

Appendix 1: Definitions of live births and maternities in each country

	Live births	Maternities
Denmark	Live born baby at any gestational age	A pregnancy resulting in a live birth at any gestational age or a stillbirth at or after 22 weeks of gestation
Finland	Live born baby at any gestational age	A pregnancy resulting in a live birth at any gestational age or a stillbirth from 22+0 weeks of gestation or weighing 500 g
France	Live born infant at or after 22 weeks of gestation or with a birth weight of at least 500g	A pregnancy resulting in the birth of one or more children at or after 22 weeks of gestation, live birth or stillbirth
Italy	Product of conception which, once expelled or completely extracted from the maternal body, regardless of the duration of gestation, breathes or manifests other signs of life.	Any delivery of live born or stillborn infant after 22 weeks of gestation
Netherlands	An infant born alive from 22 weeks of gestation	Any delivery of a live born or stillborn infant after 22 weeks of gestation
Norway	Any fetus born at or after 22+0 weeks of gestation, weighing more than 500 g and showing signs of life (heartbeat, breathing, or muscle activity).	Pregnancy resulting in the birth of one or more children including stillbirths from 22+0 weeks of gestation or with a birth weight of 500 g or more
Slovakia	The number of newborns with either -a birth weight \geq 500 g and one of the following (vital signs): breathing, heart action, umbilical cord pulsation or active muscle movements, even if the umbilical cord has not been cut or the placenta not delivered -a birth weight < 500 g and the baby survives more than 24 hours after birth.	The number of pregnancies resulting in a birth of: -a newborn with a birth weight \geq 500 g and with one of the following (vital signs): breathing, heart action, umbilical cord pulsation or active muscle movements, even if the umbilical cord has not been cut or the placenta not delivered -a live born infant weighing < 500 g with one of the above vital signs and surviving > 24 hours -a stillbirth with a birth weight \geq 1000 g and or an estimated gestational age >28 weeks if the birth weight is undetermined.
UK	A baby showing signs of life at birth.	A pregnancy resulting in the birth of one or more live born or stillborn children. Therefore, the number of maternities (and paternities) is less than the total number of live births and stillbirths.

Appendix 2: Availability of data regarding the women’s age and ethnic background for maternal deaths (MD) and livebirths (LB) in each country

	Denmark		Finland		France		Italy		Netherlands		Norway		Slovakia		UK	
	MD	LB	MD	LB	MD	LB	MD	LB	MD	LB	MD	LB	MD	LB	MD	LB
Age	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Citizenship			Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	
Country of birth	Yes	Yes	Yes	Yes	Yes	Yes					Yes	Yes	Yes	Yes	Yes	Yes
Ethnicity									Defined by carer	Yes					Self defined	Yes

Appendix 3: Number of maternal deaths per age group and age-specific maternal mortality ratios, in countries with enhanced surveillance systems*

Age (years)	Denmark		Finland		France		Italy		Netherlands		Norway		Slovakia		UK	
	n	MMR ^{°°}	n	MMR ^{°°}	n	MMR ^{°°}	n	MMR ^{°°}	n	MMR ^{°°}	n	MMR ^{°°}	n	MMR ^{°°}	n	MMR ^{°°}
<20	0	0.0 [0 to 121.0]	3	44.9 [9.2 to 131.0]	4	9.3 [2.5 to 23.9]	3	13.6 [2.8 to 39.9]	3	38.9 [8.0 to 113.7]	0	0.0 [0 to 122.0]	2	11.3 [1.4 to 40.9]	8	11.5 [5.0 to 22.7]
20-24	2	6.3 [0.8 to 22.6]	7	15.2 [6.1 to 31.4]	11	3.8 [1.9 to 6.8]	10	8.5 [4.1 to 15.6]	3	4.1 [0.8 to 11.9]	0	0.0 [0 to 114.5]	2	4.5 [0.5 to 16.3]	19	5.9 [3.5 to 9.2]
25-29	1	1.0 [0.03 to 5.8]	3	3.1 [0.6 to 9.2]	33	4.5 [3.1 to 6.3]	14	4.9 [2.7 to 8.2]	11	4.3 [2.1 to 7.7]	2	2.1 [0.3 to 7.7]	8	9.4 [4.0 to 18.6]	57	9.1 [6.9 to 11.7]
30-34	3	3.0 [0.6 to 8.7]	4	4.1 [1.1 to 10.5]	63	7.7 [5.9 to 9.8]	29	6.9 [4.6 to 7.7]	14	4.3 [2.4 to 7.3]	2	2.0 [0.2 to 7.2]	8	9.1 [3.9 to 17.9]	52	7.2 [5.4 to 9.4]
35-39	2	3.9 [0.5 to 14.2]	4	8.9 [4.5 to 22.9]	60	14.1 [10.8 to 18.1]	32	10 [6.8 to 14.0]	8	5.3 [2.3 to 10.5]	3	6.2 [1.3 to 18.1]	8	19.3 [8.3 to 37.9]	55	13.2 [9.9 to 17.2]
≥40	2	17.4 [2.1 to 62.9]	1	9.2 [0.2 to 51.1]	25	20.2 [13.1 to 29.8]	23	23.3 [14.8 to 34.9]	1	3.5 [0.9 to 19.7]	1	9.3 [0.2 to 52.1]	3	39.4 [8.1 to 115.0]	26	26.8 [17.5 to 39.3]

* Maternal mortality up to 42 days after the end of pregnancy

°° MMR maternal mortality ratios per 100 000 live births with [95% Confidence Interval] or one-sided [97.5%CI]

Appendix 4 Maternal mortality by women's migrant or minoritized ethnic background according to various categorizations (numbers and maternal mortality ratios), in countries with enhanced surveillance*

	Denmark		France		Italy		Netherlands		Norway		UK	
	n	MMR ^{°°}	n	MMR ^{°°}	n	MMR ^{°°}	n	MMR ^{°°}	n	MMR ^{°°}	n	MMR ^{°°}
National citizenship		NA	135	6.6 [5.7 to 7.8]	76	7.4[5.8 to 9.2]		NA	6	2.6[0.9 to 5.8]		NA
Foreign citizenship		NA	54	14.2[10.7 to 18.5]	28	11.8[7.8 to 17.0]		NA	2	3.2[0.3 to 11.6]		NA
Born in country	7	3.0 [1.2 to 6.2]	117	6.1[5.0 to 7.8]		NA		NA	6	2.9[1.1 to 6.4]	144	8.7 [7.3 to 10.2]
Born abroad	3	5.8 [1.2 to 16.9]	71	13.8[10.8 to 17.5]		NA		NA	2	2.3[0.2 to 8.1]	50	8.1[6.0 to 10.7]
White		NA		NA		NA	21	3.6[2.3 to 5.4]		NA	117	7.9[6.5 to 9.4]
Other ethnicity		NA		NA		NA	18	11.0[6.5 to 17.3]		NA	70	18.4[14.4 to 23.3]

NA: not available

* Maternal mortality up to 42 days after the end of pregnancy

^{°°}MMR maternal mortality ratios per 100 000 live births with [95% Confidence Interval]

Appendix 5 Cause-specific maternal mortality up to one year (numbers, proportion of all maternal deaths and maternal mortality ratios) in countries with enhanced surveillance systems that identify, review and classify maternal deaths up to 1 year

	France		UK	
Number of livebirths	2 435 583		2 261 090	
Total number of maternal deaths	262		432	
All cause MMR ^{oo}	10.8 [9.5 to 12.1]		19.1 [17.0 to 21.0]	
	n(%)	MMR ^{oo}	n	MMR ^{oo}
Abortive outcomes*	9(3.4)	0.4[0.2 to 0.7]	8(1.9)	0.4[0.2 to 0.7]
Obstetric haemorrhage**	22(8.4)	0.9[0.6 to 13.7]	14(3.2)	0.6[0.3 to 1.0]
Pregnancy related infection	11(4.2)	0.5[0.2 to 0.8]	12(2.8)	0.5[0.3 to 0.9]
Hypertensive disorders of pregnancy***	4(1.5)	0.2[0.0 to 0.4]	4(0.9)	0.2[0.0 to 0.4]
Venous thrombosis and thromboembolism	22(8.4)	0.9[0.6 to 1.4]	47(10.9)	2.1[1.5 to 2.8]
Amniotic fluid embolism	28(10.7)	1.2[0.8 to 1.7]	6(1.4)	0.3[0.0 to 0.5]
Anaesthesia complication	4(1.5)	0.2[0.0 to 0.4]	1(0.2)	/
Other direct cause	6(2.3)	0.2[0.0 to 0.5]	1(0.2)	/
Cardiovascular ††	36(13.7)	1.5[1.0 to 2.0]	86(19.9)	3.8[3.0 to 4.7]
Stroke (arterial) haemorrhagic or ischaemic	13(5.0)	0.5[0.2 to 0.9]	27(6.3)	1.2[0.7 to 1.7]
Indirect sepsis †††	10(3.8)	0.4[0.2 to 0.8]	18(4.2)	0.8[0.5 to 1.2]
Malignancy ††††	18(6.9)	0.7[0.4 to 1.2]	27(6.3)	1.2[0.7 to 1.7]
Other indirect cause	8(3.1)	0.3[0.1 to 0.6]	56(13.0)	2.5[1.9 to 3.2]
Suicide	35(13.4)	1.4[0.1 to 2.0]	66(15.3)	2.9[2.2 to 3.7]
Illicit drug or alcohol abuse	2(0.8)	0.1[0.0 to 0.2]	56(13.0)	2.5[1.9 to 3.2]
Unascertained	34(13.0)	1.4[1.0 to 1.9]	3(0.7)	0.1[0.0 to 0.4]

*Abortive outcomes: Ectopic pregnancy, post-abortion (spontaneous, elective, and medically indicated) haemorrhage, post-abortion infection, post-abortion pulmonary embolism, and other abortive outcomes

**Haemorrhage by uterine atony, morbidly adherent placenta, placenta praevia, uterine rupture, placenta abruption, and other obstetric haemorrhage

*** Preeclampsia, eclampsia, HELLP

†† Influenza, pneumonia, meningitis, urinary sepsis, and other indirect sepsis

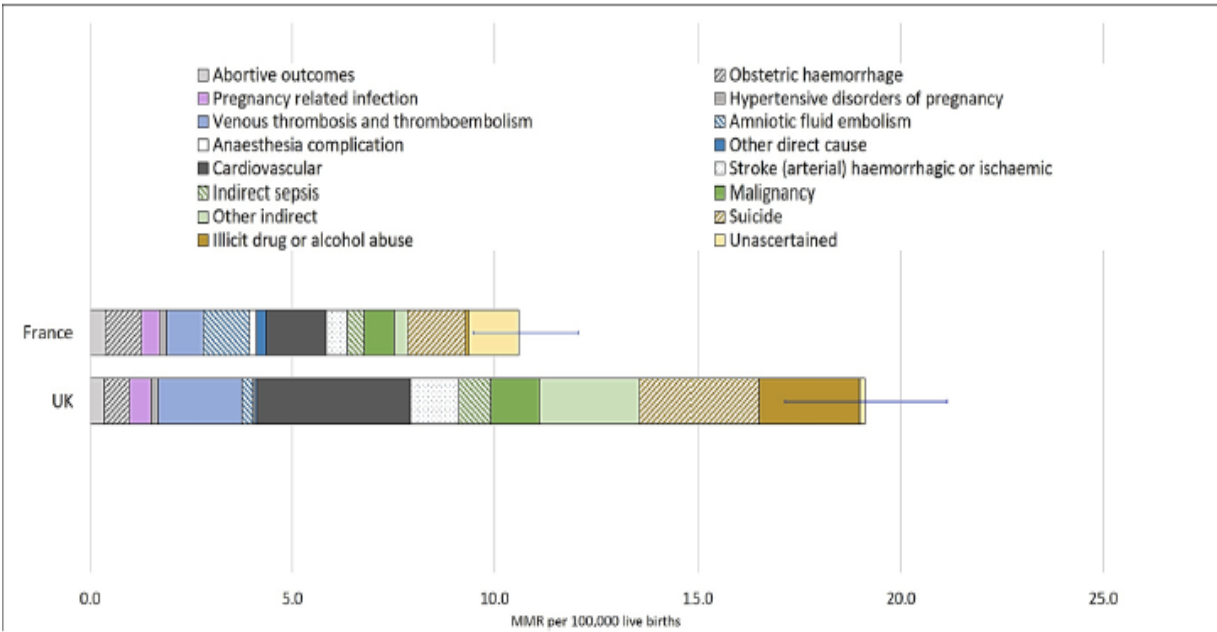
††† In the 2 countries, deaths after trophoblastic tumours were considered as maternal. For other tumours, definitions of a maternal death varied between countries. In France maternal deaths were the pregnancy associated deaths from all hormone sensitive cancers or any other type of cancer for which the pregnancy delayed the diagnosis or treatment. The UK's definition of a maternal death due to cancer were the pregnancy-associated deaths after cancer of the breast, ovary, or uterus.

^{oo}MMR maternal mortality ratio per 100 000 live births with [95% Confidence Interval]

Appendix 6: Cause-specific maternal mortality ratios up to one year after the end of pregnancy per 100 000 live births in countries with enhanced surveillance systems reviewing late maternal deaths up to one year *

* Maternal mortality up to one year after the end of pregnancy

Error bars represent 95% Confidence Intervals of all-cause MMRs up to 1 year



Appendix 7: Distribution of maternal age among all live births during the study period in the eight countries

Age (years)	Denmark		Finland		France		Italy		Netherlands		Norway		Slovakia		UK	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
<20	3030	1.0	6688	2.2	42 857	1.8	21 985	1.7	7710	0.9	3002	1.0	17 641	6.2	69 367	3.1
20-24	31 960	10.9	45 918	15.2	287 307	11.8	118 100	9.3	73 401	8.8	32 229	11.2	44 174	15.6	323 205	14.3
25-29	95 794	32.6	95 607	31.7	731 248	30.1	285 346	22.5	255 896	30.5	93 802	32.5	84 681	29.8	629 648	27.8
30-34	100 619	34.2	97 305	32.3	818 251	33.7	421 939	33.3	322 675	38.5	100 619	34.8	88 126	31.1	724 832	32.1
35-39	51 071	17.4	44 759	14.9	425 516	17.5	321 503	25.4	150 099	17.9	48 384	16.8	41 558	14.6	417 086	18.4
≥40	11 485	3.9	10 892	3.6	123 844	5.1	98 723	7.8	28 286	3.4	10 686	3.7	7620	2.7	96 924	4.3

Appendix 8: Distribution of women's migrant or minoritized ethnic background among all live births during the study period in the eight countries

	Denmark		Finland		France		Italy		Netherlands		Norway		Slovakia		UK	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Current citizenship																
Not foreign	NA		NA		2 048 988	84.4	1 027 397	81 .2	NA		226 411	78.4	283 825	99.96	NA	
Foreign	NA		NA		380 035	19.8	237 868	18.8	NA		62 372	21.6	105	0.04	NA	
Place of Birth																
Born in country	233 050	81.8	276 852	91.9	1 916 321	78.9	NA		NA		203 758	69.7	283 825	99.96	1 656 483	73.0
Born abroad	51 976	18.2	24 317	8.1	512 702	21.1	NA		NA		88 557	30.3	105	0.04	613 882	27.0
Ethnicity																
White	NA		NA		NA		NA		660 516	80.1	NA		NA		1 486 428	79.6
Other	NA		NA		NA		NA		163 914	19.9	NA		NA		379 942	20.4

NA: not available