

NordForsk PhD course in Register-Based Epidemiology

# Birth Registers

**AOGS**

ACTA Obstetrica et Gynecologica



Scandinavica

**AOGS** ACTA COMMENTARY

# The Nordic medical birth registers – a potential goldmine for clinical research

# Content

- All live births and stillbirths (varying gestational ages)
  - General (parents' age, country of origin, place of residency)
  - Mother's health before pregnancy (asthma, epilepsy)
  - Mother's health during pregnancy (gestational diabetes, BMI)
  - Pregnancy (parity, term, duration, smoking, IVF)
  - Birth (C-section, breech, induction)
  - Child (Apgar, weight, length, sex, malformations, death)

# Strengths

- Compulsory notification
- Several generations
  - Mother giving birth in 1967
  - Daughter giving birth in 1990
  - Her daughter giving birth in 2015
- Long follow-up
- Linkage to other registers

# Medical Birth Registers

**Table 2.** Background information from Nordic Birth Registries 2011.

	Denmark	Finland	Norway	Iceland	Sweden
Number of births/infants (2011)	58 717/59 666	59 385/60 258	60 319/61 322	4421/4480	108 211/10 9766
Number of obstetric units (2011)	25	31	54	10	45
Number of home deliveries, planned/unplanned	555	10/142	113/168	94/1	Not available
Missing data: gestational age (%)	706 (0.1%)	81 (0.1%)	379 (0.6%)	0	16 (0.01%)
Missing data: birthweight (%)	989 (0.2%)	22 (0.04%)	10 (0.02%)	0	128 (0.12%)
Missing data: parity (%)	1172 (0.2%)	3 (0.005%)	62 (0.1%)	0	0
Induction of labor	20.4%	19.9%	19.4%	18.4%	14.0%
Elective cesaerean section	9.9%	6.2%	6.9%	5.6%	6.9%
IVF	5.7%	2.6%	3.0%	3.5%	3.7%

Why is the number of births lower than the number of infants?

# Limitations

- Validation using medical records
  - Demanding
  - Difficult for all variables
- Over-reporting when conditions are suspected but not confirmed
- Under-reporting when conditions are difficult to detect
- Births at hospitals

# Medical Birth Registers

Country	Since	Tissue bank	Gestational age	Useful websites
Denmark	1973	Yes	>22 weeks / sign of life	<a href="https://sundhedsdatastyrelsen.dk/da/registre-og-services/om-de-nationale-sundhedsregistre/graviditet-foedsler-og-boern/foedselsregisteret">https://sundhedsdatastyrelsen.dk/da/registre-og-services/om-de-nationale-sundhedsregistre/graviditet-foedsler-og-boern/foedselsregisteret</a>
Finland	1987	Yes	>22 weeks / >500g	<a href="https://thl.fi/fi/web/thlfi-en/statistics/information-on-statistics/register-descriptions/newborns">https://thl.fi/fi/web/thlfi-en/statistics/information-on-statistics/register-descriptions/newborns</a>
Iceland	1981	Yes	>22 weeks / >500g	<a href="https://www.landlaeknir.is/english/statistics/births/">https://www.landlaeknir.is/english/statistics/births/</a>
Norway	1967	No	>12 weeks	<a href="http://hrr.uit.no/hrr/">http://hrr.uit.no/hrr/</a>
Sweden	1973	No	>22 weeks / sign of life	<a href="https://www.socialstyrelsen.se/statistik-och-data/register/alla-register/medicinska-fodelseregistret/">https://www.socialstyrelsen.se/statistik-och-data/register/alla-register/medicinska-fodelseregistret/</a>