2004–2008	18
Duration of pregnancy at first antenatal visit	18
Table 7: Duration of pregnancy at first antenatal visit, NSW 2004–2008	18
Smoking in pregnancy	19
Table 8: Mothers who smoked at all during pregnancy by number of cigarettes smoked in the second half of pregnancy, NSW 2004–2008	19
Place of birth	19
Table 9: Maternal place of birth, NSW 2004–2008	19
Hypertension and diabetes	20
Table 10: Maternal hypertension or diabetes, NSW 2004–2008	20
Labour	20
Table 11: Onset and augmentation of labour, NSW 2004–2008	20
Birth	21
Table 12: Type of birth, NSW 2004–2008	21
Table 13: Maternal health insurance status by type of birth, NSW 2001–2005	21
Baby sex	22
Gestational age	22
Table 14: Gestational age, NSW 2004–2008	22
Birth weight	22
Table 15: Birth weight, NSW 2004–2008	22

Apgar score	23
Table 16: Apgar score at 5 minutes, NSW 2004–2008	23
Perinatal outcome	23
Table 17: Perinatal outcome, NSW 2004–2008	23
Maternal deaths	24
Table 18: Maternal deaths by year, NSW 1990–2007	24
Table 19: Maternal deaths by cause, NSW 2007	24
5. Area Health Services	25
Confinements	25
Maternal age	25
Table 20: Maternal age by health area of residence, NSW 2008	25
Maternal country of birth	25
Maternal Aboriginality	25
Table 21: Maternal country of birth by health area of residence, NSW 2008	26
Table 22: Maternal Aboriginality by health area of residence, NSW 2008	26
Duration of pregnancy at first antenatal visit	27
Table 23: Duration of pregnancy at first antenatal visit by health area of residence, NSW 2008	27
Smoking in pregnancy	27
Table 24: Number of cigarettes smoked in the second half of pregnancy by health area of residence, NSW 2008	27
Place of birth	28
Table 25: Place of birth by health area of residence, NSW 2008	28
Labour	28
Table 26: Onset and augmentation of labour by health area of residence, NSW 2008	28
Birth	29
Table 27: Type of birth by health area of residence, NSW 2008	29
Birth weight	29
Table 28: Birth weight by health area of residence, NSW 2008	29
Gestational age	30
Table 29: Gestational age by health area of residence, NSW 2008	30
Infant feeding	30
Table 30: Live births by infant feeding on discharge and health area of residence, NSW 2008	30
Perinatal outcomes	31
Table 31: Perinatal outcomes by health area of residence, NSW 2008	31
Live births by statistical local areas	32
Table 32: Live births by health area and statistical local area of residence, NSW 2008	32
6. NSW hospitals	34
Onset and augmentation of labour	34
Table 33: Onset and augmentation of labour by health area of hospital, NSW 2008	34
Table 34: Onset and augmentation of labour by hospital and maternity service level, NSW 2008	34
Type of birth	37
Table 35: Type of birth by health area of hospital, NSW 2008	37
Table 36: Type of birth by hospital and maternity service level, NSW 2008	37
Pain relief	39
Table 37: Pain relief by health area of hospital, NSW 2008	39
Table 38: Pain relief by hospital and maternity service level, NSW 2008	39
Perineal status	41
Table 39: Perineal status among vaginal births and health area of hospital, NSW 2008	41
Table 40: Perineal status among vaginal births by hospital and maternity service level, NSW 2008	41

Birth weight	43
Table 41: Births by birth weight and health area of hospital, NSW 2008	43
Table 42: Births by birth weight, hospital and maternity service level, NSW 2008	43
Gestational age	45
Table 43: Births by gestational age and health area of hospital, NSW 2008	45
Table 44: Births by gestational age, hospital and maternity service level, NSW 2008	45
Neonatal resuscitation	47
Table 45: Births by type of resuscitation and health area of hospital, NSW 2008	47
Table 46: Births by type of resuscitation, hospital and maternity service level, NSW 2008	47
Admission to special care or neonatal intensive care	49
Table 47: Live births by admission to special care or neonatal intensive care by health area of hospital, NSW 2008	49
Table 48: Live births by admission to special care or neonatal intensive care, hospital and maternity service level, NSW 2008	49
Infant feeding	51
Table 49: Live births by type of infant feeding and health area of hospital, NSW 2008	51
Table 50: Live births by type of infant feeding, hospital and maternity service level, NSW 2008	51
Baby discharge status	53
Table 51: Baby discharge status by health area of hospital, NSW 2008	53
Table 52: Baby discharge status by hospital and maternity service level, NSW 2008	53
Postnatal length of stay	55
Table 53: Average maternal postnatal length of stay in hospital of birth, NSW 2003–2007	55
Clinical indicators	57
Outcome of selected primipara, Indicator 1.1	57
Table 54: 1.1: Selected primipara who have a spontaneous vaginal birth by hospital, NSW 2007–2008	57
Outcome of selected primipara, Indicator 1.2	58
Table 55: 1.2: Selected primipara who undergo induction of labour by hospital, NSW 2007–2008	58
Outcome of selected primipara, Indicator 1.3	59
Table 56: 1.3: Selected primipara who undergo instrumental vaginal birth by hospital, NSW 2007–2008	59
Outcome of selected primipara, Indicator 1.4	60
Table 57: 1.4: Selected primipara undergoing caesarean section by hospital, NSW 2007–2008	60
Vaginal birth following caesarean section, Indicator 2.1	61
Table 58: 2.1: Vaginal delivery after previous primary caesarean section by hospital, NSW 2007–2008	61
Major perineal tears and surgical repair of the perineum, Indicator 3.1	62
Table 59: 3.1: Selected primipara delivering vaginally with an intact perineum by hospital, NSW 2007–2008	62
Major perineal tears and surgical repair of the perineum, Indicator 3.2	63
Table 60: 3.2: Selected primipara undergoing episiotomy and no perineal tear by hospital, NSW 2007–2008	63
Major perineal tears and surgical repair of the perineum, Indicator 3.3	64
Table 61: 3.3: Selected primipara sustaining a perineal tear and no episiotomy by hospital, NSW 2007–2008	64
Major perineal tears and surgical repair of the perineum, Indicator 3.4	65
Table 62: 3.4: Selected primipara undergoing episiotomy and sustaining a perineal tear by hospital, NSW 2007–2008	65
Major perineal tears and surgical repair of the perineum, Indicator 3.5	66
Table 63: 3.5: Selected primipara undergoing surgical repair of the perineum for third degree tear by hospital, NSW 2007–2008	66
Major perineal tears and surgical repair of the perineum, Indicator 3.6	67
Table 64: 3.6: Selected primipara undergoing surgical repair of the perineum for fourth degree tear by hospital, NSW 2007–2008	67
General anaesthesia for caesarean section, Indicator 4.1	68
Table 65: 4.1: General anaesthesia for caesarean section by hospital, NSW 2007–2008	68

Postpartum haemorrhage and blood transfusion after vaginal birth, Indicator 7.1	69
Table 66: 7.1: Post partum haemorrhage and blood transfusion by hospital, NSW 2007–2008	69
Intrauterine growth restriction, Indicator 8.1	70
Table 67: 8.1: Intrauterine growth restriction at 40 weeks gestation or more by hospital, NSW 2007–2008	70
Apgar scores, Indicator 9.1	71
Table 68: 9.1: Apgar score of 7 or less in term babies by hospital, NSW 2007–2008	71
7. Aboriginal and Torres Strait Islander mothers and babies	72
Reporting of Aboriginality	72
Table 69: Births to Aboriginal mothers by source of birth report, year of birth and health area of residence, NSW 2005–2007	72
Figure 2: Level of reporting of Aboriginality to the NSW Midwives Data Collection by year of birth and health area of hospital, NSW 2005–2007	73
Table 70: Births to Aboriginal mothers and fathers by source of birth report, year of birth and health area of residence, NSW 2005–2007	74
Trends in births	75
Table 71: Aboriginal and Torres Strait Islander mothers and babies NSW 2004–2008	75
Plurality	75
Table 72: Aboriginal and Torres Strait Islander mothers and babies by plurality, NSW 2004–2008	75
Previous pregnancies	76
Table 73: Previous pregnancies among Aboriginal and Torres Strait Islander mothers, NSW 2004–2008	76
Maternal age	76
Table 74: Age of Aboriginal and Torres Strait Islander mothers, NSW 2004–2008	76
Health area of residence	77
Table 75: Health area of residence of Aboriginal and Torres Strait Islander mothers, NSW 2004–2008	77
Table 76: Health area of residence of Aboriginal and Torres Strait Islander mothers by age, NSW 2008	77
Duration of pregnancy at first antenatal visit	78
Table 77: Duration of pregnancy at first antenatal visit among Aboriginal and Torres Strait Islander mothers, NSW 2004–2008	78
Table 78: Duration of pregnancy at first antenatal visit among Aboriginal and Torres Strait Islander mothers by health area of residence, NSW 2008	78
Smoking in pregnancy	79
Figure 3: Smoking in the second half of pregnancy among Aboriginal and Torres Strait Islander mothers by amount smoked and health area of residence, NSW 2008	79
Medical conditions and obstetric complications	79
Table 79: Maternal medical conditions and obstetric complications by Aboriginality, NSW 2008	79
Labour and birth	80
Table 80: Labour onset for Aboriginal and Torres Strait Islander mothers, NSW 2004–2008	80
Table 81: Type of birth among Aboriginal and Torres Strait Islander mothers, NSW 2004–2008	80
Birth weight	81
Table 82: Weight of Aboriginal and Torres Strait Islander babies, NSW 2004–2008	81
Table 83: Weight of Aboriginal and Torres Strait Islander babies by health area of residence, NSW 2008	81
Gestational age	82
Table 84: Gestational age of Aboriginal and Torres Strait Islander babies, NSW 2004–2008	82
Table 85: Gestational age of Aboriginal and Torres Strait Islander babies by health area of residence, NSW 2008	82
Apgar score	82
Table 86: Apgar score of Aboriginal and Torres Strait Islander babies, NSW 2004–2008	82
Infant feeding	83
Table 87: Infant feeding among Aboriginal and Torres Strait Islander liveborn babies by health area of residence, NSW 2008	83
Perinatal mortality	83
Table 88: Perinatal deaths among Aboriginal and Torres Strait Islander babies, NSW 2004–2008	83

8. Maternal country of birth	84
Trends in confinements	84
Table 89: Births and confinements by country of birth group, NSW 2004–2008	84
Maternal age	85
Table 90: Maternal age by country of birth group, NSW 2008	85
Figure 4: Maternal age by country of birth group, NSW 2008	85
Health area of residence	86
Table 91: Health area of residence by maternal country of birth group, NSW 2008	86
Duration of pregnancy at first antenatal visit	87
Table 92: Duration of pregnancy at first antenatal visit by country of birth group, NSW 2008	87
Smoking in pregnancy	87
Table 93: Smoking in pregnancy by country of birth group, NSW 2008	87
Table 94: Mothers who smoked at all during pregnancy by number of cigarettes smoked in the second half of pregnancy and country of birth group, NSW 2008	88
Medical conditions and obstetric complications	88
Table 95: Maternal medical conditions by obstetric complications and country of birth group, NSW 2008	88
Labour and birth	89
Table 96: Labour onset by country of birth group, NSW 2008	89
Table 97: Type of birth by country of birth group, NSW 2008	89
Birth weight	90
Table 98: Birth weight by maternal country of birth group, NSW 2008	90
Gestational age	90
Table 99: Gestational age by maternal country of birth group, NSW 2008	90
Apgar score	91
Table 100: Apgar score at five minutes by country of birth group, NSW 2008	91
Infant feeding	91
Table 101: Infant feeding among liveborn babies by country of birth group, NSW 2008	91
Perinatal outcomes	92
Table 102: Perinatal outcomes by country of birth group, NSW 2008	92
9. Congenital conditions	93
Congenital conditions among stillborn and liveborn infants	93
Trends in reported congenital conditions	93
Table 103: Cases of congenital conditions, NSW 2002–2008	93
Congenital conditions by diagnostic category	93
Table 104: Congenital conditions among stillbirths and liveborn infants by diagnostic category, NSW 2002–2008	93
Infant characteristics	96
Table 105: Cases of congenital conditions by gestational age, NSW 2002–2008	96
Table 106: Cases of congenital conditions by pregnancy outcome, NSW 2002–2008	96
Maternal characteristics	97
Table 107: Cases of congenital conditions by maternal age, NSW 2002–2008	97
Congenital conditions among terminations of pregnancy, spontaneous abortions and unknown outcomes of pregnancy	97
Table 108: Pregnancies with fetuses affected by congenital conditions and resulting in spontaneous abortion, termination of pregnancy or unknown outcome, NSW 2002–2008	97
Table 109: Congenital conditions among spontaneous abortions, terminations of pregnancy and unknown outcomes of pregnancy by diagnostic category, NSW 2002–2008	98
Trends in selected congenital conditions	99
Table 110: Selected congenital conditions by year, NSW 2002–2008	99
Figure 5: Neural tube defects: cases by year and pregnancy outcome, NSW 2002–2008	100
Figure 6: Chromosomal abnormalities: cases by year and pregnancy outcome, NSW 2002–2008	100
Figure 7: Down syndrome: cases by year and pregnancy outcome, NSW 2002–2008	101
Figure 8: Diaphragmatic hernia: cases by year and pregnancy outcome, NSW 2002–2008	101
Congenital conditions by NSW health areas	102
Table 111: Congenital conditions in NSW health areas, 2002–2008	102

10. Perinatal deaths	103
Review of perinatal deaths 2008	103
Trends in causes of perinatal death 2008	103
Causes of perinatal death 2008	103
Table 112: Perinatal deaths by PSANZ-PDC classification, NSW 2006–2008	103
Table 113: Perinatal deaths by PSANZ-PDC classification and perinatal outcome, NSW 2008	104
Obstetric cause of perinatal death by hospital service level	106
Perinatal deaths associated with maternal drug dependency–abuse 2008	107
Postmortem examination 2008	107
Table 114: Perinatal deaths by PSANZ-PDC classification and maternity service level, NSW 2008	107
Table 115: Neonatal deaths by PSANZ-NDC classification, NSW 2006–2008	108
Table 116: Neonatal deaths by PSANZ-NDC classification and gestational age, NSW 2008	109
11. Appendices	110
Appendix 1: Description of selected congenital conditions	110
Appendix 2: Congenital conditions exclusion list	110
Appendix 3: Maternal countries of birth and country of birth groups	111
Appendix 4: NSW Midwives Data Collection Form	112