

# Data linkages and microdata for perinatal statistics for improve international data Views from Finland

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# Linkages are performed routinely

- Within THL:
  - Reproductive registers: induced abortions, sterilisations, births, congenital anomalies
  - Hospital care: Inpatient care, outpatient care in hospitals, **outpatient care in primary care (new)**
- To other register keeping organisations
  - Statistics Finland: causes-of-death, socioeconomic and demographic background
  - Social Insurance Institution: data on reimbursed medication

# Personal identity code from 1964-1968

- Until 1899: DDMMYY+XXXXY
- 1900-1999: DDMMYY-XXXXY
- 2000-2099: DDMMYYAXXXXY

DDMMYY

- date, month and year of birth

XXX

- serial number: even for women, uneven for men

Y

- control number

# Finnish options

1. To give data for Eurostat (easy)
  2. INSERM to apply for a permission to get the data from THL and Statistics Finland (complicated)
- Data cannot be given for permanently, e.g. for Joint Research Centre or for any research group. A study permission is valid for five years with a possibility to extend the period

# Data sources: THL

## Medical Birth Register: most cases & 23 variables

Gestational age, Birthweight at delivery, Sex, Type of pregnancy + birth order, Presentation, Woman identifier, Vital status at birth, Maternal age at delivery, Parity, Previous caesarean delivery, Mode of delivery, Mode of onset of labour, Smoking before or at beginning of pregnancy, Smoking in the third trimester of pregnancy, Mother' pre-pregnancy body mass index (BMI), Sub fertility treatment (IVF, IUI, OI), Timing of first antenatal visit, Anaesthetic during labour (excluding General anesthesia), Episiotomy, Apgar score at 5 minutes, Perineal tears (3 or 4), Place of birth by number of annual births, Place of birth by level of care

## Register on Induced Abortions: new cases

Pregnancy terminations between 22+0 and 24+0 gestational weeks

## Malformation Register: one variable

Information on certain congenital anomalies

## Hospital Discharge Register: three variables

General anesthesia, Severe maternal morbidity, Perineal tears (all grades)

# Data sources: Statistics Finland

## Cause-of-Death Register: sex variables

Neonatal death, Infant death, Cause-of-death, Age at death, if death < 1 year,  
Maternal death, Cause-of-death

## Register on Education: one variable

Mother's education

## Register on Occupation: two variables

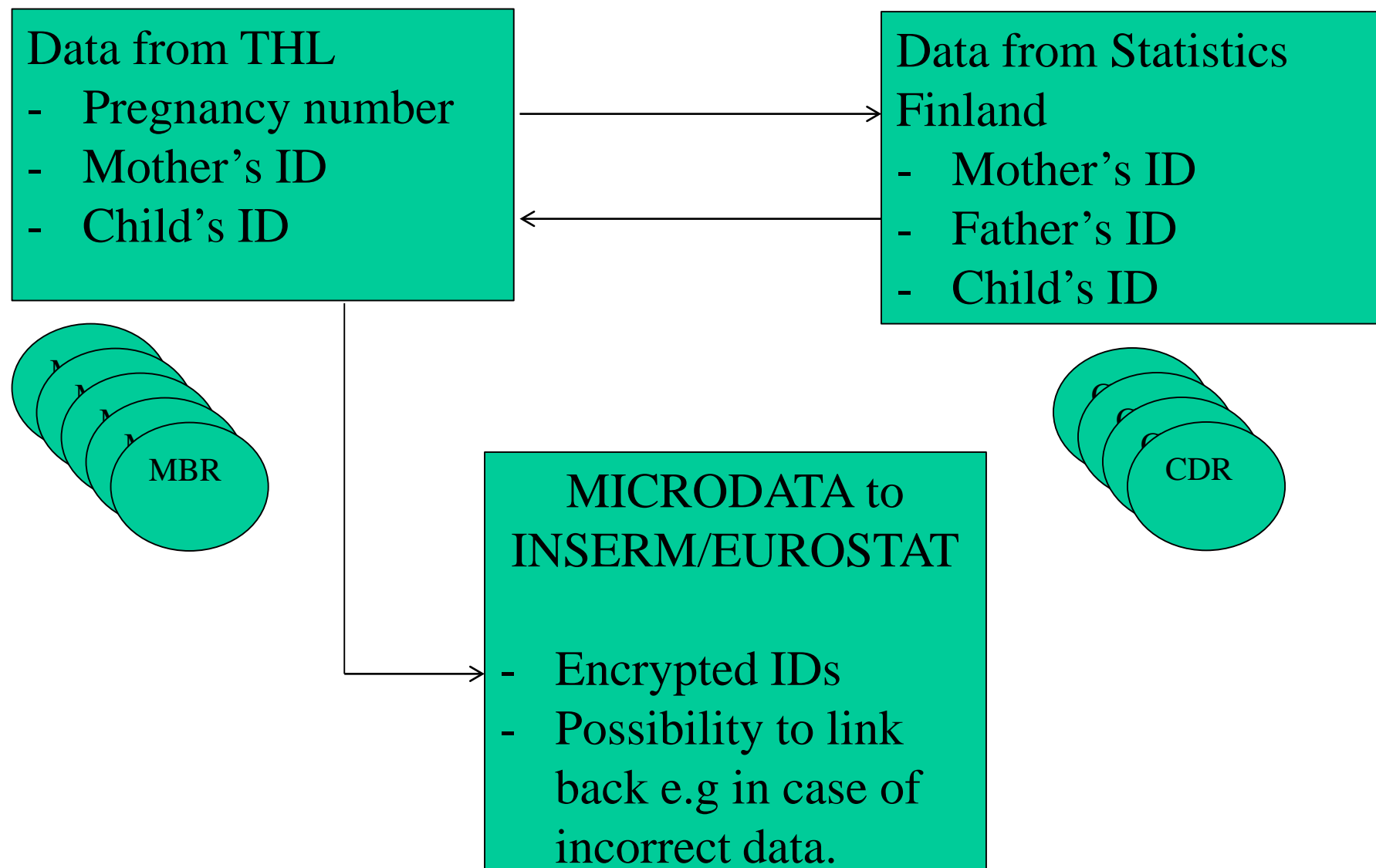
Mother's occupation, Father's occupation

## Population Register: one variable

Mother's country of origin

**Data not available  
before 2017:**  
Infants breastfed  
in first 48 hours

# Flow chart



# Pros and cons

- + More detailed information
- + Better data validation possibilities
- + More accurate country comparisons
- ± Less work for national correspondents?
- May not be free of charge
- Time to get permission and data from Statistics Finland
- Different timing when registers are complete





# Option 2: Aggregated data

- Aggregated data (example for a Nordic study)

Country	Age	BMI	Smoking	Previous births	Multiple	Order	Mode of delivery	Gestation al age	SGA/ LGA	Death	Apgar 5		Number
2	1	1	0	0	1	1	1	2	2	0	1		1
2	1	1	0	0	1	1	1	3	1	0	0		1
2	1	1	0	0	1	1	1	3	2	0	0		13
2	1	1	0	0	1	1	1	4	1	0	0		17
2	1	1	0	0	1	1	1	4	2	0	0		190
2	1	1	0	0	1	1	1	4	2	0	1		2
2	1	1	0	0	1	1	1	4	2	0	9		1
2	1	1	0	0	1	1	1	4	3	0	0		1
2	1	1	0	0	1	1	2	3	2	0	0		2
2	1	1	0	0	1	1	2	3	2	0	1		1
2	1	1	0	0	1	1	2	4	1	0	0		2
2	1	1	0	0	1	1	2	4	1	0	1		1
2	1	1	0	0	1	1	2	4	2	0	0		27



# 1987 Finnish Birth Cohort

