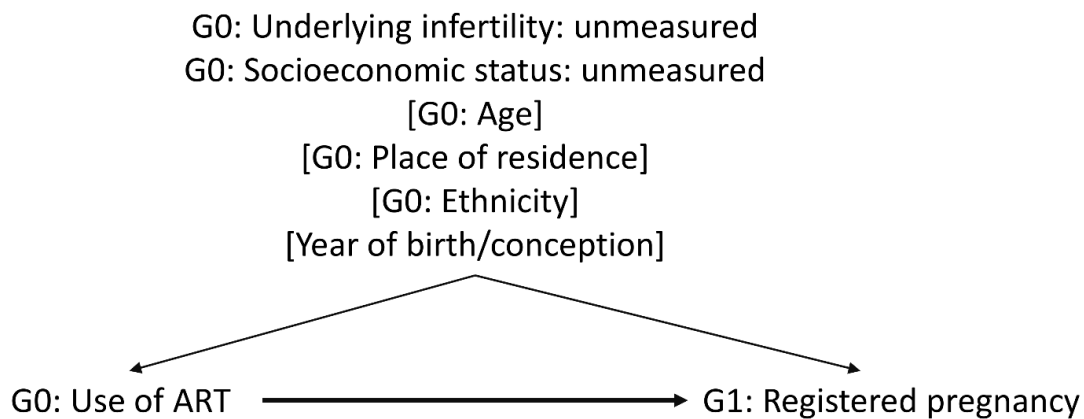
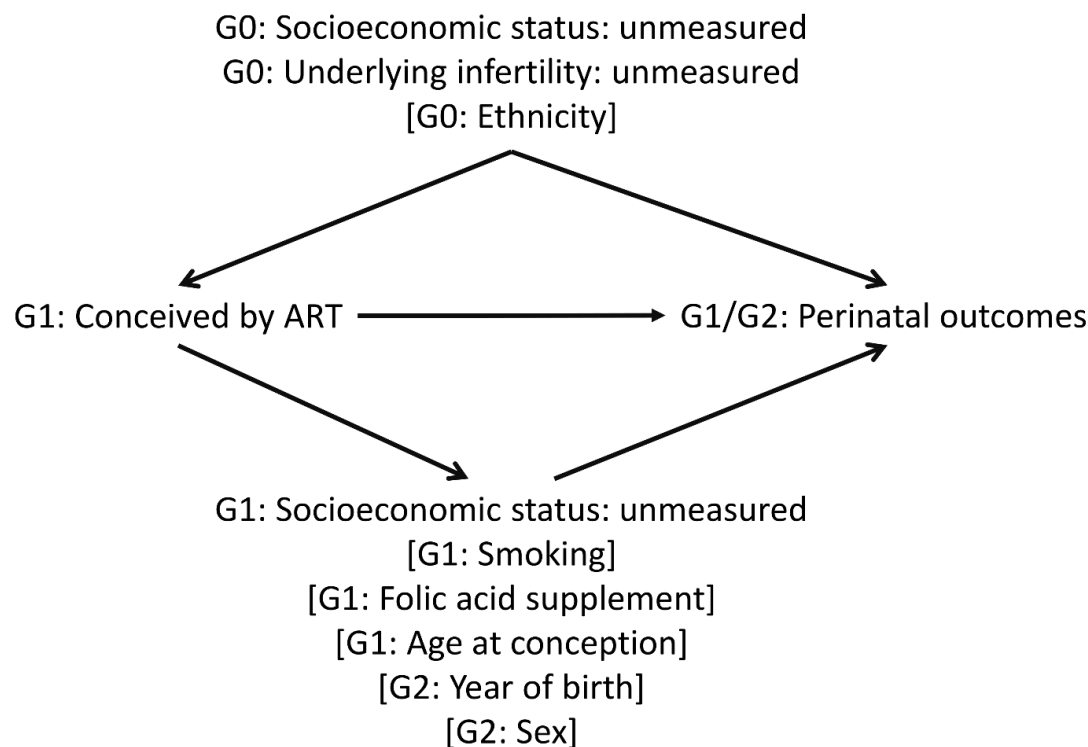


**eFigure 1. Covariate selection for the analysis of a registered pregnancy in the Medical Birth Registry of Norway.**

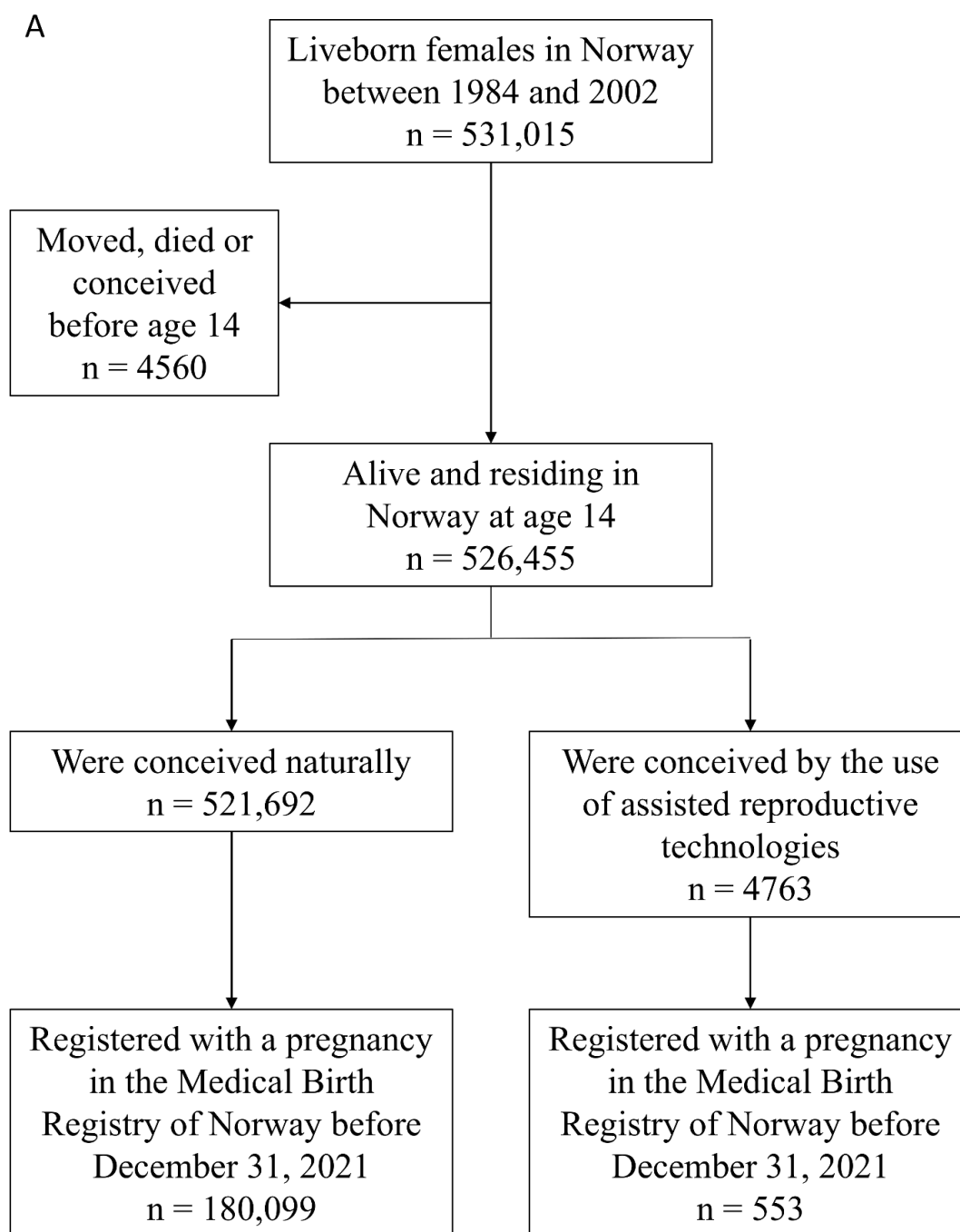


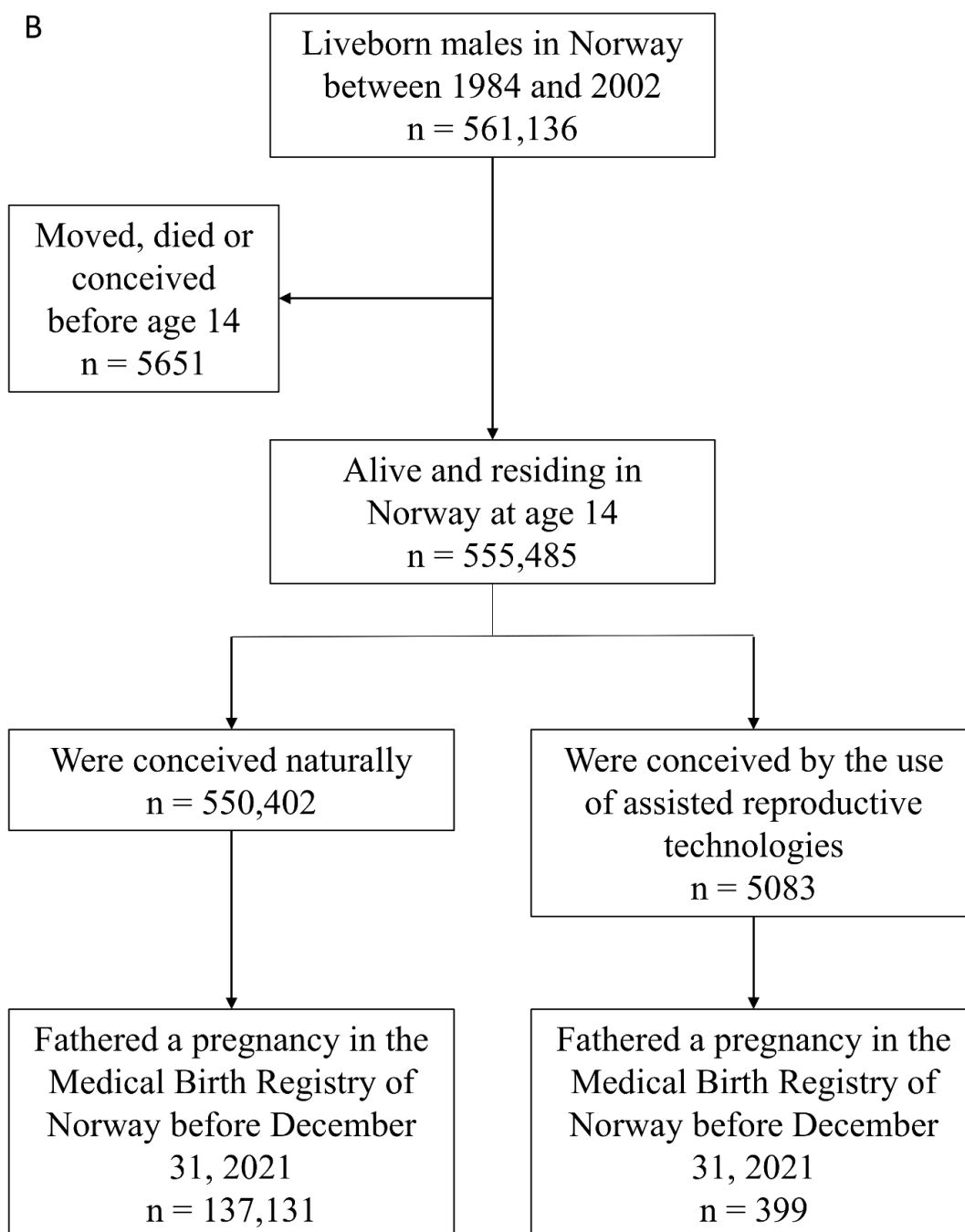
G0: the generation using ART or not to conceive. G1: the generation conceived by ART or not, in whom we later assessed the likelihood of having a registered pregnancy as either the mother or father. Year of birth was included as both an indicator of availability of ART and impacting the likelihood of having time to have a pregnancy in the G1 generation before the end of follow-up. Year of birth of G1 was included in the “minimally” adjusted model, while the three other variables in brackets were also included in the “fully” adjusted model.

**eFigure 2. Covariate selection for the analysis of perinatal outcomes according to parental mode of conception.**



G0: the generation using ART or not to conceive. G1: the generation conceived by ART or not, in whom we later assessed the perinatal outcomes among those with a registered pregnancy as mother or father. G2: the offspring generation in which the newborn-related outcomes were assessed. Factors in brackets were adjusted for in multivariate regression analyses. Year of birth in was G2 included due to temporal trends of perinatal outcomes. Smoking, folic acid supplement and age at conception in G1 could all be seen as possible surrogates of the socioeconomic statuses of the participants in both G0 and G1. Sex in the offspring may not be a mediating variable in a biological sense, but given the observed difference in sex ratio among those conceived by ART and not, it may impact the association between parental mode of conception and perinatal outcomes, and we therefore adjusted for it in the multivariate analyses.

**eFigure 3. Flow-chart of study participant selection. A) Women, B) Men.<sup>1</sup>**



<sup>1</sup> Liveborn definition: exclusion of stillbirths and those dead within 24 hours.

**eTable 1. Linear regression models comparing birthweight, gestational age, and placental weight by parental mode of conception.<sup>1</sup>**

	<b>Outcome</b>	<b>Naturally conceived, mean (SD)</b>	<b>ART-conceived, mean (SD)</b>	<b>Difference between ART-conceived and naturally conceived (95 % CI)</b>	<b>Adjusted difference between ART-conceived and naturally conceived (95 % CI)<sup>2</sup></b>
<b>Women</b>	Birthweight, grams	3505 (584)	3497 (590)	-8 (-57 to 41)	5 (-50 to 59)
	Placental weight, grams	663 (157)	654 (159)	-9 (-22 to 5)	3 (-12 to 19)
	Gestational age, days	278.2 (13.5)	278.2 (13.4)	-0.2 (-1.6 to 1.1)	-0.4 (-1.9 to 1.2)
<b>Men</b>	Birthweight, grams	3505 (582)	3487 (573)	-18 (-71 to 35)	-12 (-66 to 42)
	Placental weight, grams	661 (155)	653 (166)	-7 (-24 to 10)	-2 (-19 to 15)
	Gestational age, days	278.1 (13.4)	277.1 (14.0)	-0.9 (-2.1 to 0.4)	-0.8 (-2.0 to 0.4)

<sup>1</sup>All registered births, not just first births. Miscarriages and induced abortions before week 22 not included. Included pregnancies, women; n=322,453 (n=824 by women conceived by ART), included newborns by women; n=326,634 (n=839 by women conceived by ART). Included pregnancies, men; n=231,865 (n=600 by men conceived by ART), included newborns by men; n=234,804 (n=609 by men conceived by ART).

<sup>2</sup> Adjusted for maternal age at conception (<25 years, 25-29 years, 30+ years), year of birth index pregnancy (categorically, <2011, 2011-2015, 2016-2018, 2019-2021), offspring sex, smoking (none vs smoking or not consented to provide information on smoking), folic acid supplement (yes vs no), grandmaternal country of birth (Norway, missing, or other) and parity (0 or ≥1). Also adjusted for paternal age at conception (<25 years, 25-29 years, 30+ years) in the analyses of men. Also applied clustering adjustment as we include more than one pregnancy per woman or man.

**eTable 2. The odds ratios of pregnancy outcomes in pregnancies to ART-conceived and naturally conceived women.<sup>1</sup>**

Outcome	Naturally conceived, No. with outcome (%) <sup>2</sup>	ART-conceived, No. with outcome (%) <sup>2</sup>	Odds ratio of outcome in ART conceived compared to naturally conceived (95 % CI)	
			Crude	Adjusted <sup>3</sup>
<b>Use of ART</b>	8,605 (2.7)	19 (2.3)	0.86 (0.53 to 1.39)	0.99 (0.57 to 1.72)
<b>Offspring sex (boy)</b>	167,383 (51.4)	395 (47.1)	0.84 (0.73 to 0.97)	0.82 (0.70 to 0.96)
<b>Preterm birth</b>	18,427 (5.7)	50 (6.1)	1.06 (0.79 to 1.44)	1.04 (0.77 to 1.47)
<b>Preeclampsia</b>	10,395 (3.2)	32 (3.9)	1.21 (0.83 to 1.77)	1.21 (0.81 to 1.82)
<b>Any hypertensive disorder of pregnancy</b>	16,018 (5.0)	52 (6.3)	1.29 (0.96 to 1.73)	1.17 (0.83 to 1.63)
<b>Congenital malformations</b>	12,777 (3.9)	29 (3.5)	0.88 (0.60 to 1.28)	1.03 (0.71 to 1.51)
<b>Low 5-minute Apgar score (&lt;7)</b>	5,420 (1.7)	26 (3.1)	1.89 (1.21 to 2.94)	1.64 (0.96 to 2.80)
<b>NICU admission</b>	34,735 (10.7)	106 (12.6)	1.21 (0.97 to 1.51)	1.20 (0.94 to 1.55)

<sup>1</sup> All births included, not just first births. Miscarriages and induced abortions before week 22 not included. Pregnancies; n=322,453 (n=824 by women conceived by ART), newborns; n=326,634 (n=839 by women conceived by ART).

<sup>2</sup> For outcomes offspring sex, congenital malformations, NICU admission and low Apgar scores, each child is counted regardless of plurality. For outcomes ART conception, preterm birth, preeclampsia, hypertensive disorders of pregnancy, each pregnancy contributes with one count.

<sup>3</sup> Adjusted for maternal age at conception (<25 years, 25-29 years, 30+ years), year of birth index pregnancy (categorically, <2011, 2011-2015, 2016-2018, 2019-2021), offspring sex, smoking (none vs smoking or not consented to provide information on smoking), folic acid supplement (yes vs no), grandmaternal country of birth (Norway, missing, or other), and parity (0 or ≥1). Also applied clustering adjustment as we include more than one pregnancy per woman.

**eTable 3. The odds ratios of pregnancy outcomes in pregnancies to ART-conceived and naturally conceived men.<sup>1</sup>**

Outcome	Naturally conceived, No. with outcome (%) <sup>2</sup>	ART-conceived, No. with outcome (%) <sup>2</sup>	Odds ratio of outcome in ART-conceived compared to naturally conceived (95 % CI)	
			Crude	Adjusted <sup>3</sup>
<b>Conception by ART</b>	5,507 (2.4)	14 (2.3)	0.98 (0.52 to 1.84)	1.11 (0.58 to 2.12)
<b>Offspring sex (boy)</b>	120,314 (51.4)	301 (49.4)	0.92 (0.79 to 1.08)	0.92 (0.79 to 1.08)
<b>Preterm birth</b>	13,385 (5.8)	38 (6.3)	1.10 (0.78 to 1.54)	1.08 (0.77 to 1.51)
<b>Preeclampsia</b>	7,586 (3.3)	25 (4.2)	1.28 (0.84 to 1.96)	1.17 (0.76 to 1.79)
<b>Any hypertensive disorder of pregnancy</b>	11,605 (5.0)	37 (6.2)	1.24 (0.87 to 1.78)	1.14 (0.80 to 1.63)
<b>Congenital malformations</b>	9,020 (3.9)	31 (5.1)	1.34 (0.92 to 1.96)	1.34 (0.92 to 1.96)
<b>Low 5-minute Apgar score (&lt;7)</b>	3,876 (1.7)	11 (1.8)	1.09 (0.61 to 1.97)	1.03 (0.57 to 1.86)
<b>NICU admission</b>	25,351 (10.8)	53 (8.7)	0.79 (0.58 to 1.06)	0.75 (0.56 to 1.01)

<sup>1</sup> All births included, not just first births. Miscarriages and induced abortions before week 22 not included. Included pregnancies n=231,865 (n=600 by men conceived by ART), included newborns; n=231,865 (n=609 by men conceived by ART).

<sup>2</sup> For outcomes offspring sex, congenital malformations, low Apgar scores and NICU admission, each child is counted regardless of plurality. For outcomes ART conception, preterm birth, preeclampsia, hypertensive disorders of pregnancy, each pregnancy contributes with one count.

<sup>3</sup> Adjusted for maternal and paternal age at conception (<25 years, 25-29 years, 30+ years), year of birth index pregnancy (categorically, <2011, 2011-2015, 2016-2018, 2019-2021), offspring sex, smoking in the partner (none vs smoking or not consented to provide information on smoking), folic acid supplement (yes vs no), grandmaternal country of birth (Norway, missing, or other), and parity (0 or ≥1). Also applied clustering adjustment as we include more than one pregnancy per man.

