

MBRN record: Record description

MBRN database version	2018Q1
Record version	5.3.1
Number of records	3 007 515
Content	<ul style="list-style-type: none"> • 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 – 2016
Preliminary data	2017 (see comments on page 9)
Date	2018-06-21
Last change	2018-06-21

Variable name	Format	Description	Values
Administrative data			
VERSJON_DATABASE	Char (6)	Complete database, version no.	2018Q1
VERSJON_RECORD	Char (7)	MBRN record, version no.	5.31
MELDINGSTYPEID	Number (2)	Primary data source	1 = Digital birth notification form v. 1.0 2 = Digital birth notification form v. 1.1 5 = Digital birth notification form v. 0.51 8 = Birth notification form 1998-present, green paper 10 = Birth notification form 1967-1998, white paper 199 = Termination of pregnancy registered according to §2.3c, unknown notification form
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 categorized by: - Size of maternity clinic (deliveries per year) - Deliveries outside of institution	1 = 1-49 2 = 50-499 3 = 500-1499 4 = 1500-2999 5 = 3000+ 6 = At home, planned 7 = At home, unplanned 8 = During transport 9 = Other place of delivery outside

Variable name	Format	Description	Values
			institution/unkown
FODESTED_KAT_5	Number (2)	Place of delivery categorized by: - Size of maternity clinic (deliveries per year) - Deliveries outside of institution	1 = 1-499 2 = 500-1499 3 = 1500-2999 4 = 3000+ 5 = Outside of institution /Other
HOVEDINSTNR	Varchar2 (5)	Main institution no. (hospital)	Internal MBRN number
INSTNR	Varchar2 (5)	Department no.	Internal MBRN number
HELSEFORETAK	Varchar2 (3)	Administrative health region	Internal MBRN number
HELSEREGION	Number (1)	Health region	1 = South-East 2 = West 3 = Middle 4 = North 9 = Unknown/Other
BOHELSEREGION_DAGENS	Number (1)	Health region of mother's place of residence, adjusted to fit today's region divisions	1 = South-East 2 = West 3 = Middle 4 = North 9 = Unknown/Other
<i>Mother</i>			
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	Month
MORS_ALDER	Number (3)	Mother's age at time of delivery	Integer
MORS_ALDER_DESIMALT	Number (38,35)	Mother's age at time of delivery	Decimal
MORS_ALDER_K8	Number (1)	Mother's age categorized	1 = 17 years and younger 2 = 18 – 19 years 3 = 20 – 24 years 4 = 25 – 29 years 5 = 30 – 34 years 6 = 35 – 39 years 7 = 40 – 44 years 8 = 45 years and older
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, adjusted to fit today's municipality borders – borders are updated after e.g. merging/splitting of municipality or moving of borders	Municipality number
BOFYLKE_DAGENS	Varchar2 (2)	Mother's county, adjusted to fit today's municipality borders – see above (BOKOMM_DAGENS)	County number

Variable name	Format	Description	Values
FODELAND_KODE	Varchar2 (3)	Mother's country of birth	Country number
FODELAND_KAT_NOR_GBD	Varchar2 (4)	Mother's country of birth in 8 categories: - Norway - The 7 Global Burden of Disease (GBD) super regions	0201 = Norway 0202 = High Income 0203 = Central Europe, Eastern Europe and Central Asia 0204 = Sub-Saharan Africa 0205 = North Africa and Middle East 0206 = South Asia 0207 = South East Asia, East Asia and Oceania 0208 = Latin America and Caribbean
MOR_BOSATT_NO	Number (1)	Mother reside in Norway at time of delivery	1 = Yes 2 = No 3 = Unknown
SIVST	Number (1)	Mother's marital status at time of delivery	1 = Married / Registered partner 2 = Co-habitant 3 = Unmarried / Single 4 = Divorced / Separated / Widow 9 = Other / Missing
SIVST_2	Number (1)	Mother's marital status at time of delivery categorized	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
YRKE_KODE	Number (1)	Employed	1 = Not employed 2 = Employed, full-time 3 = Employed, part-time
YRKE_MOTSETTER_SEG	Number (1)	Does not consent to provide information about occupation	1 = Yes 2 = No
<i>Father</i>			
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
FARS_ALDER	Number (3)	Father's age at time of delivery	Integer
FARS_ALDER_K11	Number (1)	Father's age categorized	1 = 17 years and younger 2 = 18 - 19 years 3 = 20 - 24 years 4 = 25 - 29 years 5 = 30 - 34 years 6 = 35 - 39 years 7 = 40 - 44 years 8 = 45 - 49 years 9 = 50 - 54 years 10 = 55 - 59 years 11 = 60 years and older

Variable name	Format	Description	Values
B – Pregnancy and maternal health			
PARITET	Number (2)	Number of previous deliveries: Highest value of variables 'PARITET_MOR' and 'PARITET_MFR'	Integer
PARITET_5	Number (1)	The variable PARITET categorized	0 = 0 (primiparous) 1 = 1 2 = 2 3 = 3 4 = 4 or more
PARITET_MOR	Number (2)	Number of previous deliveries, as stated by mother	Integer
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	Integer
DODFODTE	Number (2)	Previous stillbirths (from 24 weeks and later)	Integer
DODFODTE_5	Number (2)	Previous stillbirths (from 24 weeks and later) categorized	0 = 0 1 = 1 2 = 2 3 = 3 4 = 4 or more
LEVENDEFODTE	Number (2)	Previous live births	Integer
LEVENDEFODTE_5	Number (2)	Previous live births categorized	0 = 0 1 = 1 2 = 2 3 = 3 4 = 4 or more
SPABORT_12	Number (2)	Previous miscarriages before 12 weeks of gestation	Integer
SPABORT_12_5	Number (2)	Previous miscarriages before 12 weeks of gestation categorized	0 = 0 1 = 1 2 = 2 3 = 3 4 = 4 or more
SPABORT_23	Number(2)	Previous miscarriages/stillbirths 12-23 weeks of gestation	Integer
SPABORT_23_5	Number(2)	Previous miscarriages/stillbirths 12-23 weeks of gestation categorized	0 = 0 1 = 1 2 = 2 3 = 3 4 = 4 or more
KSNITT_TIDLIGERE	Number (1)	Mother has delivered by cesarean section in a previous pregnancy	1 = Yes
KSNITT_TIDLIGERE_MFR	Number (1)	Mother has previous cesarean section registered in MBRN	1 = Yes
SMENSD	Date	1st day of last menstrual period	Date

Variable name	Format	Description	Values
SMENSD_KODE	Number (1)	Reliability of 1st day of last menstrual period	1 = Certain 2 = Uncertain 3 = Irregular 4 = Unknown
UL_TERMIN	Date	Ultrasound estimated date of delivery	Date
TERMINMETODE	Number (2)	Method for estimating expected date of delivery	1 = Ultrasound – “Terminhjulet” 2 = Ultrasound – “eSnurra” 3 = Ultrasound – Other 4 = Embryo transfer 5 = Naegels rule 6 = Ultrasound unspecified 7 = Ultrasound is not performed 99 = Other
SVLEN	Number (2)	Length of gestation based on ultrasound estimation. If ultrasound is not available, the gestational length is calculated from the last menstrual period	Number of completed weeks
SVLEN_DG	Number (3)	Length of gestation in days. See SVLEN for details	Days
SVLEN_UL_DG	Number (3)	Length of gestation based on ultrasound estimations	Days
SVLEN_SM_DG	Number (3)	Length of gestation calculated from the last menstrual period	Days
SVLEN_ART	Number (2)	Length of gestation calculated from date of embryo transfer	Number of completed weeks
SVLEN_ART_DG	Number(2)	Length of gestation calculated from date of embryo transfer	Days
ZSCORE_BW_GA	Number (5,2)	Raw z_score based on child's weight, length of gestation and gender	Decimal
PRENAT_PAT_KODER	Varchar2 (500)	Prenatal diagnostics: Pathological findings	Code-string variable. See code-strings
PRENAT_DIAG_TYPE	Varchar2 (500)	Prenatal diagnostics: Type	Code-string variable. See code-strings
PRENAT_DIAGNOSTIKK_UTF	Number (1)	Prenatal diagnostics performed	1 = Yes
<i>Mother's health prior to pregnancy</i>			
MORS_HELSE_FOER	Varchar2 (500)	Mother's health prior to pregnancy	Code-string variable. See code-strings
ASTMA	Number (1)	Asthma	1 = Yes
HYPERTENSJON_KRONISK	Number (1)	Chronic hypertension	1 = Yes
NYRESYKDOM_KRONISK	Number (1)	Chronic renal disease	1 = Yes
REUM_ARTRITT	Number (1)	Rheumatoid arthritis	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

Variable name	Format	Description	Values
			5 = Antidiabetic medication during pregnancy registered without further information
KOSTNEI	Number (1)	No regular supplements	1 = Checked "Regular supplements: No" and no other information about supplements is registered 2 = Checked "Regular supplements: No", but also gave information about other supplements
FOLATF	Number (1)	Folate supplements prior to pregnancy	1 = Yes
MULTIVITF	Number (1)	Multivitamin supplements prior to pregnancy	1 = Yes
<i>Mother's health during pregnancy</i>			
MORS_HELSE_UNDER	Varchar2 (500)	Mother's health during pregnancy	Code-string variable. See code-strings
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
HYPERTENSJON_ALENE	Number (1)	«Hypertension only» occurred during pregnancy	1 = Yes
EKLAMPSI	Number (1)	Eclampsia, total: - Eclampsia during pregnancy - Eclampsia during birth and/or post partum - Unspecified eclampsia	1 = Yes
PREEKL	Number (1)	Preeclampsia	1 = Light 2 = Serious 3 = Unspecified
PREEKLTIDL	Number (1)	Early preeclampsia	1 = Yes
HELLP	Number (1)	HELLP	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. See code-strings
<i>Mother's smoking habits during pregnancy</i>			
ROYK_MOTSETTER_SEG	Number (1)	Refuses registration of smoking habits	1 = Yes 2 = No
ROYK_SKRIFT_ORIENT	Number (1)	Written information on smoking registration is given (see ROYK_MOTSETTER SEG)	1 = Yes 2 = No
ROYK_OPPL	Number (1)	Smoking information available	1 = Yes
ROYK_FOER	Number (1)	Smoking before pregnancy	1 = No 2 = Sometimes 3 = Daily
ROYK_FOER_ANT	Number (1)	Number of cigarettes per day before pregnancy	0-99

Variable name	Format	Description	Values
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
MORS_HOYDE	Number (3)	Mother's height	Centimeter
MORS_VEKT_FOER	Number (4)	Mother's weight before pregnancy	Kg
MORS_VEKT_SLUTT	Number (4)	Mother's weight at end of pregnancy	Kg
KMI_FOER	Number (38,4)	Mother's body mass index before the start of the pregnancy (BMI)	Decimal
KMI_SLUTT	Number (38,4)	Mother's body mass index at end of pregnancy (BMI)	Decimal
C – Delivery			
FSTART	Number (1)	Initiation of delivery	1 = Spontaneous 2 = Induction 3 = Cesarean section
ROBSON_10	Number (2)	Birth classification according to the Robson 10-group classification system	See tables under Abbreviations and definitions
<i>Position, induction, intervention</i>			
LEIE	Number (1)	Child's presentation/position at birth	1 = Normal cephalic 2 = Breech 3 = Transverse 4 = Cephalic, abnormal 5 = Other
INTERVENSJON	Varchar2 (500)	Surgical intervention and induction	Code-string variable. See code-strings
INDUKSJON_PROSTAGLANDIN	Number (1)	Induction of labor: Prostaglandine	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
TANG	Number (1)	Forceps	1 = Forceps, breech delivery 2 = Outlet forceps, vertex delivery 3 = Other forceps, vertex delivery
VAKUUM	Number (1)	Vacuum extraction	1 = Yes
EPISIOTOMI	Number (1)	Episiotomy	1 = Yes
FRAMHJELP	Number (1)	Assisted delivery of breech / partial extraction	1 = Yes

Variable name	Format	Description	Values
UTTREKKING	Number (1)	Total breech extraction	1 = Yes
VAGINAL	Number (1)	Vaginal delivery	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
<i>Complications during delivery</i>			
KOMPLIKASJONER	Varchar2 (500)	Complications	Code-string variable. See code-strings
VANNAVANGANG	Number (1)	Premature rupture of membranes	1 = 12-24 hours before delivery 2 = More than 24 hours before delivery 3 = Unspecified time before delivery
ABRUPTIOP	Number (1)	Abruptio placentae	1 = Yes
PLACENTA_PREVIA	Number (1)	Placenta previa	1 = Yes
RUPTUR34	Number (1)	Perineal rupture, 3.-4. degree	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
ENHETER_BLOD	Number (2)	Units of blood given to the mother during delivery	Integer
<i>Anaesthesia/analgesia</i>			
ANESTESI_ANALGESI	Number (1)	Anaesthesia/analgesia	1 = Yes
EPIDURAL	Number (1)	Epidural anaesthesia	1 = Yes
SPINAL	Number (1)	Spinal anaesthesia	1 = Yes
NARKOSE	Number (1)	General anaesthesia	1 = Yes
<i>Placenta, umbilical cord, amniotic fluid</i>			
UTSKRAPING	Number (1)	Placenta: Curettage	1 = Yes
PLACENTAVEKT	Number (5)	Weight of placenta	Gram
MANUELL_PLACENTA	Number (1)	Placenta: Manual extraction	1 = Yes
NAVLESNORLENGDE	Number (3)	Length of the umbilical cord	Centimeter
FOSTERV_POLYHYDRAMNION	Number (1)	Amniotic fluid: Polyhydramnios	1 = Yes
FOSTERV_OLIGOHYDRAMNION	Number (1)	Amniotic fluid: Oligohydramnios	1 = Yes
FOSTERV_MISF_STINK_INFI	Number (1)	Amniotic fluid: Discoloured,malodorous,infected	1 = Yes
NAVLESNOR_KOMPL	Number (1)	Umbilical cord: Complications	1 = Yes
PCO2_NAVLESNORARTERIE	Number (2,2)	PCO2 umbilical cord artery	PCO2-value
PCO2_NAVLESNORVENE	Number (2,2)	PCO2 umbilical cord vein	PCO2-value

Variable name	Format	Description	Values
PH_NAVLESNORARTERIE	Number (2,2)	PH umbilical cord artery	PH-value
PH_NAVLESNORVENE	Number (2,2)	PH umbilical cord vein	PH-value
<i>Complications with the mother after delivery</i>			
KOMPLIKASJONER_ETTER	Varchar2 500)	Complications after delivery. Some medications and treatments are also included.	Code-string variable. See code-strings
D – The child			
FDATE	Date	Date of delivery	Date
FMND	Varchar2 (2)	Month of delivery	Month
FAAR	Number (4)	Year of delivery	Year (1967-)
FKLOKKEN	Char (4)	Time of birth	Time
UTSKRIVINGDATO_BARN	Date	Discharge date, child	Date
UTSKRIVINGDATO_MOR	Date	Discharge date, mother	Date
LIGGEDOBN_MOR	Number (1)	Days in hospital, mother	Integer
FLERFODSEL	Number (1)	The birth is a plural birth (twins, triplet etc.)	1 = Yes
PLURAL	Number (1)	Plurality: Number of children born	Integer
PLUREK	Number (1)	Child's order	Integer
KJONN	Number (1)	Child's gender	0 = Not specified 1 = Male 2 = Female 3 = Uncertain 9 = Missing
VEKT	Number (4)	Child's weight	Gram
VEKT_MANGLER	Number (1)	Child's weight is missing	1 = Yes
LENGDE	Number (4)	Child's full length For some cases with MELDINGSTYPEID=10 crown-rump length is used.	Centimeter
SETE_ISSE	Number (2)	Child's crown-rump length	Centimeter
LENGDE_MANGLER	Number (1)	Child's length is missing	1 = Yes
HODE	Number (2)	Child's head circumference	Centimeter
HODE_MANGLER	Number (1)	Child's head circumference is missing	1 = Yes
APGAR1	Number (2)	Apgar score after 1 minute	0 – 10
APGAR1_MANGLER	Number (1)	Apgar score after 1 minute is missing	1 = Yes
APGAR5	Number (2)	Apgar score after 5 minutes	0 – 10
APGAR5_MANGLER	Number (1)	Apgar score after 5 minutes is missing	1 = Yes
APGAR10	Number (2)	Apgar score after 10 minutes	0 – 10

Variable name	Format	Description	Values
OVERFLYTTET	Number (1)	Child was transferred to neonatal ward	1 = Yes 2 = No
UTVANDRET_DATO	Date	Date of the child's emigration from Norway	Date
FODT_MFR	Number (1)	Defined as a birth according to MBRN's definitions	1 = VEKT >= 500g or SVLEN >= 22 2 = Live born in the national registry in Norway and not in category 1
<i>Mortality</i>			
DDATO	Date	Child's date of death	Date
DAAR	Number (4)	Child's year of death	Year
DMND	Varchar2 (2)	Child's month of death	Month
DODKAT	Number (2)	Time of death, categorized	0 = Live born, still alive 1 = Live born, died within 24 hours 2 = Live born, died 2.-6. day 3 = Live born, died 7.-27. day 4 = Live born, died 28. day – 1 year of age 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 (§2.3c) 11 = Live born, unknown follow-up status 12 = Live born, emigrated 13 = Live born, registered birth certificate
PERINAT_FODT_MFR	Number (1)	Perinatal born according to MBRNs definition. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes
PERINAT_DODFODT_MFR	Number (1)	Perinatal stillborn according to MBRNs definition. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes
PERINAT_DOD_TID_MFR	Number (1)	Death during the early perinatal period according to MBRNs definition. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes
PERINAT_DOD_MFR	Number (1)	Death during the perinatal period according to MBRNs definition. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes
PERINAT_FODT_22_EP	Number (1)	Perinatal born ≥ 22 weeks according to Euro-Peristat definition. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes
PERINAT_DODFODT_22_EP	Number (1)	Perinatal stillborn ≥ 22 weeks according to Euro-Peristat definition. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes

Variable name	Format	Description	Values
PERINAT_DOD_TID_22_EP	Number (1)	Death during the early perinatal period ≥ 22 weeks according to Euro-Peristat definition. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes
PERINAT_DOD_22_EP	Number (1)	Death during the perinatal period ≥ 22 weeks according to Euro-Peristat definition. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes
PERINAT_FODT_500_WHO	Number (1)	Perinatal born ≥ 500 gram according to WHO's primary definition. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes
PERINAT_DODFOD_500_WHO	Number (1)	Perinatal stillborn ≥ 500 gram according to WHO's primary definition. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes
PERINAT_DOD_TL_500_WHO	Number (1)	Death during the early perinatal period ≥ 500 gram according to WHO's primary definition. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes
PERINAT_DOD_500_WHO	Number (1)	Death during the perinatal period ≥ 500 gram according to WHO's primary definition. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes
PERINAT_FODT_1000_WHO	Number (1)	Perinatal born ≥ 1000 gram according to WHO's secondary definition. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes
PERINAT_DODFOD_1000_WHO	Number (1)	Perinatal stillborn ≥ 1000 gram according to WHO's secondary definition. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes
PERINAT_DOD_TL_1000_WHO	Number (1)	Death during the early perinatal period ≥ 1000 gram according to WHO's secondary definition. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes
PERINAT_DOD_1000_WHO	Number (1)	Death during the perinatal period ≥ 1000 gram according to WHO's secondary definition. See also: Abbreviations and definitions: Perinatal mortality	1 = Yes
<i>Child health and neonatal diagnoses</i>			
BARNETS_HELSE	Varchar2 (500)	Child health and neonatal diagnoses reported in the birth-, child- and abortion form	Code-string variable. See code-strings
ABSTINENS	Number (1)	Withdrawal symptoms in the child due to medicaments, alcohol or narcotics	1 = Yes
RESPIRATORISK_DISTR	Number (1)	Respiratory distress syndrome	1 = Yes

Variable name	Format	Description	Values
INTRAKRANIELL_BLODN	Number (1)	Intracranial hemorrhage	1 = Yes
PLEXUSSKADE	Number (1)	Plexus injury	1 = Yes
SYSTEMISKANTIBIOTIKA	Number (1)	Treated with systemic antibiotics	1 = Yes
RESPIRATOR	Number (1)	Respiratory treatment	1 = Yes
FRACT_CLAVICULAE	Number (1)	Fractura clavicularae – fracture of clavicle	1 = Yes
CPAP	Number (1)	CPAP-treatment	1 = Yes
ANNEN_FRACTUR	Number (1)	Other fracture	1 = Yes
ICTERUS	Number (1)	Icterus, treated	1 = Yes
FACIALISPARESE	Number (1)	Facial paresis	1 = Yes
<i>Congenital malformations - see also: Neonatal diagnoses (above)</i>			
MISD	Number (1)	Congenital malformations	1 = Yes
NEVRALRORSDEFEKTER	Numer (1)	Anencephaly, Encephalocele or Spina bifida	1 = Yes
ANENCEPH	Number (1)	Anencephaly	1 = Yes
SPINAB	Number (1)	Spina bifida	1 = Yes
ENCEPH	Number (1)	Encephalocele	1 = Yes
HJERTE_MISD	Number (1)	Heart condition	1 = Yes
GANESPALTE	Number (1)	Cleft palate without cleft lip	1 = Yes
LEPPE_LEPPEGANESPALTE	Number (1)	Cleft lip with or without cleft palate	1 = Yes
HYPOSPADIA	Number (1)	Hypospadias	1 = Yes
KLUMPFOT	Number (1)	Pes equinovarus (Clubfoot)	1 = Yes
OMPHALO	Number (1)	Omphalocele	1 = Yes
GASTROS	Number (1)	Gastroschisis	1 = Yes
KROMOSOMFEIL	Number (1)	Chromosomal abnormality	1 = Yes
DOWNS	Number (1)	Down's syndrome	1 = Yes
ART			
ART	Number (1)	Assisted Reproductive Technology treatment (IVF, ICSI or other ART treatments. See ARTMETODE)	1 = Reported on ART notification form 2 = Art info from birth notification form (mother's health) 3 = ART info from method of estimating delivery date (embryo transfer) 9 = Other ART info

General Comments

Since 2015, a comprehensive modernization project has been in place at the Medical Birth Registry of Norway (MBRN), where the infrastructure for receiving, processing, coding, quality assuring, storing and managing data from the birth notification forms has been upgraded. The main goal of the project has been to ensure a consistent registry across its 50 year timespan. Data from all versions of the birth notification form have been transformed to a common format for easier understanding and to facilitate correct use. This work has resulted in data changes compared to previous versions. The changes first appear in database version 2017Q1. Comments to known changes are given under the individual variables in the following sections.

MBRNs set of data contains births up to the year of 2016.

Terminations of pregnancy

Records with MELDINGSTYPEID=199 (Terminations of pregnancy according to §2.3c) only contain information submitted on the notification form for termination of pregnancy and from autopsy reports where available.

Code-strings

Also includes information from check boxes in the birth notification form, which is coded under the relevant string's code group. Please note that from database version 2013Q2 the amount of data elements in the code-strings has increased. This is due to the inclusion of check boxes that indicates "nothing unusual" or similar in the birth notification form.

Demographic information

Demographic information as e.g. mother's age, father's age, child's date of death depends on the quality of the information provided by the national registry in Norway. Smaller changes may occur in the demographic data from database version 2017Q1 version due to the introduction of a new infrastructure for the national registry data.

Variables

For more detailed documentation of each variable in the database versions, see the variable definition reports published on MBRNs web-site.

Abstinens

Abstinens was introduced in database version 2011Q1.

Anestesi_analgesi

Anestesi_analgesi is revised in database version 2017Q1.

Blodning_0500

Blodning_0500 is revised in database version 2017Q1. Notifications from before 1998 contains codes that was not included in the previous variable definition.

Diabetes_mellitus

Diabetes_mellitus was introduced as a group variable for diabetes in database version 2009Q2. The variable replaces the mutually excluding variables 'diabetes_1', 'diabetes_2', 'diabetes_annen' and 'diabetes_svgsk'.

Dodkat

Dodkat code 11 was introduced in database version 2010Q1. The code is used for live born children where MBRN is unable to track whether they are still alive or not. Dodkat code 12, 13 and 14 was introduced in database version 2013Q3. Dodkat code 12 is used for live born children, who have emigrated and MBRN is therefore unable to track whether they are still alive or not. Dodkat code 13 is used for live born children born in Norway by foreign parents which do not resides in Norway. The definition of dodkat is re-built in database version 2013Q3. This is done

to correct misclassifications, primarily for 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 subject.

Following the modernization project at MBRN, codes for approximately 100 stillborns and neonatal deaths was changes, mainly from died within 24 hours to died 2.-6. day.

Eclamsi

Eclamsia is probably under-reported in the period 1967 – 1998. Each individual case of eclamsia reported from 1999 is verified at the hospitals.

Flerfodsel

Flerfodsel was introduced in database version 2010Q2 and indicates if the birth is a single birth or part of a plural birth (twins, triplets etc.)

Fodested_kat

For MELDINGSTYPEID=10 (birth notification form 1967-1998, white paper) the category 7 (at home, unplanned) includes all home births, both planned and unplanned.

Fodt_mfr

Fodt_mfr distinguishes between a birth and a spontaneous abortion/termination of pregnancy for fetal anomaly.

Fosterv_misf_stink_infi

Fosterv_misf_stink_infi is revised in database version 2017Q1. Notifications from before 1998 contains codes that was not included in the previous variable definition.

Fstart

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

Helseforetak

Helseforetak was introduced in database version 2011Q1.

Helseregion

Helseregion was introduced in database version 2011Q1.

Hode

Only contains information submitted on birth notification forms. Information reported to MBRN on NICU notification forms are no longer retained.

Hypospadia

Hypospadia is revised in database version 2017Q1.

Induksjon_oxytocin

Induksjon_oxytocin is revised in database version 2017Q1. For notifications from before 1998 some codes that previously was included in the variable definition are not included in the revised variable definition. In addition, new codes are included in the revised variable definition for notifications from after 1998.

Ksnitt

The definition of the categories (planned, emergency and unspecified) have been changed from database version 2008Q4. This resulted in a small increase in the number of unspecified cesarean sections. The changes have no effect on the total number of cesarean section. In database version 2013Q1 there are 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 c-sections have not been reported to MBRN. The change increases the level of ksnitt_tidligere by approx. 100-200 per year.

Ksnitt_planlagt

Ksnitt_planlagt was introduced in database version 2012Q4. The variable indicates whether the c-section was planned or unplanned. 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 (Meldingstype 10) in database version 2012Q4. This is fixed in database version 2013Q2.

KMI_foer og KMI_slutt (BMI)

The variables are based on mother's height and weight. The information is only available from 2007 and only from approximately 40% of the institutions.

Leie

Leie is revised in the database version 2017Q1. Notifications from before 1998 contains codes that was not included in the previous variable definition. For paper notifications after 1998, where abnormal cephalic position is reported in combination with normal cephalic, abnormal cephalic is prioritized.

Lengde

Only contains information submitted on birth notification forms. Information reported to MBRN on NICU notification forms are no longer retained.

Navlesnor_kompl

Navlesnor_kompl is revised in the database version 2017Q1. Notifications from before 1998 contains codes that was not included in the previous variable definition.

Overflyttet

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

Paritet

Paritet (parity) does not include terminations of pregnancy according to §2.3c. These were included in previous database versions.

Paritet_mfr

Paritet_mfr (parity) does not include terminations of pregnancy according to §2.3c. These were included in previous database versions.

Paritet_5

Paritet_5 was introduced in database version 2010Q2. Paritet (parity) is a group variable that indicates the number of previous deliveries. It is the highest value of the fields "paritet_mor" and "paritet_mfr".

Preekl

The categories has been changed from 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 has led to a small decrease in incidents.

Prenat_diagnostikk_utf

Prenat_diagnostikk_utf is revised in database version 2017Q1.

Royk_avsl

The category 9 (does not consent to give information about smoking) is removed from the categories as of database version 2014Q1. This information is available in the variable royk_motsetter_seg.

Royk_beg

The category 9 (does not consent to give information about smoking) is removed from the categories as of database version 2014Q1. This information is available in the variable `royk_motsetter_seg`.

Royk_foer

`Royk_foer` and `royk_foer_ant` was introduced in database version 2012Q4. All variables regarding smoking were adjusted in database version 2013Q2 to improve the handling of missing-values. The category 9 (does not consent to give information about smoking) is removed from the categories as of database version 2014Q1. This information is available in the variable `royk_motsetter_seg`.

Slektf

`Slektf` was introduced in database version 2011Q1. The variable indicates the familial relationship between the parents. `Slektf` is revised in database version 2017Q1.

Svlen

The variable definition is changed from database version 2013Q3. When `svlen < 35`, `plural = 1` and `z_score > 4`, the `svlen` value is set to missing. From medio 2015 the reported method for estimating expected date of delivery is more specific. From this point it is decided to use reported methods as basis for length of gestation.

Svlen_art

The variable was removed in database version 2011Q2 due to uncertainties in the data basis. The variable was reintroduced in database version 2014Q3.

Svlen_art_dg

The variable was removed in database version 2011Q2 due to uncertainties in the data basis. The variable was reintroduced in database version 2014Q3.

Tang

A category 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`.

Utvandret_dato

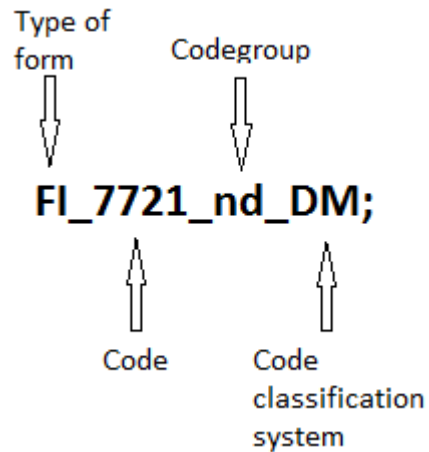
The variable is temporarily removed from database version 2017Q1 due to quality issues.

Vekt

Only contains information submitted on birth notification forms. Information reported to MBRN on NICU notification forms are no longer retained.

Code-strings

Code-strings contain codes that describe conditions related to pregnancy and delivery. The structure of the code-strings is shown below. The example is taken from the code-string `'BARNETS_HELSE`.



In this example the maternity ward (FI) has reported the neonatal diagnosis (nd) Cephalhematom which are coded with the ICD-8-MFR (DM) code 7721.

Each code-string contains one or several code blocks that are separated by semicolons. Each code block contains four elements separated by underscores:

- 1.st element indicates the type of form the code is reported on, e.g. birth notification form or NICU notification form
- 2.nd element indicates the reported code, e.g. a diagnosis or medication code
- 3.rd element indicates the code group which is used to group codes into certain categories, e.g. mother's health during pregnancy or neonatal diagnoses.
- 4.th element indicates the code classification system used, e.g. ICD-10 or ATC

A description of the different code elements are given in the following tables.

Using code-strings

Examples on how to use code-strings and syntaxes that can be used in SPSS and SAS to split code-strings into single fields are available on MBRNs website.

Type of form

Type of form	Description
FI	Birth notification form
BA	NICU notification form
A	Termination of pregnancy notification form
OR	Autopsy notification form
EK	Epicrisis notification form
PP	Test results of the placenta
CT	CT of stillborn
AN	Other

Code groups

Codegroup	Description	Code-string variable
ig	Intervention	INTERVENSJON
ii	Indication for intervention	INTERVENSJON
io	Indication for transfer to NICU	BARNETS_HELSE
pf	Pathological findings prenatally	PRENAT_PAT_KODER
mf	Mother's health before pregnancy	MORS_HELSE_FOER
mu	Mother's health during pregnancy	MORS_HELSE_UNDER
dd	Cause of death for stillbirths	BARNETS_HELSE
id	Induction of labour	INTERVENSJON
ke	Maternal complications after delivery	KOMPLIKASJONER_ETTER
kp	Complications (during delivery)	KOMPLIKASJONER
lu	Medication during pregnancy	LEGEMIDLER_UNDER
nd	Neonatal diagnoses	BARNETS_HELSE
pd	Prenatal diagnostics	PRENAT_DIAG_TYPE
if	Intrauterine intervention	KOMPLIKASJONER
sl	Familial relations between parents	SLEKTSKAPSKODER
ov	Assessment during delivery	BARNETS_HELSE
as	Asphyxia	BARNETS_HELSE

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	Description
D8	ICD-8	International statistical classification of diseases and related health problems. 8th revision (ICD-8)
D	ICD-10	International statistical classification of diseases and related health problems. 10th revision (ICD-10)
F	ATC	Anatomical Therapeutic Chemical classification system
M	NCMP	Norwegian classification of medical procedures
K	NCSP-N	Norwegian version of The NOMESCO Classification of Surgical Procedures
DM	ICD-8-MFR	MBRN's modifications of and supplements to ICD-8
IM	Internal MBRN codes	Internal MBRN codes used when there are no suitable official codes
IK	X-codes	Predefined variables from lists in the digital birth notification form and check boxes in the birth notification paper form

Abbreviations and definitions

Robson 10-group classification system

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

ICSI

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

ART

Assisted Reproductive Technology. The variable indicates if the pregnancy is a result of IVF, ICSI or other ART treatments.

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 Meldingstypeid = 10 is the sum of prior live borns and stillborns as reported by the mother (without specification of gestational age for stillborns). For Meldingstypeid = 1, 2, 5 and 8 PARITET_MOR is based upon the number of prior live- and stillborns from 12 weeks of gestation.

PARITET_MFR is based upon the sum of prior births for the mother, from 16 weeks of gestation in Meldingstypeid = 10, and from 12 weeks of gestation for Meldingstypeid = 1, 2, 5 and 8.

Paritet does include previously termination of pregnancy registered according to §2.3c.

Perinatal period

The period from immediately before birth up to and including the first 7 days after birth. See: Perinatal mortality.

Early perinatal period

The period from immediately before birth up to and including the end of the first day after birth. See: Perinatal mortality.

Perinatal mortality

The total number of stillbirths and deaths within the first 7 days after birth according to the inclusion criteria (specified below) divided by the total number of births according to the inclusion criteria.

As a result of the general development within neonatal medicine most official institutions have lowered the inclusion criteria for gestational age and birth weight from 28 weeks/1000 grams to 22 weeks/500 grams.

Perinatal mortality: MBRN

The MBRN uses the variable FODT_MFR (see record description above) as a tool to identify the births that fulfil the inclusion criteria.

Perinatal mortality: Euro-Peristat:

Gestational age \geq 22 weeks. If gestational age is unknown, birth weight \geq 500 grams is used as a reasonable indicator for inclusion.

Perinatal mortality: WHO's primary definition

Birth weight \geq 500 grams. If birth weight is unknown, gestational age \geq 22 weeks is considered a reasonable indicator for inclusion. If both birth weight and gestational age are unknown, length (crown-heel) \geq 25 cm is used as an indicator for inclusion.

Perinatal mortality: WHO's secondary definition

Birth weight \geq 1000 grams. If birth weight is unknown, gestational age \geq 28 weeks is considered as an indicator for inclusion. If both birth weight and gestational age are unknown, length (crown-heel) \geq 35 cm is used as an indicator for inclusion.

Data types

MBRNs data are stored in an ORACLE database 11g, and therefore MBRN uses data types from ORACLE 11g. Different programs use different data types with similar, but not necessarily identical properties. 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 11g datatype	Datatype	Description
date	Date and time	MBRN uses MM.DD.YYYY
number (precision)	Number	Number. The value in the parenthesis defines the precision.
varchar2 (length)	String	Text-string with variable length. The value in the parenthesis defines the maximum length.
char (length)	String	Text-string with permanent length. The value in the parenthesis defines the length.