MBRN record: Complete record description

Complete database version	2014Q1
Record version	4.1.0
Number of records	2 766 495
Content	• All reported births including stillbirths
	• Miscarriages after 12 completed weeks of gestation
	• Terminations of pregnancy registered according to MFR-forskriften § 1-2 pkt.3
Finalized data	1967 – 2012
Preliminary data	2013 (see comments on page 9)
Date	2014-02-20
Last change	2014-04-10

Variable name	Format	Description	Values
Administrative data			
VERSJON_ DATABASE	CHAR(6)	Complete database, version no.	2014Q1
VERSJON_RECORD	CHAR(7)	MBRN record, version no.	4.10full
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
Unique project identification number			
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
A – Demographic data			
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
FODESTED_KAT_5	Number (2)	Place of delivery: Size of maternity clinic (deliveries per year) Home delivery / Delivery during transport / Other	1 = 499 2 = 500-1499 3 = 1500-2999 4 = 3000+ 5 = Outside of institution, unspecified 10 = Unknown place of delivery
HOVEDINSTNR	Varchar2(5)	Main institution no.- sykehus nr	Number created by MBRN
INSTNR	Varchar2(5)	Department no	Number created by MBRN
HELSEFORETAK	Varchar2(3)	Administrative health region	Number
HELSEREGION	Number (1)	Health region related to the institution's location	1 = South / East 2 = West 3 = Middle 4 = North
BOHELSEREGION_DAGENS	Number(1)	Health region related to mothers place of residence	1 = South / East 2 = West 3 = Middle 4 = North
Mother			
MFDATO	Date	Mother`s date of birth	Date
MOR_FAAR	Number(4)	Mother's year of birth	Year
MFMND	Varchar2(2)	Mother's month of birth	01-12
GEN_MFNR	Number(1)	Mother's national ID number is registered identically in the population register.	1=Yes 0 = No
MORS_ALDER	Number (3)	Mother`s age	In years at the time of birth
MORS_ALDER_DESIMALT	Number(38,35)	Mother's age, with decimals	In years at the time of birth, with decimals
MORS_ALDER_K6	Number(1)	Mother's age, categorized	1 = <= 19 2 = 20 -24 years

Variable name	Format	Description	Values
			3 = 25 - 29 years 4 = 30 - 34 years 5 = 35 - 39 years 6 = 40 years +
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
FODELAND_KODE	Varchar2 (3)	Mother's country of birth, number	Country number
FODELAND_NAVN	Varchar2 (40)	Name of mother's country of birth	Name of country
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
SIVST_2	Number(1)	Mother`s marital status	1 = Married / Co-habitant 2 = Other
SLEKTF	Number(1)	Familial relations between parents	1 = Not related 2 = Closer than first cousins 3 = First cousins 4 = Second cousins 5 = Other 6 = Unknown

Father

Variable name	Format	Description	Values
FFDATO	Date	Father`s date of birth	Date
FAR_FAAR	Number(4)	Father's year of birth	Year
FFMND	Varchar2(2)	Father's month of birth	Month
GEN_FFNR	Number(1)	Father's national ID number is registered identically in the population register.	1 = Yes
FARS_ALDER	Number (3)	Father`s age	Integer
FARS_ALDER_K8	Number(1)	Father's age, categorized	1 = <= 19 2 = 20 -24 years 3 = 25 - 29 years 4 = 30 - 34 years 5 = 35 - 39 years 6 = 40 – 44 years 7 = 45 – 49 years 8 = 50 years +

B – Pregnancy and maternal health

Variable name	Format	Description	Values
PARITET	Number(2)	Number of previous deliveries: Highest value of variables 'PARITET_MOR' and 'PARITET_MFR'	Number
PARITET_5	Number(1)	Number of previous deliveries, categorized, the largest numbers in the columns "paritet_mor" and "paritet_mfr"	0 = 0 (primipara) 1 = 1 2 = 2 3 = 3 4 = 4 +
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
DODFODTE_5	Number(2)	Previous stillbirths (from 24 weeks and above)	0 = 0 1 = 1 2 = 2 3 = 3 4 = 4 +
LEVENDEFODTE	Number(2)	Previous live births	Number
LEVENDEFODTE_5	Number(2)	Previous live births	0 = 0 1 = 1 2 = 2 3 = 3 4 = 4+

Variable name	Format	Description	Values
SPABORT_12	Number(2)	Previous miscarriages before 12 weeks of gestation	Number
SPABORT_12_5	Number(2)	Previous miscarriages before 12 weeks of gestation	0 = 0 1 = 1 2 = 2 3 = 3 4 = 4+
SPABORT_23	Number(2)	Previous miscarriages/stillbirths 12-23 weeks of gestation	Number
SPABORT_23_5	Number(2)	Previous miscarriages/stillbirths 12-23 weeks of gestation	0 = 0 1 = 1 2 = 2 3 = 3 4 = 4+
KNITT_TIDLIGERE	Number(1)	Has delivered by cesarean section in a previous pregnancy	1 = Yes
SMENSD	Number	Date for last menstrual period	Date
SMENS_MND	Number(2)	Month for last menstrual period (part of date)	Number
SMENSD_KODE	Number(1)	1st day of last menstrual period. Code for reported date	1 = certain 2 = uncertain 3 = irregular 4 = unknown
UL_TERMIN	Date	Ultrasound predicted date	Date
UL_TERMIN_AAR	Numbe (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	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.	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	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

Mother's health prior to pregnancy

Variable name	Format	Description	Values
DIAG_FOER_SVGSK_INGEN	Number (1)	No diagnosis prior to pregnancy	1 = Yes
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
HYPERTENSJON_KRONISK	Number(1)	Chronic hypertension prior to pregnancy	1 = Yes
NYRESYKDOM_KRONISK	Number(1)	Chronic renal disease	1 = Yes
URINVEIS_RES	Number(1)	Recurring urinary tract infection	1 = Yes
REUM_ARTRITT	Number(1)	Rheumatoid arthritis	1 = Yes
HJERTE_MOR	Number(1)	Heart disease	1 = Yes
EPILEPSI	Number(1)	Epilepsy	1 = Yes
DIABETES_MELLITUS	Number(1)	Diabetes	1 = Pregestational diabetes – Type 1 2 = Pregestational diabetes – Type 2 3 = Pregestational diabetes – Unspecified / other 4 = Gestational diabetes 5 = Antidiabetic medication during pregnancy registered without further information
THYREOIDEA	Number(1)	Thyreoidea	1 = Yes
SYKDOM_MOR	Number(1)	asthma, urinary tract infection, Chronic renal disease, hypertension, rheumatoid arthritis, heart disease, epilepsy, thyreoidea, diabetes	1 = Yes The variable is 1 if one of the conditions to the left is present

Variable name	Format	Description	Values
KOSTNEI	Number(1)	No regular supplements	1 = Checkbox B70 is checked and no other information about supplements 2 = Checkbox B70 is checked, but information about supplements is also given
FOLATF	Number(1)	Folic supplements prior to pregnancy	1 = Yes
MULTIVITF	Number(1)	Multivitamin supplements prior to pregnancy	1 = Yes

Mother's health during pregnancy

Variable name	Format	Description	Values
DIAG_UNDER_SVGSK_INGEN	Number (1)	No diagnosis during pregnancy	1 = Yes
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
BLODN_F13	Number(1)	Vaginal bleeding: Before week 13	1 = Yes
BLODN_13_28	Number(1)	Vaginal bleeding: Week 13-28.	1 = Yes
BLODN_E28	Number(1)	Vaginal bleeding: After week 28	1 = Yes
HYPERTENSIV_TILSTAND	Number(1)	Hypertensive condition during pregnancy	1 = Yes
HYPERTENSJON_ALENE	Number(1)	Hypertension only- during pregnancy	1 = Yes
EKLAMPSI	Number(1)	Eclampsia, total. During pregnancy, during birth and/or post partum and unspecified eclampsia	1 = Yes
PREEKL	Number(1)	Preeclampsia	1 = Light 2 = Serious 3 = Unspecified
PREEKLTIDL	Number(1)	Early preeclampsia	1 = Yes
PREEKL_EKLAMPSI	Number(1)	Preeclampsia and/or eclampsia	1 = Yes
HELLP	Number(1)	HELLP	1 = Yes
HB_U9	Number(1)	Hb < 9.0 g/dl	1 = Yes
RUBELLA	Number(1)	Rubella	1 = Yes
VENERISK	Number(1)	Sexually transmitted disease	1 = Yes
MULTIVITU	Number(1)	Multivitamin supplements, during pregnancy	1 = Yes
FOLATU	Number(1)	Folate supplements, , during pregnancy	1 = Yes
LEGEMIDLER_UNDER	Varchar2(500)	Medication during pregnancy	Code-string variable, codes separated by semicolon, with prefix for main source of data: See code-strings
LEGEMIDLER_FODSEL	Varchar2(500)	Medication during delivery	Code-string variable, codes separated by semicolon, with prefix for main source of data: See code-strings

Mother's smoking habits during pregnancy

Variable name	Format	Description	Values
ROYK_SAMTYKKE	Number(1)	Does not consent to provide information on smoking	1 = Not consenting
ROYK_OPPL	Number(1)	Smoking information available	1 = Yes
ROYK_FOER	Number(1)	Smoking before pregnancy	1 = No 2 = Sometimes 3 = Daily 9 = Does not consent to giving information about smoking
ROYK_FOER_ANT	Number(1)	Number of cigarettes per day before pregnancy	0-99
ROYK_BEG	Number(1)	Smoking at start of pregnancy	1 = No 2 = Sometimes 3 = Daily 9 = Does not consent to giving information about smoking
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 9 = Does not consent to giving information about smoking
ROYK_AVSL_ANT	Number(2)	Number of cigarettes per day at end of pregnancy	0 – 99
MORS_HOYDE	Number(3)	Mother's height	centimeter
MORS_VEKT_FOER	Number(4)	Mother's weight at the start of the pregnancy	Kg
MORS_VEKT_SLUTT	Number(4)	Mother's weight at delivery	Kg
KMI_FOER	Number(38,4)	Mother's body mass index at the start of the pregnancy	Decimal number
KMI_SLUTT	Number(38,4)	Mother's body mass index at delivery	Decimal number

C – Delivery

Variable name	Format	Description	Values
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

Position, induct., intervention

Variable name	Format	Description	Values
INNGREP_TILTAK_INGEN	Number(1)	No intervention	1 = Yes
LEIE	Number(1)	Position	1 = Normal cephalic 2 = Breech 3 = Transverse 4 = Cephalic, abnormal 5 = Other
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
INDUKSJON_OXYTOCIN	Number(1)	Induction of labor: Oxytocin	1 = Yes
INDUKSJON_AMNIOTOMI	Number(1)	Induction of labor: Amniotomy, membrane stripping	1 = Yes
INDUKSJON_ANNET	Number(1)	Induction of labor: Other methods	1 = Yes
INNGREP	Number(1)	Forceps, vacuum, c-section, manuell_placenta, placental curettage or episiotomy	1 = Yes
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
EPISIOTOMI	Number(1)	Episiotomy	1 = Yes
FRAMHJELP	Number(1)	Assisted delivery of breech / partial extraction	1 = Yes
UTTREKKING	Number(1)	Total breech extraction	1 = Yes
KSNITT	Number(1)	Cesarean section	1 = Planned C-section 2 = Emergency C-section 9 = Unspecified C-section
KSNITT_PLANLAGT	Number(1)	Cesarean section was planned	1 = No 2 = Yes

Complications during delivery

Variable name	Format	Description	Values
KOMPL_INGEN	Number(1)	No complications	1 = Yes
KOMPLIKASJONER	Varchar2(500)	Complications	Code-string variable, codes separated by semicolon, with prefix for main source of data: See code-string
VANNAVGANG	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
PLACENTA _PREVIA	Number(1)	Placenta previa	1 = Yes
RUPTUR34	Number(1)	Perineal rupture, grade 3-4	1 = Yes
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

Anaesthesia/analgesics

Variable name	Format	Description	Values
ANESTESI_INGEN	Number(1)	No anaesthesia/analgesics	1 = Yes
LYSTGASS	Number(1)	Nitrous oxide	1 = Yes
OPIAT	Number(1)	Opiates (including Petidine)	1 = Yes
EPIDURAL	Number(1)	Epidural analgesics	1 = Yes
SPINAL	Number(1)	Spinal anaesthesia	1 = Yes
PUDENDAL	Number(1)	Pudendal anaesthesia	1 = Yes
INFILTRASJON	Number(1)	Local anaesthesia (infiltration)	1 = Yes
PARACERV	Number(1)	Paracervical block (PCB)	1 = Yes
NARKOSE	Number(1)	General anaesthetics	1 = Yes
ANESTESI_ANNET	Number(1)	Other anaesthesia /analgesics	1 = Yes

Placenta, umbilical cord, amniotic fluid

Variable name	Format	Description	Values
UTSKRAPING	Number(1)	Placenta: Curettage	1 = Yes
PLACENTAVEKT	Number(5)	Weight of placenta	Grams
MANUELL_PLACENTA	Number(1)	Placenta: Manual extraction	1 = Yes
NAVLESNORLENGDE	Number(3)	Length of the umbilical chord	Centimeters

Variable name	Format	Description	Values
NORMAL_FOSTERV	Number(1)	Amniotic fluid:Normal	1 = Yes
FOSTERV_POLYHYDRAMNION	Number(1)	Amniotic fluid: Polyhydramnion	1 = Yes
FOSTERV_OLIGOHYDRAMNION	Number(1)	Amniotic fluid: Oligohydramnion	1 = Yes
FOSTERV_MISF_STINK_INFI	Number(1)	Amniotic fluid: Discoloured,malodorous,infected	1 = Yes
NORMAL_NAVLESNOR	Number(1)	Umbilical cord: Normal	1 = Yes
NAVLESNOR_KOMPL	Number(1)	Umbilical cord: Complications	1 = Yes
NAVLESNR_OMSL	Number(1)	Umbilical cord: Loops/coiling around fetal parts	1 = Yes
NAVLESNOR_KNUTE	Number(1)	Umbilical cord: Genuine knot	1 = Yes

Complications in the mother after delivery

Variable name	Format	Description	Values
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

D – The child

Variable name	Format	Description	Values
FDATO	Varchar2 (2)	Day of delivery	01 – 31
FMND	Varchar2 (2)	Month of delivery	01 – 12
FAAR	Number (4)	Year of delivery	1967->
FTID	Date	Time of birth	Time
FLERFODSEL	Number(1)	State the birth as single or part of plural birth (twins, triplet etc.)	0 = Single birth 1 = Plural birth
PLURAL	Number(1)	Plurality: Number of children born	Number
PLUREK	Number(1)	Child's order	Number
PLUREK_1	Number(1)	States the child as single or first born in a plural birth (Plurek = 1)	1 = Yes
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
OVERFL_DATO	Date	Date of transfer to neonatal ward	Date
OVERFLYTTET	Number (1)	Transfer to neonatal ward	1 = No 2 = Yes
UTVANDRET_DATO	Date	Date of emigration from Norway	Date

FODT_MFR	Number(1)	Born according to MRBNs definitions	1 = VEKT >=500g
			   or
			   SVLEN >= 22
			2 = present in the National residents directory and not in category 1

Mortality

Variable name	Format	Description	Values
TILSTAND	Number(1)	The child's condition at delivery	1 = Live born, still alive 2 = Live born, died later 3 = Stillborn 4 = Termination of pregnancy (TOPFA) 5 = Live born, unknown follow-up status 6 = Live born, emigrated 7 = Spontaneous abortion
DDATO	Date	Date of death	Date
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 2+ years of age 7 = Stillborn: Died before delivery 8 = Stillborn: Died during delivery 9 = Stillborn: Unknown time of death 10 = Abortion requiring approval (§2c) 11 = Live born, unknown follow-up status 12 = Live born, emigrated 13 = Live born, birth certified

Variable name	Format	Description	Values
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 ≥ 28 completed weeks. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes
PERINAT_DOD_28	Number(1)	Death during the perinatal period or stillborn with gestational age ≥ 28 completed weeks. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes
PERINAT_DOD_TID_28	Number(1)	Death during the early perinatal period or stillborn with gestational age ≥ 28 completed weeks. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes
PERINAT_DODFODT_28	Number(1)	"Perinatal stillborn", i.e. stillborn with gestational age ≥ 28 completed weeks. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes
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 ≥ 1000 grams. If missing weight: gestational age ≥ 28 completed weeks. See also: Abbreviations and definitions: FIGO and perinatal mortality	1 = Yes
PERINAT_DOD_28_FIGO	Number(1)	Death during the perinatal period or stillborn according to FIGOs criteria: birth weight ≥ 1000 grams, or gest.age ≥ 28 weeks. See also: Abbreviations and definitions: FIGO and perinatal mortality	1 = Yes
PERINAT_DOD_TID_28_FIGO	Number(1)	Death during the early perinatal period or stillborn according to FIGOs criteria: birth weight ≥ 1000 grams, or gest.age ≥ 28 weeks. See also: Abbreviations and definitions: FIGO and perinatal mortality	1 = Yes
PERINAT_DODFODT_28_FIGO	Number(1)	"Perinatal stillborn", i.e. stillborn according to FIGOs criteria: birth weight ≥ 1000 grams, or gest.age ≥ 28 weeks. See also: Abbreviations and definitions: FIGO and perinatal mortality	1 = Yes
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 ≥ 22 completed weeks. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes
PERINAT_DOD_22	Number(1)	Death during the perinatal period or stillborn with gestational age ≥ 22 completed weeks. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes
PERINAT_DOD_TID_22	Number(1)	Death during the early perinatal period or stillborn with gestational age ≥ 22 completed weeks. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes
PERINAT_DODFODT_22	Number(1)	"Perinatal stillborn", i.e. stillborn with gestational age ≥ 22 completed weeks. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes
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 ≥ 425 grams. If missing weight: gestational age ≥ 22 completed weeks. See also: Abbreviations and definitions: FIGO and perinatal mortality	1 = Yes
PERINAT_DOD_22_FIGO	Number(1)	Death during the perinatal period or stillborn according to FIGOs criteria: birth weight ≥ 425 grams, or gest.age ≥ 22 weeks. See also: Abbreviations and definitions: FIGO and perinatal mortality	1 = Yes
PERINAT_DOD_TID_22_FIGO	Number(1)	Death during the early perinatal period or	1 = Yes

Variable name	Format	Description	Values
		stillborn according to FIGOs criteria: birth weight ≥ 425 grams, or gest.age ≥ 22 weeks. See also: Abbreviations and definitions: FIGO and perinatal mortality	
PERINAT_DODFODT_22_FIGO	Number(1)	"Perinatal stillborn", i.e. stillborn according to FIGOs criteria: birth weight ≥ 425 grams, or gest.age ≥ 22 weeks. See also: Abbreviations and definitions: FIGO and perinatal mortality	1 = Yes

Child health and neonatal diagnoses

Variable name	Format	Description	Values
NEO_DIAG_INGEN	Number(1)	No neonatal diagnoses	1 = Yes
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
ABSTINENS	Number(1)	Withdrawal symptoms in the child	1 = Yes
RESPIRATORISK_DISTR	Number(1)	Respiratory distress syndrome	1 = Yes
INTRAKRANIELL_BLODN	Number(1)	Intracranial hemorrhage	1 = Yes
KONJUNKTIVITT	Number(1)	Conjunctivitis treated	1 = Yes
PLEXUSSKADE	Number(1)	Plexus injury	1 = Yes
RH_ANTISTOFF	Number(1)	Rhesus antibodies	1 = Yes
SYSTEMISKANTIBIOTIKA	Number(1)	Treated with systemic antibiotics	1 = Yes
RESPIRATOR	Number(1)	Respiratory treatment	1 = Yes
FRACT_CLAVICULAE	Number(1)	Fractura claviculae – fracture of clavicle	1 = Yes
CPAP	Number(1)	CPAP-treatment	1 = Yes
HOFTELEDDYSPL_PUTE	Number(1)	Hip joint dysplsia, treated with pillow	1 = Yes
ANNEN_FRACTUR	Number(1)	Other fracture	1 = Yes
ICTERUS	Number(1)	Icterus, treated	1 = Yes
FACIALISPARESE	Number(1)	Facial paresis	1 = Yes

Congenital malformations - see also: Neonatal diagnoses (above)

Variable name	Format	Description	Values
C00_MALF_ALL	Number (1)	Birth defect	1 = Yes
C01_ANENCEPH	Number (1)	Anencephalus	1 = Yes
C02_SPINAB	Number (1)	Spina bifida	1 = Yes
C03_ENCEPH	Number (1)	Encephalocele	1 = Yes
C06_HYDROCEPH	Number (1)	Hydrocephalus	1 = Yes
C11_MICROTIA	Number (1)	Microtia	1 = Yes
C13_TRANSPOS_GREAT_VESSELS	Number (1)	Transposition of great vessels	1 = Yes
C15_HYPOPLASTIC_LEFT_HEART	Number (1)	Hypoplastic left heart	1 = Yes
C18_CLEFT_PALATE_WITHOUT_CL	Number (1)	Cleft palate without cleft lip	1 = Yes
C19_CLEFT_LIP_PLUS_MINUS_CP	Number (1)	Cleft lip with or without cleft palate	1 = Yes
C20_OESOPHAGEAL_ATRES_STENOS	Number (1)	Oesophageal atresia	1 = Yes
C22_ANORECTAL_ATRES_STENOS	Number (1)	Anorectal atresia	1 = Yes
C24_HYPOSPADIA	Number (1)	Hypospadia	1 = Yes
C27_RENAL_AGENESIS	Number (1)	Renal agenesis	1 = Yes
C31_LIMB_REDUCTION_DEFECTS_ALL	Number (1)	Limb reduction defects, all	1 = Yes
C38_DIAFRAGMATIC_HERNIA	Number (1)	Diaphragmatic hernia	1 = Yes
C39_OMPHALOCELE	Number (1)	Omfalocele	1 = Yes
C40_GASTROSCHISIS	Number (1)	Gastroschisis	1 = Yes
C45_DOWN	Number (1)	Downs syndrome	1 = Yes
NEVRALRORSDEFEKTER	Number (1)	Anencephalus, Encephalocele or Spina bifida	1 = Yes

IVF

Variable name	Format	Description	Values
IVF	Number (1)	Artificial fertilization (IVF treatment)	1 = Reported on IVF notification form 2 = Reported on birth notification form 9 = Reported in other ways
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 2013. **The data for 2013 is not complete**. The data for 1967 – 2012 is considered complete. Variables that require encoding or coding definitions have been filtered for 2013 (except checkboxes on the birth notification forms). Variables are filtered regardless the amount of code contribution to each variable. Please contact MBRN for further information if needed.

Terminations of 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.

Code strings
Also includes information from tick off areas on the birth notification form that is coded within the context of the string's code group. Please note that from database version 2013Q2 the amount of data elements in the code strings is increased. This is due to the inclusion of tick-boxes from the notification form stating "nothing unusual" or similar.

Single variables

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

Abstinens
Abstinens is a new variable in database version 2011Q1 that indicates whether the child exhibits withdrawal symptoms due to the mother's use of drugs.

C00_malf_serious_mbrn_def
This variable has been removed from 2013Q1, due to inconsistencies found in the definition of the variable.

Diabetes_mellitus
Diabetes_mellitus is since database version 2009Q2 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.

Dodkat
Code 11 is a new code in database version 2010Q1. The code is used for liveborns where MBRN is unable to track whether they are still alive or not. Code 12, 13 and 14 are new codes in database version 2013Q3. Code 12 is used for liveborns, who have emigrated and MBRN is wherefore unable to track whether they are still alive or not. Code 13 is used for liveborns, born in Norway by foreign parents which do not live in Norway. The definition of dodkat is built from scratch in database version 2013Q3. This is done to correct misclassifications, primarily stillborns. The misclassifications were present from database version 2008Q4 to 2013Q3. In these versions, the number of neonatal deaths are too high and the number of stillborns too low. Please contact MBRN if you have any further questions about this matter.

Fars_alder_kat_k8
This variable was introduced in database version 2010Q2. It is a categorized variable of father's age.

Flerfodsel
Flerfodsel is a new code in database version 2010Q2 that indicates single, or part of a plural birth.

Fodested_kat
Within kilde 1 (MBRN birth notification form 1967-1998) the value 7 means all home births, both planned and unplanned.

Fodt_forskrift
Fodt_forskrift has been replaced by the variable Fodt_mfr in 2012Q4.

Fodt_mfr
Fodt_forskrift is a new variable in database version 2012Q4 that indicates viable and registered births. The value of this variable is 1 when SVLEN >= 22 weeks or VEKT >= 500g. The variable has value 2 if the above is not available but the child appears in the National resident register. All other cases are NULL.

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 and 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).

Helseforetak
This variable is new in database version 2011Q1, and identifies the administrative area the health region belongs to.

Helseregion
New variable in database version 2011Q1 that identifies the Health region.

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

IVF
From database version 2012Q4 this variable also includes a kategori 9 (Reported in other ways). These are IVF treatments from Rikshospitalet, due to lack of reporting. The amount is 1043 extra children born after IVF treatments. All of these cases will lack information about the IVF method (IVFMETODE).

IVF_innsett_dato
This variable has been removed from database version 2012Q1 due to uncertainties in the data.

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

Kostnei
Kostnei has been removed from 2012Q2 because of inconsistencies. The revised variable was re-introduced in 2013Q2 and now handles self-contradictory information from the notification form.

Ksnitt
The definition of the categories (planned, emergency and unspecified) have been changed since database version (2008Q4). The changes have no effect on the total number of caesarean section. In database version 2013Q1 there have been minor changes in the definition which reduces the amount of unspecified c-sections from Ullevål hospital.

Ksnitt_tidligere
Previous c-section. The definition of this variable was changed in 2012Q4. The change consists of also including the mother's self-reported previous c-sections, even if these births have not been reported to MBRN. The change increases the level of ksnitt_tidligere by approx. 100-200 per year.

Ksnitt_planlagt
Ksnitt_planlagt is new in database version 2012q4. The variable indicates whether the c-section was planned or not. The variable is based on check-boxes on the notification form or free text that has been coded manually. Note that this variable does not have information for the period 1967-1998 (kilde 1). This is now fixed in database version 2013Q2.

KMI_foer og KMI_slutt (BMI)
These variables are new in database version 2012Q1. The variables are based on mother's height and weight. The information is only available from 2007 and only for approximately 40% of the institutions.

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

Mors_alder_kat_k6
Mors_alder_kat_k6 is a new code in database version 2010Q2. It is a categorized variable of mothers age.

Navlesnorlengde
Navlesnorlengde is the length of the umbilical chord and is a new variable in database version 2012Q1.

Overflyttet
In database version 2011Q1 this variable has been redefined to include data from source 1 (1967-1998). Definitions for source 2 and 3 (1999->) have not been changed.

Paritet_5

This variable was introduced in database version 2010Q2. It is a grouped variable of parity. Paritet (parity) indicates numbers of previous deliveries. It is the highest value of the fields "paritet_mor" and "paritet_mfr".

Preekl

The definition of the categories has been changed since database version (2008Q4). The changes do not affect the total number of cases with preeclampsia. The definition has been changed from database version 2011Q1. The change in definition has led to a minimal decrease in incidents.

Royk-foer

This variable is new in database version 2013Q2. Please note that all the variables about smoking have been revised in 2013Q2 to improve the handling of "missing" values.

Slektf

This variable has been completely redefined in version 2011Q1. The variable indicates the familial relationship between the parents which has been grouped in a more condensed form.

Sivst

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

Smensd_kode

Smensd_kode is a new code in database version 2010Q2, and indicates 1st day of last menstrual period.

Svlen_ivf

This variable has been removed from database version 2012Q1 due to uncertainties in the data.

Svlen_ivf_dg

This variable has been removed from database version 2012Q1 due to uncertainties in the data.

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

Code 5 is a new code in database version 2010Q1. The code is used for liveborns where MBRN is unable to track whether they are still alive or not. Code 6 and 7 are new codes in database version 2013Q3.
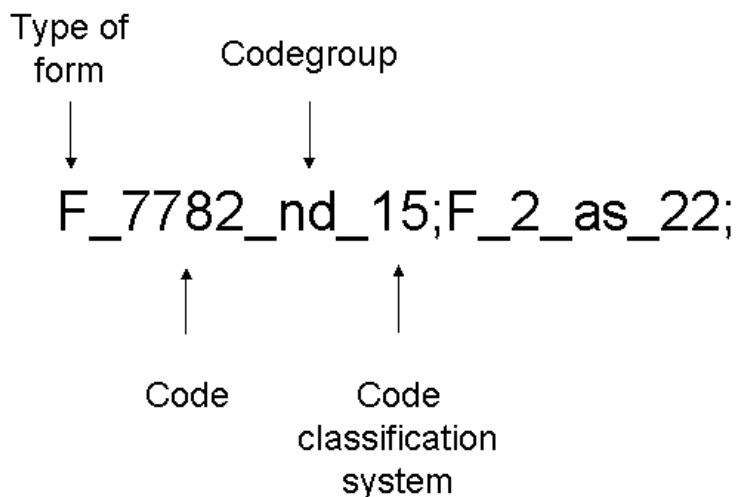
Utvandret_dato

This new variable in database version 2011Q1 gives the date of emigration from Norway.

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 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
lp	Medication during delivery	LEGEMIDLER_FODSEL	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
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-

Abbreviations and definitions

Robson 10

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

FIGO
See Perinatal mortality: FIGO

ICSI
Intracytoplasmic sperm injection. Also refered 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 stillborns where the length of pregnancy $\geq$ 28 weeks and all liveborns (at any length of pregnancy). If the length of pregnancy for stillborns 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 $\geq$ 500 grams or length >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 ≥ 1000 grams. If birth weight is unknown the length of pregnancy ≥ 28 weeks is equivalent to 1000 grams. If both birth weight and length of pregnancy are unknown the child's length > 35 cm is to be considered as equivalent to birth weight of ≥ 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 ≥ 425 grams, ≥ 22 weeks and ≥ 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