

## MBRN record: Standardized format – de-identified

Complete database version 2009Q4  
 Record version 3.1.0  
 Date 2009-11.24  
 Last change 2009-12-14

Variable name	Format	Description	Values
<b>Administrative data</b>			
VERSJON_DATABASE	CHAR(6)	Complete database, version no.	2009Q4
VERSJON_RECORD	CHAR(7)	MBRN record, version no.	3.10.ai
KILDE	Number(2)	Primary data source	1 = MBRN birth notification form 1967-1998 2 = MBRN birth notification form 1998-present, paper 3 = MBRN birth notification form 2005-present, digital 4 = Termination of pregnancy for fetal anomalies (§ 2.3c) 1999-present
<b>Identifying information (not mandatory)</b>			
ID_BARN	Varchar2(8)	Record number, child	7-digit number
ID_MOR	Varchar2(8)	Record number, mother	7-digit number
ID_FAR	Varchar2(8)	Record number, father	7-digit number
<b>A – Demographic data</b>			
FODESTED_KAT	Number(2)	Place of delivery: - Size of maternity clinic (deliveries per year) - Home delivery - Delivery during transport	01 = -49 02 = 50-499 03 = 500-1499 04 = 1500-2999 05 = 3000+ 06 = At home, planned 07 = At home, unplanned 08 = During transport 09 = Outside of institution, unspecified 10 = Unknown place of delivery
HOVEDINSTNR	Varchar2(5)	Main institution no.	Number created by MBRN
INSTNR	Varchar2(5)	Institution no.	Number created by MBRN
<b>Mor</b>			
MOR_FAAR	Number(4)	Mother's year of birth	Year
MFMD	Varchar2(2)	Mother's month of birth	01-12
GEN_MFNR	Number(1)	Mother's national ID number is OK for genealogy-linkage	1=Yes 0 = No
MORS_ALDER	Number(3)	Mother's age	Age in whole years at time of birth
MORS_ALDER_DESIMALT	Number(38,35)	Mother's age, with decimals	In years at the time of birth, with decimals
BOKOMM	Varchar2(4)	Mother's municipality of residence at time of delivery	Statistics Norway municipality number
BOFYLKE	Varchar2(2)	Mother's county of residence at time of delivery	Statistics Norway county number
BOKOMM_DAGENS	Varchar2(4)	Mothers' municipality following today's borders – old borders converted to new ones after e.g. merging, splitting, moving of borders etc.	Municipality numbers
BOFYLKE_DAGENS	Varchar2(2)	Mother's county, adjusted to fit today's municipality borders – see above (BOKOMM_DAGENS)	County numbers
SIVST	Number(1)	Mother's marital status	1 = Married 2 = Co-habitant 3 = Unmarried / Single 4 = Divorced / Separated / Widow 5 = Registered partner 9 = Other / Missing
<b>Father</b>			
FAR_FAAR	Number(4)	Father's year of birth	Year
FFMD	Varchar2(2)	Father's month of birth	Month

Variable name	Format	Description	Values
GEN_FFNR	Number(1)	Father's national ID number is OK for genealogy-linkage	1 = Yes 0 = No
FARS_ALDER	Number(3)	Father's age	Age in whole years
<b>B – Pregnancy and maternal health</b>			
PARITET	Number(2)	Number of previous deliveries: Highest value of variables 'PARITET_MOR' and 'PARITET_MFR'	Number
PARITET_MOR	Number(2)	Number of previous deliveries, as stated by mother	Number
PARITET_MFR	Number(2)	Number of previous deliveries, as registered by MBRN. From 1967-2001 registration starts at week 16, from 2002 at week 12	Number
DODFODTE	Number(2)	Previous stillbirths (from 24 weeks and above)	Number
LEVENDEFODTE	Number(2)	Previous live births	Number
SPABORT_12	Number(2)	Previous miscarriages before 12 weeks of gestation	Number
SPABORT_23	Number(2)	Previous miscarriages/stillbirths 12-23 weeks of gestation	Number
SMENS_MND	Number(2)	Month for last menstrual period (part of date)	Number
KNITT_TIDLIGERE	Number(1)	Has delivered by cesarean section in a previous pregnancy	1 = Yes 0 = No
UL_TERMIN_AAR	Number (4)	Ultrasound predicted date of birth , year	Year
UL_TERMIN_MND	Varchar2(2)	Ultrasound predicted date of birth,month	01-12
SVLEN	Number(2)	Length of gestation in weeks, based on ultrasound estimations. If ultrasound is not available, the gestational length is calculated from the last menstrual period	Number of completed weeks
SVLEN_KAT	Number(2)	Length of gestation in weeks, categorised See SVLEN	1 = - 21 weeks 2 = 22-27 weeks 3 = 28-36 weeks 4 = 37 weeks 5 = 38 weeks 6 = 39 weeks 7 = 40 weeks 8 = 41 weeks 9 = 42 weeks 10 = 43 + weeks
SVLEN_DG	Number(3)	Length of gestation in days. Calculated as variable See SVLEN	Number of completed days
SVLEN_UL	Number(2)	Length of gestation in weeks based on ultrasound estimations.	Number of completed weeks
SVLEN_UL_DG	Number(3)	Length of gestation in days based on ultrasound estimations.	Number of completed days
SVLEN_SM	Number(2)	Length of gestation in weeks calculated from last menstrual period	Number of completed weeks
SVLEN_SM_DG	Number(3)	Length of gestation in days calculated from last menstrual period	Number of completed days
PRENAT_PAT_KODER	Varchar2(500)	Prenatal diagnostics: Pathological findings	Code-string variable, codes separated by semicolon, with prefix for main source of data: See code-strings
<b><i>Mother's health prior to pregnancy</i></b>			
MORS_HELSE_FOER	Varchar2(500)	Mother's health prior to pregnancy	Code-string variable, codes separated by semicolon, with prefix for main source of data: See code-string
ASTMA	Number(1)	Asthma	1 = Yes 0 = No
HYPERTENSJON_KRONISK	Number(1)	Chronic hypertension prior to pregnancy	1 = Yes 0 = No
NYRESYKDOM_KRONISK	Number(1)	Chronic renal disease	1 = Yes 0 = No
URINVEISINF	Number(1)	Recurring urinary tract infection	1 = Yes 0 = No
REUM_ARTRITT	Number(1)	Rheumatoid arthritis	1 = Yes 0 = No
HJERTE_MOR	Number(1)	Heart disease	1 = Yes 0 = No
EPILEPSI	Number(1)	Epilepsy	1 = Yes 0 = No
DIABETES_MELLITUS	Number(1)	Diabetes	1 = Pregestational diabetes – Type 1 2 = Pregestational diabetes – Type 2 3 = Pregestational diabetes – Unspecified / other 4 = Gestational diabetes

Variable name	Format	Description	Values
			5 = Antidiabetic medication during pregnancy registered without further information
THYREOIDEA	Number(1)	Thyreoidea	1 = Yes 0 = No
MULTIVITF	Number(1)	Multivitamin supplements prior to pregnancy	1 = Yes 0 = No
FOLATF	Number(1)	Folic supplements prior to pregnancy	1 = Yes 0 = No
<b><i>Mother's health during pregnancy</i></b>			
MORS_HELSE_UNDER	Varchar2(500)	Mother's health during pregnancy	Code-string variable, codes separated by semicolon, with prefix for main source of data: See code-string
BLODN_SVGSK	Number(1)	Vaginal bleeding during pregnancy	1 = Yes 0 = No
BLODN_F13	Number(1)	Vaginal bleeding: Before week 13	1 = Yes 0 = No
BLODN_13_28	Number(1)	Vaginal bleeding: Week 13-28.	1 = Yes 0 = No
BLODN_E28	Number(1)	Vaginal bleeding: After week 28	1 = Yes 0 = No
HYPERTENSIV_TILSTAND	Number(1)	Hypertensive condition during pregnancy	1 = Yes 0 = No
HYPERTENSJON_ALENE	Number(1)	Hypertension only- during pregnancy	1 = Yes 0 = No
EKLAMPSI	Number(1)	Eclampsia, total. During pregnancy, during birth and/or post partum and unspecified eclampsia	1 = Yes 0 = No
PREEKL	Number(1)	Preeclampsia	1 = Light 2 = Serious 3 = Unspecified
PREEKL TIDL	Number(1)	Early preeclampsia	1 = Yes 0 = No
PREEKL_EKLAMPSI	Number(1)	Preeclampsia and/or eclampsia	1 = Yes 0 = No
HELLP	Number(1)	HELLP	1 = Yes 0 = No
HB_U9	Number(1)	Hb < 9.0 g/dl	1 = Yes 0 = No
RUBELLA	Number(1)	Rubella	1 = Yes 0 = No
VENERISK	Number(1)	Sexually transmitted disease	1 = Yes 0 = No
MULTIVITU	Number(1)	Multivitamin supplements, during pregnancy	1 = Yes 0 = No
FOLATU	Number(1)	Folate supplements, , during pregnancy	1 = Yes 0 = No
LEGEMIDLER_UNDER	Varchar2(500)	Medication during pregnancy	Code-string variable, codes separated by semicolon, with prefix for main source of data: See code-strings
<b><i>Mother's smoking habits during pregnancy</i></b>			
ROYK_SAMTYKKE	Number(1)	Does not consent to provide information on smoking	1 = Not consenting
ROYK_OPPL	Number(1)	Smoking information available	1 = Yes 0 = No
ROYK_BEG	Number(1)	Smoking at start of pregnancy	1 = No 2 = Sometimes 3 = Daily
ROYK_BEG_ANT	Number(2)	Number of cigarettes per day at start of pregnancy	0 – 99
ROYK_AVSL	Number(1)	Smoking at end of pregnancy	1 = No 2 = Sometimes 3 = Daily
ROYK_AVSL_ANT	Number(2)	Number of cigarettes per day at end of pregnancy	0 – 99
<b>C – Delivery</b>			
FSTART	Number(1)	Initiation of delivery	1 = Spontaneous 2 = Induction 3 = C-section
ROBSON_10	Number(2)	Birth classification according to Robson	See tables under prefix and definition
<b><i>Leie, induksjon, inngrep</i></b>			
LEIE	Number(1)	Position	1 = Normal cephalic 2 = Breech 3 = Transverse 4 = Cephalic, abnormal 5 = Other
VAGINAL	Number(1)	Vaginal delivery	1 = Yes 0 = No
INTERVENSJON	Varchar2(500)	Intervention and surgery	Code-string variable, codes separated by semicolon, with prefix for main source of data: See code-string
INDUKSJON_PROSTAGLANDIN	Number(1)	Induction of labor: Prostaglandin	1 = Yes 0 = No

Variable name	Format	Description	Values
INDUKSJON_OXYTOCIN	Number(1)	Induction of labor: Oxytocin	1 = Yes 0 = No
INDUKSJON_AMNIOTOMI	Number(1)	Induction of labor: Amniotomy, membrane stripping	1 = Yes 0 = No
INDUKSJON_ANNET	Number(1)	Induction of labor: Other methods	1 = Yes 0 = No
TANG	Number(1)	Forceps	1 = Forceps, breech delivery 2 = Outlet forceps, vertex delivery 3 = Other forceps, vertex delivery
VAKUUM	Number(1)	Vacuum extractor	1 = Yes 0 = No
EPISIOTOMI	Number(1)	Episiotomy	1 = Yes 0 = No
FRAMHJELP	Number(1)	Assisted delivery of breech / partial extraction	1 = Yes 0 = No
UTTREKKING	Number(1)	Total breech extraction	1 = Yes 0 = No
KSNITT	Number(1)	Cesarean section	1 = Planned C-section 2 = Emergency C-section 9 = Unspecified C-section
<b>Complications during delivery</b>			
KOMPLIKASJONER	Varchar2(500)	Complications	Code-string variable, codes separated by semicolon, with prefix for main source of data: See code-string
VANNAVANGANG	Number(1)	Premature rupture of membranes	1 = 12-24 hours before delivery 2 = More than 24 before to delivery 3 = Unspecified point of time before delivery
ABRUPTIOP	Number(1)	Abruptio placentae	1 = Yes 0 = No
PLACENTA_PREVIA	Number(1)	Placenta previa	1 = Yes 0 = No
RUPTUR34	Number(1)	Perineal rupture, grade 3-4	1 = Yes 0 = No
BLODNING_0500	Number(1)	Hemorrhage more than 500 ml during delivery	1 = 500-1500 ml 2 = >1500 ml, transfusion 3 = >500 ml, unspecified amount
DYSTOCI	Number(1)	Dystocia, fetopelvic disproportion, abnormal labor, inadequate labor in need of stimulation	1 = Yes 0 = No
<b>Anaesthesia/analgesics</b>			
LYSTGASS	Number(1)	Nitrous oxide	1 = Yes 0 = No
OPIAT	Number(1)	Opiates (including Petidine)	1 = Yes 0 = No
EPIDURAL	Number(1)	Epidural analgesics	1 = Yes 0 = No
SPINAL	Number(1)	Spinal anaesthesia	1 = Yes 0 = No
PUDENDAL	Number(1)	Pudendal anaesthesia	1 = Yes 0 = No
INFILTRASJON	Number(1)	Local anaesthesia (infiltration)	1 = Yes 0 = No
PARACERV	Number(1)	Paracervical block (PCB)	1 = Yes 0 = No
NARKOSE	Number(1)	General anaesthetics	1 = Yes 0 = No
ANESTESI_ANNET	Number(1)	Other anaesthesia /analgesics	1 = Yes 0 = No
<b>Placenta, umbilical cord, amniotic fluid</b>			
UTSKRAPING	Number(1)	Placenta: Curettage	1 = Yes 0 = No
PLACENTAVEKT	Number(5)	Weight of placenta	Grams
MANUELL_PLACENTA	Number(1)	Placenta: Manual extraction	1 = Yes 0 = No
FOSTERV_POLYHYDRAMNION	Number(1)	Amniotic fluid: Polyhydramnion	1 = Yes 0 = No
FOSTERV_OLIGOHYDRAMNION	Number(1)	Amniotic fluid: Oligohydramnion	1 = Yes 0 = No
FOSTERV_MISF_STINK_INFI	Number(1)	Amniotic fluid: Discoloured,malodorous,infected	1 = Yes 0 = No
NAVLESNOR_KOMPL	Number(1)	Umbilical cord: Complications	1 = Yes 0 = No
NAVLESNR_OMSL	Number(1)	Umbilical cord: Loops/coiling around fetal	1 = Yes 0 = No

Variable name	Format	Description	Values
NAVLESNOR_KNUTE	Number(1)	Umbilical cord: Genuine knot	1 = Yes 0 = No
<b>Complications in the mother after delivery</b>			
KOMPLIKASJONER_ETTER	Varchar2(500)	Complications after delivery. Some medications and treatments are also included.	Code-string variable, codes separated by semicolon, with prefix for main source of data: See code-string
TROMBOSE_BEH	Number(1)	Thrombosis, treated	1 = Yes 0 = No
<b>D – The child</b>			
FMND	Varchar2(2)	Month of delivery	01 – 12
FAAR	Number (4)	Year of delivery	1967->
PLURAL	Number(1)	Plurality: Number of children born	Number
PLUREK	Number(1)	Child's order	Number
KJONN	Number (1)	Sex as reported to MBRN. If not reported, or unknown, sex as registered in the Norwegian Population Registry	1 = boy 2 = girl 3 = information missing
VEKT	Number(4)	Child's weight in grams	Grams
LENGDE	Number(4)	Child's length in cm	Cm
HODE	Number(2)	Child's head circumference in cm	Cm
APGAR1	Number(2)	Apgar score after 1 minute	00 – 10
APGAR5	Number(2)	Apgar score after 5 minutes	00 – 10
OVERFLYTET	Number (1)	Transfer to neonatal ward	1 = No 2 = Yes
<b>Mortality</b>			
TILSTAND	Number(1)	Child's condition at delivery	1 = Live born, still alive 2 = Live born, died later 3 = Stillborn 4 = Termination of pregnancy (TOPFA)
DAAR	Number (4)	Year of death	Year
DMND	Varchar2(2)	Month of death	01-12
DODKAT	Number (2)	Time of death, categorized	0 = live born, still alive 1 = live born: Died 0-24 hours after delivery 2 = live born: Died 2-7days after delivery 3 = live born: Died 8-28 days after delivery 4 = live born: Died 29 days-12 months after delivery 5 = live born: Died 1-2 years of age 6 = live born: Died 3+ years of age 7 = stillborn: Died before delivery 8 = stillborn: Died during delivery 9 = stillborn: Unknown time of death 10 = abortion requiring approval (§2c)
PERINAT_FODT_28	Number(1)	Satisfy the following criteria for inclusion in perinatal mortality statistics: Live born independent of gestational age or stillborn with gestational age $\geq$ 28 completed weeks. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes 0 = No
PERINAT_DOD_28	Number(1)	Death during the perinatal period or stillborn with gestational age $\geq$ 28 completed weeks. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes 0 = No
PERINAT_DOD_TID_28	Number(1)	Death during the early perinatal period or stillborn with gestational age $\geq$ 28 completed weeks. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes 0 = No
PERINAT_DODFODT_28	Number(1)	"Perinatal stillborn", i.e. stillborn with gestational age $\geq$ 28 completed weeks. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes 0 = No
PERINAT_FODT_28_FIGO	Number(1)	Satisfy FIGOs criteria for inclusion in perinatal mortality statistics: Live born independent of gestational age or stillborn with birth weight $\geq$ 1000	1 = Yes 0 = No

Variable name	Format	Description	Values
		grams. If missing weight: gestational age $\geq 28$ completed weeks. See also: Abbreviations and definitions: FIGO and perinatal mortality	
PERINAT_DOD_28_FIGO	Number(1)	Death during the perinatal period or stillborn according to FIGOs criteria: birth weight $\geq 1000$ grams, or gest.age $\geq 28$ weeks. See also: Abbreviations and definitions: FIGO and perinatal mortality	1 = Yes 0 = No
PERINAT_DOD_TID_28_FIGO	Number(1)	Death during the early perinatal period or stillborn according to FIGOs criteria: birth weight $\geq 1000$ grams, or gest.age $\geq 28$ weeks. See also: Abbreviations and definitions: FIGO and perinatal mortality	1 = Yes 0 = No
PERINAT_DODFODT_28_FIGO	Number(1)	"Perinatal stillborn", i.e. stillborn according to FIGOs criteria: birth weight $\geq 1000$ grams, or gest.age $\geq 28$ weeks. See also: Abbreviations and definitions: FIGO and perinatal mortality	1 = Yes 0 = No
PERINAT_FODT_22	Number(1)	Satisfy the following criteria for inclusion in perinatal mortality statistics: Live born independent of gestational age or stillborn with gestational age $\geq 22$ completed weeks. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes 0 = No
PERINAT_DOD_22	Number(1)	Death during the perinatal period or stillborn with gestational age $\geq 22$ completed weeks. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes 0 = No
PERINAT_DOD_TID_22	Number(1)	Death during the early perinatal period or stillborn with gestational age $\geq 22$ completed weeks. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes 0 = No
PERINAT_DODFODT_22	Number(1)	"Perinatal stillborn", i.e. stillborn with gestational age $\geq 22$ completed weeks. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes 0 = No
PERINAT_FODT_22_FIGO	Number(1)	Satisfy FIGOs criteria for inclusion in perinatal mortality statistics: Live born independent of gestational age or stillborn with birth weight $\geq 425$ grams. If missing weight: gestational age $\geq 22$ completed weeks. See also: Abbreviations and definitions: FIGO and perinatal mortality	1 = Yes 0 = No
PERINAT_DOD_22_FIGO	Number(1)	Death during the perinatal period or stillborn according to FIGOs criteria: birth weight $\geq 425$ grams, or gest.age $\geq 22$ weeks. See also: Abbreviations and definitions: FIGO and perinatal mortality	1 = Yes 0 = No
PERINAT_DOD_TID_22_FIGO	Number(1)	Death during the early perinatal period or stillborn according to FIGOs criteria: birth weight $\geq 425$ grams, or gest.age $\geq 22$ weeks. See also: Abbreviations and definitions: FIGO and perinatal mortality	1 = Yes 0 = No
PERINAT_DODFODT_22_FIGO	Number(1)	"Perinatal stillborn", i.e. stillborn according to FIGOs criteria: birth weight $\geq 425$ grams, or gest.age $\geq 22$ weeks. See also: Abbreviations and definitions: FIGO and perinatal mortality	1 = Yes 0 = No
<b>Child health and neonatal diagnoses</b>			
BARNETS_HELSE	Varchar2(500)	Child health and neonatal diagnoses	Code-string variable, codes separated by semicolon, with prefix for main source of data: See code-string
HOFTELEDDYSPL_PUTE	Number(1)	Hip joint dysplasia, treated with pillow	1 = Yes 0 = No
RESPIRATORISK_DISTR	Number(1)	Respiratory distress syndrome	1 = Yes 0 = No
INTRAKRANIELL_BLODN	Number(1)	Intracranial hemorrhage	1 = Yes 0 = No

Variable name	Format	Description	Values
KONJUNKTIVITT	Number(1)	Conjunctivitis treated	1 = Yes 0 = No
FRACT_CLAVICULAE	Number(1)	Fractura claviculae – fracture of clavicle	1 = Yes 0 = No
ANNEN_FRACTUR	Number(1)	Other fracture	1 = Yes 0 = No
FACIALISPARESE	Number(1)	Facial paresis	1 = Yes 0 = No
PLEXUSSKADE	Number(1)	Plexus injury	1 = Yes 0 = No
RH_ANTISTOFF	Number(1)	Rhesus antibodies	1 = Yes 0 = No
SYSTEMISKANTIBIOTIKA	Number(1)	Treated with systemic antibiotics	1 = Yes 0 = No
RESPIRATOR	Number(1)	Respiratory treatment	1 = Yes 0 = No
CPAP	Number(1)	CPAP-treatment	1 = Yes 0 = No
ICTERUS	Number(1)	Icterus, treated	1 = Yes 0 = No

***Congenital malformations - see also: Neonatal diagnoses (above)***

C00_MALF_ALL	Number (1)	Birth defect	1 = Yes 0 = No
C00_MALF_SERIOUS_MBRN_DEF	Number (1)	Serious defect	1 = Yes 0 = No
C01_ANENCEPH	Number (1)	Anencephalus	1 = Yes 0 = No
C02_SPINAB	Number (1)	Spina bifida	1 = Yes 0 = No
C03_ENCEPH	Number (1)	Encephalocele	1 = Yes 0 = No
C06_HYDROCEPH	Number (1)	Hydrocephalus	1 = Yes 0 = No
C11_MICROTIA	Number (1)	Microtia	1 = Yes 0 = No
C13_TRANSPOS_GREAT_VESSELS	Number (1)	Transposition of great vessels	1 = Yes 0 = No
C15_HYPOPLASTIC_LEFT_HEART	Number (1)	Hypoplastic left heart	1 = Yes 0 = No
C18_CLEFT_PALATE_WITHOUT_CL	Number (1)	Cleft palate without cleft lip	1 = Yes 0 = No
C19_CLEFT_LIP_PLUS_MINUS_CP	Number (1)	Cleft lip with or without cleft palate	1 = Yes 0 = No
C20_OESOPHAGEAL_ATRES_STENOS	Number (1)	Oesophageal atresia	1 = Yes 0 = No
C22_ANORECTAL_ATRES_STENOS	Number (1)	Anorectal atresia	1 = Yes 0 = No
C24_HYPOSPADIA	Number (1)	Hypospadias	1 = Yes 0 = No
C27_RENAL_AGENESIS	Number (1)	Renal agenesis	1 = Yes 0 = No
C31_LIMB_REDUCTION_DEFECTS_ALL	Number (1)	Limb reduction defects, all	1 = Yes 0 = No
C38_DIAFRAGMATIC_HERNIA	Number (1)	Diaphragmatic hernia	1 = Yes 0 = No
C39_OMPHALOCELE	Number (1)	Omphalocele	1 = Yes 0 = No
C40_GASTROSCHISIS	Number (1)	Gastroschisis	1 = Yes 0 = No
C45_DOWN	Number (1)	Downs syndrom	1 = Yes 0 = No
NEVRALRORSDEFEKTER	Number (1)	Anencephalus, Encephalocele or Spina bifida	1 = Yes 0 = No

**IVF**

IVF	Number (1)	Artificial fertilization (IVF treatment)	1 = Reported on IVF notification form 2 = Reported on birth notification form
IVFMETODE	Number (1)	IVF method	1 = IVF 2 = ICSI 3 = Combinations / Other 9 = Not specified
IVFINSTITUSJON	Varchar2(4)	Institutional number, IVF-institution	Internal MBRN number

## General Comments

MBRNs set of data contains births up to the year of 2008. The data for 2008 are not completed, i.e. there will be changes in the number of rows and variables in the future versions of the data set.

MBRN has not completed the coding of reported information for 2008. This refers to *malformation* and *neonatal diagnoses*, as well as the code-strings.

### Eclampsia

During the last few years eclampsia has been over-reported from the institutions. The quality assurance of this variable is not completed for 2008, and data for 2008 is therefore not registered. As a consequence 'preekl\_eklamsi' and 'hypertensive\_tilstand' are also missing for 2008. In addition, 'Placenta\_previa' does not contain data for 2008.

### Terminations og pregnancy

Cases with kilde = 4 (Terminations of pregnancy) only contain information submitted on the notification form for termination of pregnancy and from autopsy reports where available.

## Single variables

For more detailed documentation of each variable in the database see Definitions reports on MBRNs web-site.

### Diabetes\_mellitus

Diabetes\_mellitus is now replacing the mutually excluding variables 'diabetes\_1', 'diabetes\_2', 'diabetes\_annen' and 'diabetes\_svgsk'.

### Eklampsi

Eclampsia is probably under-reported during the years 1967 – 1998. The hospitals now verify each individual case of eclampsia that is reported. No information is available yet for 2008.

### Fstart

The definition of the categories for initiation of delivery (spontaneous, induction, c-section) has been changed since database version (2008Q4). Induction of delivery is now prioritized over c-section if both are reported.

### Gen\_mfnr og gen\_ffnr

Indicates that the birth number for mother and father respectively have gone through an extra quality assurance through linkage with DSF (The national registry of inhabitants).

### Hode

Contains only information submitted on birth notification forms. Information passed to MBRN on a NICU notification form is no longer retained.

### IVFmetode

The definition of the categories (ivf, icsi, combinations/annet and not specified) have been changed since database version (2008Q4).

### Ksnitt

The definition of the categories (planned, emergency and unspecified) have been changed since database version (2008Q4).

**Leie**

We have observed a shift in the prevalence of 'normal cephalic position' towards 'other cephalic position', especially for 2008, no quality assurance has been made. Nevertheless nothing is found on the category breech and transverse.

**Lengde**

Contains only information submitted on birth notification forms. Information passed to MBRN on a NICU notification form is no longer retained.

**Preekl**

The definition of the categories have been changed since the previous database version (2008Q4). The changes do not affect the total number of cases with preeclampsia.

**Sivst**

The definition of the categories has been changed since the previous database version (2008Q4). "Registered partner" has been introduced as a new category.

**Tang**

A single variable for use of forceps was introduced in database version (2008Q4). This variable replaces the mutually excluding variables tang\_sete, tang\_utskj and tang\_annen.

**Tilstand**

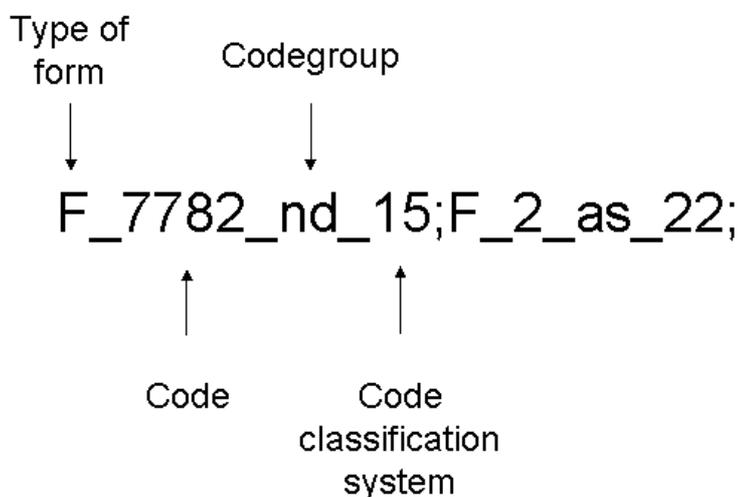
Coding has changed from letters (A-D) to numbers (1-4).

**Vekt**

Contains only information submitted on birth notification forms. Information passed to MBRN on a NICU notification form is no longer retained.

## Code-strings

Code-strings contain codes that describe matters related to pregnancy and delivery. The structure of the code-strings is shown below.



The example above is from the code-string 'barnets\_helse'.

The code elements are separated by semicolons.

The Prefix F = Indicates that the code is reported on a birth notification form.

B = The code has been reported on a NICU notification form.

A = The code has been reported on a termination of pregnancy notification form.

The code that is reported has the value 7782, and it is reported on a birth notification form (F). The code is reported in connection with codegroup "nd" which is the codegroup for neonatal diagnosis on the birth notification form (refer to table below). To explore what the code 7782 means we examine the last part of the code element. In the example it is 15. This is the number of the code classification system used for this code element (refer to table below). Code classification system number 15 is MBRN's modifications of and supplements to ICD-8.

### Using code-strings

Examples on how to use code-strings is supplied along with the documentation. Syntaxes to be used in SPSS and SAS to split code-strings into single fields are also available on MBRNs website.

## Overview of which codegroups that are present in code-strings

Codegroup	Description	Code-string	Comment
in	Induction of labour	INTERVENSJON	For kilde 1
ig	Intervention	INTERVENSJON	For kilde 1, 2 and 3
id	Induction of labour	INTERVENSJON	For kilde 2 and 3
ii	Indication for intervention	INTERVENSJON	For kilde 3
kp	Complications (during delivery)	KOMPLIKASJONER	For kilde 1, 2 and 3
fl	Fetal presentation	KOMPLIKASJONER	For kilde 1
fv	Amniotic fluid	KOMPLIKASJONER	For kilde 1
ns	Umbilical cord	KOMPLIKASJONER	For kilde 1
pl	Placenta	KOMPLIKASJONER	For kilde 1
lu	Medication during pregnancy	LEGEMIDLER_UNDER	For kilde 2 and 3
mf	Mother's health before pregnancy	MORS_HELSE_FOER	For kilde 1, 2 and 3
mu	Mother's health during pregnancy	MORS_HELSE_UNDER	For kilde 1, 2 and 3
pf	Pathological findings prenatally	PRENAT_PAT_KODER	For kilde 2 and 3
ke	Maternal complications after delivery	KOMPLIKASJONER_ETTER	For kilde 2 og 3
as	Asphyxia	BARNETS_HELSE	For kilde 1
nd	Neonatal diagnoses	BARNETS_HELSE	For kilde 1, 2 og 3
mm	Congenital anomalies	BARNETS_HELSE	For kilde 2, 3 og 4
dd	Cause of death for stillbirths	BARNETS_HELSE	For kilde 3
io	Indication for transfer to NICU	BARNETS_HELSE	For kilde 2

## Code classification systems

The codes that are reported on birth notification forms are classified by different types of code classification systems. The table below describes the relationship between the classification numbers in the code-strings and the code classification systems.

Classification number	Short name	Code classification system
3	ICD-8	International statistical classification of diseases and related health problems. 8th revision (ICD-8)
5	ICD-10	International statistical classification of diseases and related health problems. 10th revision (ICD-10)
8	ICD-10-BPA	British Paediatric Classification of Diseases and other Problems & Paediatric Adaption of ICD-10
10	ATC	Anatomical Therapeutic Chemical classification system
12	NCSP-N	Norwegian version of The NOMESCO Classification of Surgical Procedures
15	ICD-8-MFR	MBRN's modifications of and supplements to ICD-8
21	Asphyxia 1967-1968	Asphyxia 1967-1968
22	Asphyxia 1969-1998	Asphyxia 1969-1998
23	Fetal presentation 1967-1998	Fetal presentation at delivery 1967-1998
24	Induction of labour 1967-1998	Induction of labour: method 1967-1998
25	Anaesthesia 1967-1998	Anaesthesia and analgesics during delivery 1967-1998
26	Interventions 1967-1998	Intervention during delivery 1967-1998
27	Complications 1967-1998	Complications during delivery 1967-1998

Classification number	Short name	Code classification system
3	ICD-8	International statistical classification of diseases and related health problems. 8th revision (ICD-8)
28	Placenta 1967-1968	Placental factors 1967-1968
29	Placenta 1969-1998	Placental factors 1969-1998
30	Amniotic fluid 1967-1968	Factors related to the amniotic fluid 1967-1968
31	Amniotic fluid 1969-1998	Factors related to the amniotic fluid 1969-1998
32	Umbilical cord 1967-1968	Factors related to the umbilical cord 1967-1968
33	Umbilical cord 1969-1998	Factors related to the umbilical cord 1969-1998
34	X-codes 1998-	X-codes 1998- (Refers to check-boxes on the notification form)
38	Other MFR-codes 1998-	Other MFR-codes 1998-

## Robson 10

Birth classification according to Robson	Datatype - description
1	Number of previous deliveries = 0, singleton, normal cephalic, length of gestation $\geq$ 37 weeks, spontaneous initiation of delivery
2	Number of previous deliveries = 0, singleton, normal cephalic, length of gestation $\geq$ 37 weeks, induction or sectio
3	Number of previous deliveries $\geq$ 1, no previous sectio, singleton, normal cephalic, length of gestation $\geq$ 37 weeks, spontaneous initiation of delivery
4	Number of previous deliveries $\geq$ 1, no previous sectio, singleton, normal cephalic, length of gestation $\geq$ 37 weeks, induction or sectio
5	Number of previous deliveries $\geq$ 1, previous sectio, singleton, normal cephalic, length of gestation $\geq$ 37 weeks
6	Number of previous deliveries = 0, singleton, breech
7	Number of previous deliveries $\geq$ 1, singleton, breech
8	Plurality: Number of children born $\geq$ 2
9	Singleton, transverse
10	Singleton, normal cephalic, length of gestation $\leq$ 36 weeks

## Abbreviations and definitions

### FIGO

See Perinatal mortality: FIGO

### ICSI

Intracytoplasmic sperm injection. Also referred to as microinjection. One (single) sperm cell is injected directly into an oocyte

### IVF

In vitro fertilization/ artificial fertilization (IVF treatment). This is a form of assisted conception where the oocyte is fertilized in-vitro, outside of the woman's body.

### KILDE

Kilde states the primary source of data.

1 = MBRN birth notification form 1967 – 1998

2 = MBRN birth notification form 1999 – present. Paper forms

3 = MBRN birth notification form 2005 – present, electronic forms

4 = Notification form for abortions requiring approval (§2,3c)

### PARITET

MBRN's definition is based on number of prior births as reported by the mother (PARITET\_MOR) and on number of prior births as registered by MBRN (PARITET\_MFR). A prior twin birth will increase mother's parity by 2. PARITET\_MOR for kilde = 1 is the sum of prior live borns and stillborns as reported by the mother (without specification of gestational age for stillborns). For kilde = 2 and 3 PARITET\_MOR is based upon the number of prior live- and stillborns after 12 weeks of gestation. PARITET\_MFR is based upon the sum of prior births for this mother, from 16 weeks of gestation in kilde = 1, and from 12 weeks of gestation for kilde = 2 and 3.

## PERINATAL PERIOD

The period immediately before partus, including the end of the 7 day after partus. See: Perinatal mortality.

## EARLY PERINATAL PERIOD

The period immediately before partus including the end of the first day after partus. See: Perinatal mortality.

## PERINATAL MORTALITY

Traditional definition:

The total number of stillborn where length of pregnancy  $\geq 28$  weeks, and time of death occurs before 7 days after partus divided by the number of still borns where the length of pregnancy  $\geq 28$  weeks and all live borns (at any length of pregnancy). If the length of pregnancy for still borns is unknown, birth weight  $\geq 1000$  grams and length  $\geq 35$  cm is equivalent to  $\geq 28$  weeks. (See FIGO)

Latest definition:

In according to the general development within neonatal medicine it is appropriate to lower the lower limit for length of pregnancy. MBRN is therefore using an alternative definition of perinatal mortality which includes all infants born after gestation  $\geq 22$  weeks, or equivalent weight  $\geq 425$  grams or length  $\geq 25$  cm.

## PERINATAL MORTALITY: FIGO

The definition of perinatal mortality is given by the Federation International de Gynecologie et Obstetrique. FIGO recommends that all live born and stillborns who fit the following criteria are included in the mortality statistics. Birth weight  $\geq 1000$  grams. If birth weight is unknown the length of pregnancy  $\geq 28$  weeks is equivalent to 1000 grams. If both birth weight and length of pregnancy are unknown the child's length  $\geq 35$  cm is to be considered as equivalent to birth weight of  $\geq 1000$  grams. (Litterature: Acta Obstet Gynecol Scand 56 247-253, 1977)

In connection with introduction of new limits for perinatal mortality, MBRN has introduced a few variables to be used according to the FIGO-convention where limits are set to be  $\geq 425$  grams,  $\geq 22$  weeks and  $\geq 25$  cm respectively.

## DATA TYPES

MBRNs data are stored in an ORACLE database 10g, and therefore MBRN uses data types from ORACLE 10g.

Different programs use different data types with similar, but not necessarily identical quality. When data are read from MBRNs data base into another program i.e. SAS, SPSS, Microsoft Access or Microsoft Excel the fields are converted to data types in the chosen program. For details see documentation for the chosen program.

Oracle 10g datatype	Datatype	Description
date	Date and time	MBRN uses MM.DD.YYYY
number (precision)	Number	Number(precision)
varchar(2)	String	Text-string with variable length(defines max length)
char	String	Text-string with permanent length