

PREBIC collaboration

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BETTER STATISTICS FOR BETTER HEALTH
for pregnant women and their babies



PREBIC

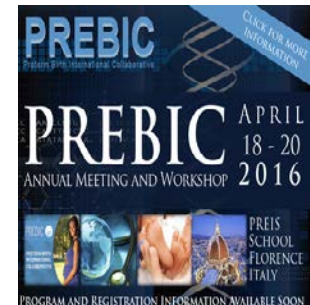
- The Preterm Birth International Collaborative (PREBIC) Inc. is a not for profit organisation funded by WHO and March of Dimes
- Working to find ways of 1) identifying women who have an increased risk of delivering too early, 2) understanding the underlying mechanisms and developing ways to prevent preterm birth.



Members



- Multinational network of experts focused on the prevention of preterm birth through basic, epidemiologic, and applied clinical research.
- Structured in research expertise nodes:
 - Biomarkers
 - Nutrition
 - Global Perspectives
 - Systems Biology
 - **Epidemiology, co-led by S.dolan and M.Kramer from McGill.**



Aims

- Develop global collaborative research into preterm birth
- Combine the resources of multiple research groups across multiple geographic populations
- Encourage young researchers to work in international collaborative multidisciplinary teams
- Further the understanding of the mechanisms leading to preterm birth
- Create scientific guidelines for global research in preterm birth



Euro-peristat contribution to PREBIC

- PREBIC-EWG two main priority areas:

1) how international differences in rates of very preterm birth are affected by registration of births and deaths at the limits of viability and the inclusion or stillbirths.

Variations in very preterm births rates in 30 high-income countries: are valid international comparisons possible? *SPER 2015, EuroEpi2015 submitted at BJOG*

2) the extent to which obstetric interventions affect rates and trends of singleton late preterm birth

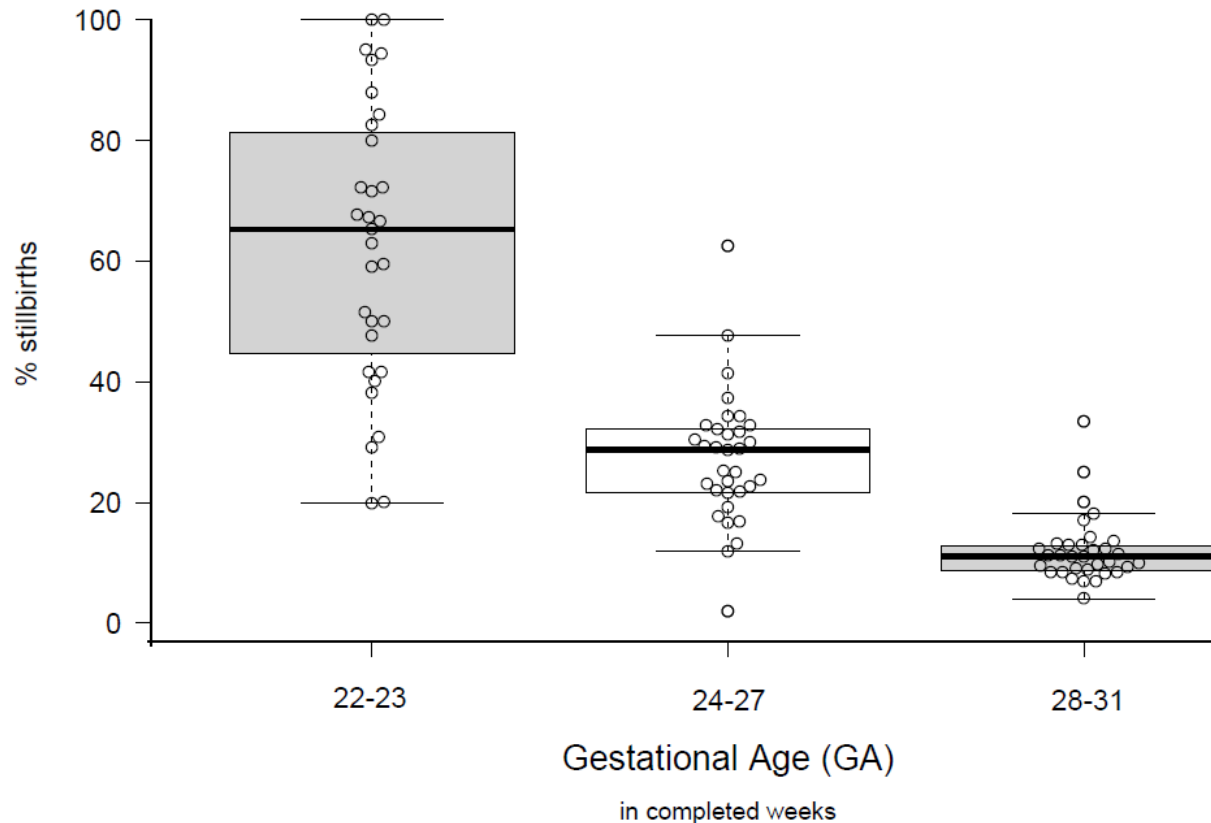
Do international variations in the preterm birth rate reflect overall differences in the gestational age distribution? *SPER 2016, To be submitted in June*

- Also, to examine gestation specific mortality rates and how these relate to trends in preterm birth rates – A. Hindori-Mohangoo

→ Data from other PREBIC countries (US, Japan and Canada) added to Euro-Peristat database

Project 1: Differences in very preterm birth rates

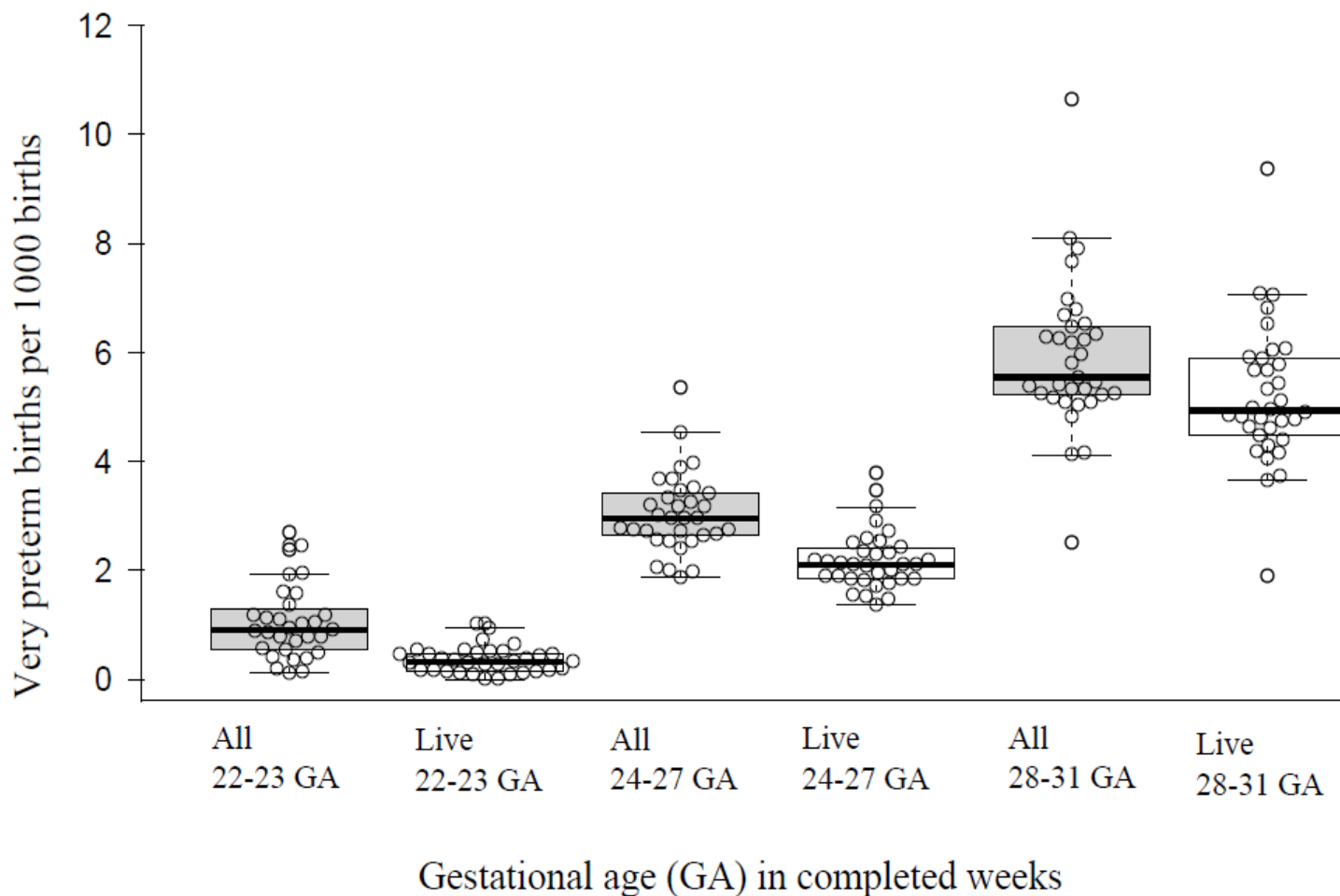
- Preterm birth rates vary widely across countries – VPT?
- Concerns about differences in registration practices for births and deaths
(GA vs. BW criteria, TOP vs. spontaneous stillbirths)



NOTE: (1) Center lines show the medians; box limits indicate the 25th and 75th percentiles; whiskers extend 1.5 times the interquartile range from the 25th and 75th percentiles; data points are plotted as open circles. (2) In the UK: Northern Ireland and UK: England and Wales, data were provided starting at 24 weeks GA.

Stillbirths as a percent of singleton very preterm births by gestational age subgroups in 30 countries in 2010

Live very preterm singleton births rates by gestational age subgroups in 30 countries in 2010



Total 22 -31 weeks GA		Total 24 -31 weeks GA reference group		Live 24 -31 weeks GA	
Country	Rate	Country	Rate	Country	Rate
Iceland	5.7	Iceland	5.2	Iceland	4.0
Finland	6.7	Finland	6.1	Finland	5.2
Japan	7.6	Japan	6.7	Japan	5.6
Sweden	7.7	Sweden	7.0	France	5.7
Italy	8.0 3	Malta	7.2	Malta	5.7
Slovakia	8.2	Switzerland	7.3	Sweden	6.0
Norway	8.3	Norway	7.5	Luxembourg	6.0
Malta	8.3	Italy	7.7 3	Switzerland	6.2
Swit zerland	8.5	Czech Republic	7.8	BE: Wallonia	6.4 2
Ireland	8.7	Denmark	8.0	Norway	6.6
Portugal	8.8	France	8.0	BE: Flanders	6.7 2
BE: Wallonia	9.0 2	Slovakia	8.1	Czech Republic	6.8
Lithuania	9.0	BE: Wallonia	8.1 2	Ireland	6.8
Denmark	9.1	Ire land	8.2	Lithuania	6.9
BE: Flanders	9.3 2	Canada (2008)	8.2	Canada (2008)	7.0
Poland	9.5	BE: Flanders	8.3 2	Denmark	7.0
Canada (2008)	9.5	Lithuania	8.3	Italy	7.0 3
France	9.6	Poland	8.5	Slovenia	7.2
UK: Northern Ireland	9.8 2	Luxembourg	8. 6	Poland	7.3
Spain	10.0 3	Portugal	8.7	Netherlands	7.3
Estonia	10.0	The Netherlands	8.8	Portugal	7.4
Luxembourg	10.1	Estonia	9.2	Slovakia	7.5
Czech Republic	10.2	UK: Northern Ireland	9.3 2	UK: Northern Ireland	7.9 2
Cyprus (2007)	10.2	Slove nia	9.5	Estonia	8.2
Slovenia	10.6	Austria	9.6	UK: Scotland	8.3 2
Austria	10.8	Spain	9.6 3	Austria	8.5
Germany	10.9	Cyprus (2007)	9.8	UK: England and Wales	8.6 2
UK: England and Wales	11.0 2	Germany	10.0	Cyprus (2007)	8.3 2
UK: Scotland	11.1 2	UK: Scotland	10.4 2	Spain	8.9 3
Netherlands	11.5	UK: England and Wales	10.5 2	Germany	8.9
Romania	11.5	Romania	11.4	Latvia	9.4
Latvia	12.0	Latvia	11.5	BE: Brussels	10.0 2
United States	14.1	United States	12.2	Romania	10.7
BE: Brussels	15.7 2	BE: Brussels	13.3 2	United States	10.8

Conclusions and message

- National routine data systems can be used for international comparisons of VPT birth rates
- Registration practices for births and deaths have a clear impact on country rates and rankings.
- However there are also true underlying rate differences between countries

➤ Necessity of adopting a standardized approach:

We recommend using data on all births at 24 weeks GA and over after excluding TOP.

Other PREBIC EWG themes

- Late preterm and early term birth: role of provider-initiated obstetric intervention in explaining temporal trends across six high-income countries in North America and Europe
- Adverse infant consequences of discrepant LMP-US GA estimates
- WHO global survey analysis of early and late PTB

Supplementary slides

Differences in registration practices

Table 1. Availability of data on all births and deaths starting at 22 weeks of gestation, excluding TOP in routine data systems of 32 countries. N= 9,265,572 singleton births

Study inclusion criteria: Birth and deaths from singleton pregnancies without TOP starting at 22 weeks of GA ^{1,2}	Other inclusion criteria for stillbirths (criteria) ¹	Not able to exclude TOP ¹
Canada Denmark Estonia France Japan Latvia Lithuania Malta Romania Slovakia Finland Norway Sweden Switzerland United States	Austria (500g) Germany (500g) Ireland (500g) Italy (180 days) ³ Poland (500g) Portugal (500g, voluntary data at 22-23 weeks GA) Slovenia (500g) Spain (180 days) United Kingdom (24 weeks GA) UK: Scotland (voluntary at 22-23 weeks GA)	Belgium Cyprus Czech Republic Iceland Luxembourg Netherlands Slovenia Spain

NOTE: (1) All countries could report on live births starting at 22 weeks GA.(2) Stillbirths for all birthweights starting at least at 22 weeks of GA (3) data available on miscarriages before 180 days, but not by plurality.