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BRidging Information and Data Generation for Evidence-based Health Policy and Research

The availability of data on maternal and newborn health in routine systems in 29 European countries

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Background

- International comparisons of perinatal health indicators provide performance benchmarks and underpin maternal and child health policies.
- These comparisons are affected by the quality and availability of data in national data systems.
- However, data linkage has been used in the literature to improve the validity and quality of study data and to improve the ascertainment of short and long term maternal and infant outcomes[1-3].

1. Gissler M, Mohangoo A, Blondel B, Chalmers J, Macfarlane A, Gaizauskiene A, Gatt M, Lack N, Sakkeus L, Zeitlin J for the EURO-PERISTAT group: Perinatal health monitoring in Europe: results from the EURO-PERISTAT project. Informatics for Social and Health Care 35 (2): 64-79, 2010. 3
2. Bouvier-Colle MH, Mohangoo AD, Gissler M, Novak-Antolic Z, Vutuc C, Szamotulska K, et al. What about the mothers? An analysis of maternal mortality and morbidity in perinatal health surveillance systems in Europe. BJOG : an international journal of obstetrics and gynaecology. 2012;119(7):880-9; discussion 90.
3. Henningsen AK, Romundstad LB, Gissler M, Nygren KG, Lidegaard O, Skjaerven R, et al. Infant and maternal health monitoring using a combined Nordic database on ART and safety. Acta obstetricia et gynecologica Scandinavica. 2011;90(7):683-91.

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Aim

This study aimed:

1) to assess the availability of perinatal health indicators in European countries
2) and to investigate whether the use of routine data linkage affects indicator availability.

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EURO PERISTAT

BETTER STATISTICS FOR BETTER HEALTH
for pregnant women and their babies

The Euro-Peristat project

- EU-funded project which began in 1999 and is now a part of the BRIDGE Health Project which aims to promote sustainable health reporting in Europe.
- Euro-Peristat collects population-based aggregate data on a set of 10 core and 20 recommended indicators for the surveillance of maternal and newborn health.
- Official representation from 29 countries across Europe
- Relies on a network of over 100+ data providers which are clinicians, statisticians and researchers.

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Euro-Peristat 10 Core Indicators

- Fetal, Neonatal and Child Health:

C1: Fetal mortality rate by gestational age, birth weight, and plurality

C2: Neonatal mortality rate by gestational age, birth weight, and plurality

C3: Infant mortality rate by gestational age, birth weight, and plurality

C4: Birth weight distribution by vital status, gestational age, and plurality

C5: Distribution of gestational age by vital status and plurality

- Maternal Health:

C6: Maternal mortality ratio

- Population Characteristics and risk factors:

C7: Multiple birth rate by number of fetuses

C8: Distribution of maternal age

C9: Distribution of parity

- Health Care Services:

C10: Mode of delivery by parity, plurality, presentation, previous caesarean section and gestational age

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Euro-Peristat 20 Recommended indicators

- ## Fetal, Neonatal and Child Health:

R1: Prevalence of selected congenital anomalies; **R2**: Distribution of Apgar score at 5 minutes
R3: Fetal and neonatal deaths due to congenital anomalies; **R4**: Prevalence of cerebral palsy

- ## Maternal Health:

R5: Maternal mortality ratio by cause of death; **R6**: Incidence of severe maternal morbidity
R7: Incidence of tears to the perineum

- ## Population Characteristics and risk factors:

R8: Percentage of women who smoked during pregnancy; **R9:** Distribution of mothers' educational level; **R10**: Distribution of parents' occupational classification; **R11**: Distribution of mothers' country of birth; **R12**: Distribution of mothers' prepregnancy body mass index (BMI)

- ## Health Care Services:

R13: Percentage of all pregnancies following treatment for subfertility; **R14**: Distribution of timing of first antenatal visit; **R15**: Distribution of births by mode of onset of labour; **R16**: Distribution of place of birth by volume of deliveries; **R17**: Percentage of very preterm infants delivered in units without a neonatal intensive care unit (NICU); **R18**: Episiotomy rate; **R19**: Births without obstetric intervention
R20: Percentage of infants breast fed at birth

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The Euro-Peristat project

- Published two comprehensive reports on the health status of pregnant women and newborn in European countries in 2008 and 2013 (available from www.europeristat.com)

- For the EPHR2010, SC members provided data on indicators and meta-data on the characteristics of routine data sources, including use of data linkage.

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Results I: Data availability in EPHR2010

- No country could provide all 30 Euro-Peristat indicators.
- The availability of core indicators was good: 12 countries (41%) provided at least some data on all 10 indicators and 13 (45%) provided 9 out of 10 indicators.
- Recommended indicators were less available: 13 out of 20 indicators were provided on average.
- Only 17 out of 29 countries provided data on smoking during pregnancy, 11 on maternal body mass index, and 15 on timing of antenatal care initiation.

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Results II: Data linkage

- 17 out of 29 countries (59%) indicated linkage of at least one data source to compile the indicators.
- Countries mainly linked birth and death certificates (N=15) but also medical birth registers with hospital discharge data (N=6) or vital statistics (N=6).

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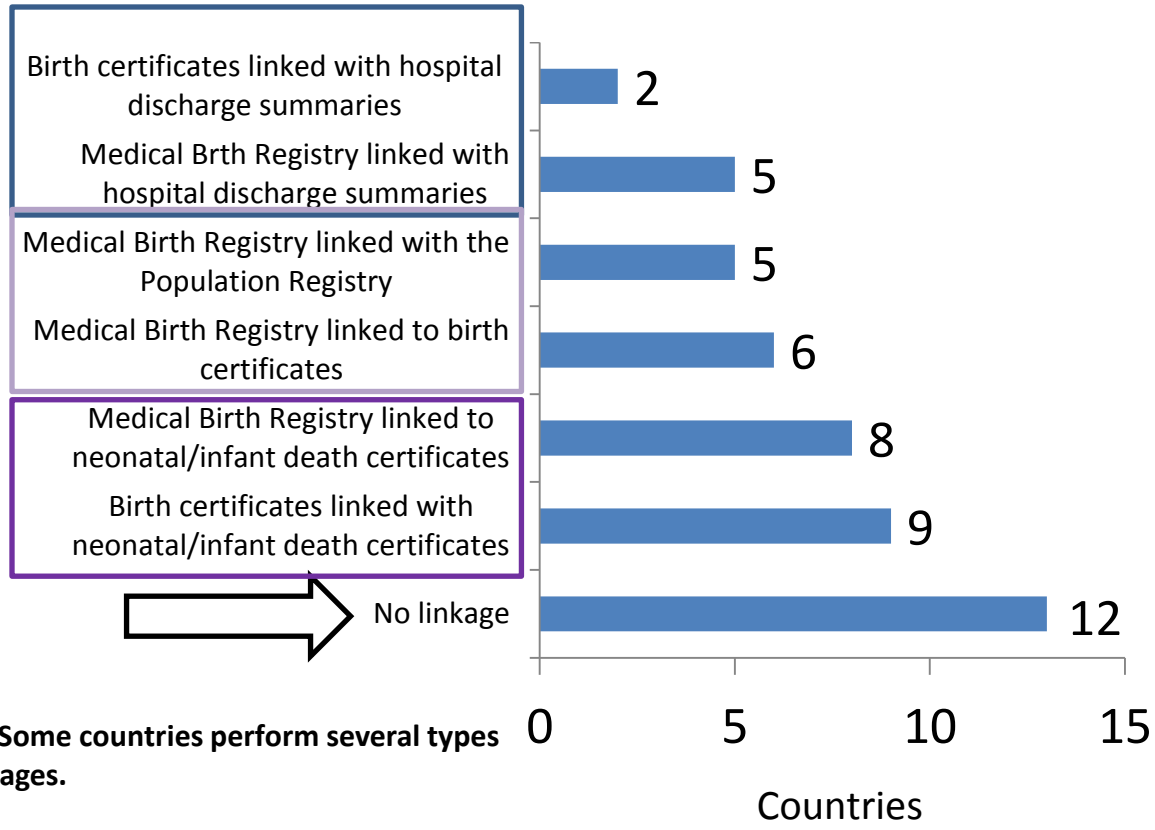
Results II: Routine linkages



Note: Some countries perform several types of linkages.

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Results II: Data linkage

Countries who use linkage	Countries who do not use linkage
Austria	Belgium
Cyprus	Denmark
Czech Republic	Greece
Estonia	Hungary
Finland	Ireland
France	Italy
Germany	Lithuania
Iceland	Portugal
Latvia	Romania
Luxembourg	Slovakia
Malta	Spain
Netherlands	UK : Northern Ireland
Norway	United Kingdom
Poland	
Slovenia	
Sweden	
Switzerland	
UK: England and Wales	
UK :Scotland	

Countries with routinely linked data systems produced:
9 core and 16 recommended indicators, on average

Countries without routinely linked data systems produced:
8 core and 10 recommended indicators.

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Conclusion

- Euro-Peristat indicators are available in many European countries, confirming the feasibility of routine perinatal health reporting.
- Our results suggest that record linkage can improve the availability of perinatal indicators and promotion of linkage is a priority for Euro-Peristat's future work.
- This approach to mapping the maternal and newborn data available in national registers could be useful for other reproductive and child health data sources and other health domains in BridgeHealth.

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Key messages

Message 1: **Availability of core perinatal health indicators in Europe is good**, but in order to obtain a complete picture of maternal and newborn health and care, **improvements are needed in many countries.**

Message 2: Whereas many countries do not routinely link data sources, countries with routine linkage of data on births were able to provide more of the Euro-Peristat indicators. Therefore, **instituting routine data linkage may be an effective strategy for strengthening perinatal health monitoring capacity in Europe.**

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Thank you!

Merci!

Grazie!

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