The worldwide incidence of preterm birth: a systematic review of maternal mortality and morbidity

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Objective To analyse preterm birth rates worldwide to assess the incidence of this public health problem, map the regional distribution of preterm births and gain insight into existing assessment strategies.

Methods Data on preterm birth rates worldwide were extracted during a previous systematic review of published and unpublished data on maternal mortality and morbidity reported between 1997 and 2002. Those data were supplemented through a complementary search covering the period 2003–2007. Region-specific multiple regression models were used to estimate the preterm birth rates for countries with no data.

Findings We estimated that in 2005, 12.9 million births, or 9.6% of all births worldwide, were preterm. Approximately 11 million (85%) of these preterm births were concentrated in Africa and Asia, while about 0.5 million occurred in each of Europe and North America (excluding Mexico) and 0.9 million in Latin America and the Caribbean. The highest rates of preterm birth were in Africa and North America (11.9% and 10.6% of all births, respectively), and the lowest were in Europe (6.2%).

Conclusion Preterm birth is an important perinatal health problem across the globe. Developing countries, especially those in Africa and southern Asia, incur the highest burden in terms of absolute numbers, although a high rate is also observed in North America. A better understanding of the causes of preterm birth and improved estimates of the incidence of preterm birth at the country level are needed to improve access to effective obstetric and neonatal care.

Une traduction en français de ce résumé figure à la fin de l'article. Al final del artículo se facilita una traducción al español. الترجمة العربية لهذه الخلاصة في نهاية النص الكامل لهذه المقالة.

Introduction

Preterm birth, defined as childbirth occurring at less than 37 completed weeks or 259 days of gestation, is a major determinant of neonatal mortality and morbidity and has long-term adverse consequences for health.[1–3] Children who are born prematurely have higher rates of cerebral palsy, sensory deficits, learning disabilities and respiratory illnesses compared with children born at term. The morbidity associated with preterm birth often extends to later life, resulting in enormous physical, psychological and economic costs.[4,5] Estimates indicate that in 2005 the costs to the United States of America alone in terms of medical and educational expenditure and lost productivity associated with preterm birth were more than US$ 26.2 billion.[6]

Of all early neonatal deaths (deaths within the first 7 days of life) that are not related to congenital malformations, 28% are due to preterm birth.[7] Preterm birth rates have been reported to range from 5% to 7% of live births in some developed countries, but are estimated to be substantially higher in developing countries.[8] These figures appear to be on the rise.[9] Events leading to preterm birth are still not completely understood, although the etiology is thought to be multifactorial. It is, however, unclear whether preterm birth results from the interaction of several pathways or the independent effect of each pathway. Causal factors linked to preterm birth include medical conditions of the mother or fetus, genetic influences, environmental exposure, infertility treatments, behavioural and socioeconomic factors and iatrogenic prematurity.[9]

Approximately 45–50% of preterm births are idiopathic, 30% are related to preterm rupture of membranes (PROM) and another 15–20% are attributed to medically indicated or elective preterm deliveries.[10,11] Estimation of preterm birth rates and, ideally, their proper categorization (e.g. spontaneous versus indicated) are essential for accurate determination of global incidence in order to inform policy and programmes on interventions to reduce the risk of premature labour and delivery.

No data have been published on the global incidence of preterm birth. Preterm birth rates available from some developed countries, such as the United Kingdom, the United States and the Scandinavian countries, show a dramatic rise over the past 20 years.[6,12] Factors possibly contributing to but not completely explaining this upward trend include increasing rates of multiple births, greater use of assisted reproduction techniques, increases in the proportion of births among women over 34 years of age and changes in clinical

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practices, such as greater use of elective Caesarean section. For example, the increasing use of ultrasonography rather than the date of the last menstrual period to estimate gestational age may have resulted in larger numbers of births being classified as preterm. Changes in the definitions of fetal loss, stillbirth and early neonatal death may also have contributed to the substantial increases in preterm birth rates recorded in developed countries in the past two decades.[13,14]

In developing countries, accurate and complete population data and medical records usually do not exist. Furthermore, estimates of the rate of preterm birth in developing countries are influenced by a range of factors including varying procedures used to determine gestational age, national differences in birth registration processes, heterogeneous definitions used for preterm birth, differences in perceptions of the viability of preterm infants and variations in religious practices such as local burial customs, which can discourage the registering of preterm births.[15] These issues make measurement of preterm birth and comparisons across and between developing countries difficult.

The World Health Organization (WHO) conducted a systematic review of the worldwide incidence/prevalence of maternal mortality and morbidity in the period 1997–2002 to contribute to the knowledge base in this area.[16,17] Data extracted for that review and relevant to the estimation of preterm birth rates are used for this study, along with data from a supplementary search carried out for the years 2003–2007 to bring the estimates up to date. This manuscript presents an analysis of preterm birth rates worldwide in an effort to understand the global extent of this public health problem, gain insight into existing assessment strategies and map the regional distribution of preterm births.

Methods

Search strategy

The methods used in the WHO systematic review have been described elsewhere.[16] In brief, we searched for published and unpublished data on maternal mortality and morbidity reported between 1997 and 2002. The search strategy included reviewing 10

relevant databases, conducting manual searches, contacting experts active in the field, screening the reference lists of retrieved articles and reviewing congress abstract books.[16]

To locate data available after 2002, we performed an updated systematic search in September 2007 for national-level data on preterm birth rates using the following online resources: PubMed, MEDLINE, University of Michigan–MEDSEARCH, MD Consult, Google Scholar, Cochrane Central Register of Controlled Trials, Cochrane Database of Systematic Reviews and the Cumulative Index to Nursing and Allied Health Literature (CINAHL). We also attempted to access public vital statistics and population-based medical records, including web sites of the ministries of health of the 193 WHO Member States. Our search terms were limited to "preterm labor," "preterm labour" and/or "preterm birth" combined with a word defining each country. Eligible data sets included those presented in journal articles, national registries and information sources provided by government and international agencies through the internet. This search yielded a total of 2023 citations, of which 125 were reviewed in full text and 25 were included in the review. The modification of the search strategy for data after 2002 was based on an in-depth analysis of the effectiveness of the different databases in the larger systematic review.[18]

Selection of studies

Criteria for study inclusion in the review were availability of data on incidence/prevalence of maternal mortality or identified conditions of morbidity, specified dates of the data collection period, inclusion of data from 1990 onwards, sample size larger than 200 and a clear description of the methods used. We extracted data from the included studies using a specifically designed data extraction form that contained 48 items distributed in five modules.[16] The three modules relevant to the analysis of preterm birth rates were designed to collect information on: (i) general characteristics of the study, such as design, population and setting; (ii) preterm birth rates; and (iii) quality of the preterm birth measurement, including definition and method or procedure for diagnosis, if reported.

Representative estimates

This article does not attempt to present national-level estimates for preterm birth. Instead, its goal is to estimate the incidence and number of preterm births worldwide and map the geographical distribution of preterm births at the regional and subregional levels. The best estimates available for each country were used to produce such estimates. When the same data set was presented in multiple reports, the report providing the most comprehensive information was judged to contain the best available estimate. Data referring to specific groups of women (e.g. young adolescents aged 15–16 years or women with HIV infection, of high socioeconomic status, with suspected malaria or over 40 years of age) were not considered representative of the whole population and were disregarded.

The following types and sources of data on preterm birth, listed in order of preference, were used in the analysis.
1. Population-based national-level data were used if available for countries, regardless of any other data collected in the systematic review (either population- or hospital-based).
2. Subnational population-based data were used when available for countries with no national-level data, regardless of any other data collected in the systematic review.
3. Facility-based data were used when available for countries without national or subnational population-based data.
4. Regression model estimates were derived for countries with no existing preterm birth data.

If more than one estimate was available within the same data type and source category (see above), a decision was made through a consultative process involving predefined criteria as to which estimate should be considered the best or most representative. For countries with national-level estimates (mostly developed countries) from consecutive years, an average was calculated using data available from the five most recent years. In addition, an average estimate weighted with the size of the study was calculated if subnational data (either population- or hospital-based) were available for more than one year and/or from more than one population or hospital.

Table 1. **Variables included in the regression model, number of countries modelled, and predictive power of the model, by region, in a systematic review of the worldwide incidence of preterm birth**

Region/grouping[a]	Predictor variable[b]	No. of countries modelled/total	Adjusted R^2
Africa	Proportion of urban population Total expenditure on health Life expectancy at birth (male) Under-five mortality	30/52	0.644
Asia	Government expenditure on health Low birth weight Under-five mortality Human development index	25/47	0.424
Europe, North America[c] and Australia and New Zealand	Immunization coverage for DPT3 Total expenditure on health Government expenditure on health Healthy life expectancy at birth (adult, female)	9/43	0.421
Latin America and the Caribbean and Oceania (excluding Australia and New Zealand)	Immunization coverage for measles Per capita total expenditure on health Mortality rate (females) Low birth weight	23/37	0.603

DPT3, diphtheria, pertussis and tetanus, third and final dose.
[a] For application of models, country groupings were defined based on sociodemographic similarities.
[b] See Appendix A (http://www.who.int/reproductivehealth/publications/monitoring/en/index.html) for definitions and sources of variables.
[c] In this analysis, Mexico was included in Latin America rather than North America.

For hospital-based preterm birth estimates, results from more than one study were combined if the studies were comparable with regard to the year, type of population and characteristics of pregnancy (i.e. singleton versus all births). In cases where studies were not comparable, we included data from the study that best represented the general population (e.g. the characteristics of the population and of the pregnancies), contained the larger sample size and was conducted most recently. Studies including only singleton pregnancies took precedence over those including both singleton and multiple pregnancies. This decision was based on the general tendency to exclude multiple pregnancies from the denominator in most primary studies. If no data were available for only singleton pregnancies from a country, studies including all pregnancies were considered. For countries where the only available study was a controlled trial and where no known relationship between preterm delivery and the intervention in question existed, both arms of the trial were combined.

Estimates provided in this analysis refer to year 2005. Coverage of available estimates at global and regional levels was defined as a percentage of the total number of live births in the region (Africa, Asia, Europe, North America excluding Mexico, Latin America and the Caribbean and Oceania) or subregion. Estimates of the number of live births for the year 2005, the regional and subregional country groupings and the development status classification used (developed, less developed, least developed) were based on those of the United Nations.[19] Fourteen countries with populations below 100 000 were excluded from the analysis.

Statistical analysis

Preterm birth rates for countries where no eligible data were available were estimated using a multiple regression model. This model aimed to capture the relationship between sociodemographic and health indicators and the preterm birth rates in countries where a rate was available. The model was then used to derive estimates and their 95% prediction intervals (95% PIs) for countries where no data were available.[20] Given that preterm birth rates are expressed as proportions, a logit transformation of the proportion (instead of the proportion itself) was modelled and then back-transformed to the original scale. Separate multiple regression models were developed for the

following country groupings: (i) Africa; (ii) Asia; (iii) Europe, North America and Australia and New Zealand (ENA); and (iv) Latin America, the Caribbean and Oceania excluding Australia and New Zealand (LCO). These groupings are based on similarities among the countries for better fit of the regression model and they differ slightly from the United Nations classification, which is used in reporting the findings. Separate models in each region provided better predictions than a unique model for the whole data set, indicating that the variation observed in the rates can best be described by different subsets of predictors.

Variables were selected for inclusion in the region-specific multiple regression models based upon their availability for all countries (Appendix A, available at: http://www.who.int/reproductivehealth/publications/monitoring/en/index.html). For each of the four regions, the best model was selected by maximizing the adjusted R-squared, a measure of prediction capacity of the model. Models with severe collinearity problems (variance inflation factor greater than 10) were not considered. Variables selected in each model and the R-squared values achieved are listed in Table 1. Since these models were selected for their

predictive power, the subset of variables included in each model should not be considered causally associated with preterm birth. Instead, such variables should be viewed as the ones producing the smallest prediction error for the specific data set analysed.

The preterm birth rate was defined as the number of preterm births divided by the number of live births. Country data (actual and model-based) were combined to produce regional and subregional estimates weighted by the total number of live births. For a region or subregion, point estimates and confidence limits for the number of preterm births were computed by multiplying the rate (point and confidence limits) by the total number of live births.

Results

Descriptive analysis

Information from studies was available for 92 out of the 179 countries included in the analysis, which represent 115.3 million births (85.8% of the estimated total number of births in the world in 2005).[19] Characteristics of the studies and the estimates derived from them are presented in Table 2.

The majority of the studies were cross-sectional analyses of prospective surveys or retrospective case records; around half applied to national and subnational populations and a large majority pertained to samples representing the general characteristics of the population. In Africa all studies except one were facility-based, whereas in Europe and North America about 80% were population-based. There was general agreement across the studies on the definition of "preterm" based on gestational week (less than 37 complete weeks), but the procedures used to define gestational age were not reported in 65% of the cases. Only five reported using ultrasonography as the diagnostic method. Most of the estimates were based on preterm rates computed using deliveries as denominators (Table 2).

Model-based estimates were derived for the remaining 87 countries, which represent only 14.2% of all births in 2005. As shown in Table 1, estimates were modelled for 30 countries in Africa, 25 countries in Asia, 9 countries in ENA and 23 in LCO. Regression models derived for Africa and LCO had better predictive power than those derived

Table 2. **Characteristics of the estimates and reports used in a systematic review to estimate the worldwide incidence of preterm birth, by region/country grouping**

Variable	Africa	Asia	Latin America and Caribbean	Developed countries[a]	Total
Total	**22**	**22**	**13**	**35**	**92**
Study design					
Cross-sectional	10	13	4	29	56
Cohort/controlled trial	3	5	2	1	11
Survey	9	4	7	5	25
Type of estimate					
Population-based: national	0	6	3	23	32
Population-based: subnational	1	5	2	5	13
Facility-based	21	11	8	7	47
Estimate based on					
Adolescents	1	1	0	0	2
Mixed ethnic group	0	1	0	0	1
Tribal group	0	2	0	0	2
Lower socioeconomic class	1	1	2	1	5
Not specific (general population)	18	15	11	29	73
Unspecified	2	2	0	5	9
Preterm birth definition					
Less than 37 weeks gestation	17	16	11	31	75
Other	1	1	1	0	3
No definition reported	4	5	1	4	14
Diagnostic procedure					
Ultrasound	2	1	0	2	5
Last menstrual period	2	4	0	6	12
Best obstetric estimate	6	0	6	0	12
Other	0	0	0	2	2
No method reported	11	18	7	25	61
Denominator used					
Live births	3	8	2	16	29
Pregnancies	1	3	4	8	16
Deliveries	18	12	7	10	47

[a] Europe, North America (excluding Mexico), Australia and New Zealand comprise the developed countries category.

for the other regions. In 3 countries (Afghanistan, Cyprus and Somalia), model-based indicators could not be computed because of missing values for one of the predictor variables. For those countries the estimated preterm rate for the United Nations subregion to which the country belongs was used in computing the global estimate.

Global incidence

We estimate that 9.6% of all births were preterm in 2005, which translates to about 12.9 million births definable as preterm (Table 3). Approximately 85% of this burden was concentrated in Africa and Asia, where 10.9 million births were preterm. About 0.5 million preterm births occurred in Europe and the same number in North America, while 0.9 million occurred in Latin America and the Caribbean.

The highest rates occurred in Africa and North America, where 11.9% and 10.6%, respectively, of the births were preterm. Europe, where 6.2% of the births were preterm, had the lowest rate (Table 3).

Discussion

To our knowledge, this is the first attempt to provide global, regional and subregional estimates of the incidence of preterm birth. The estimated 12.9 million preterm births that occurred in 2005 represent a substantial problem for already overtaxed health, education

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Table 3. **Preterm birth rates, number of preterm births by United Nations geographical region/subregion and percentage of births covered by the estimates in a systematic review of the worldwide incidence of preterm birth**

Region/subregion[a]	Preterm births		Preterm birth rate		Percent coverage of estimates[c]
	No. in 1000s	95% CI[b]	%	95% CI[b]	
World total	**12 870**	**12 228–13 511**	**9.6**	**9.1–10.1**	**85.8**
More developed countries	1 014	982–1 046	7.5	7.3–7.8	
Less developed countries	7 685	7 109–8 261	8.8	8.1–9.4	
Least developed countries	4 171	3 891–4 452	12.5	11.7–13.3	
Africa	**4 047**	**3 783–4 311**	**11.9**	**11.1–12.6**	**72.7**
Eastern	1 686	1 481–1 891	14.3	12.5–16.0	
Middle	602	535–669	11.6	10.3–12.9	
Northern	407	290–523	8.7	6.2–11.2	
Southern	228	191–265	17.5	14.6–20.3	
Western	1 125	1 036–1 215	10.1	9.3–10.9	
Asia	**6 907**	**6 328–7 486**	**9.1**	**8.3–9.8**	**90.9**
Eastern	724	650–798	3.8	3.4–4.1	
South-central	4 467	3 944–4 991	11.4	10.0–12.7	
South-eastern	1 271	1 062–1 480	11.1	9.3–13.0	
Western	396	290–501	7.9	5.8–9.9	
Central	49	21–77	3.8	1.6–5.9	
Europe	**466**	**434–498**	**6.2**	**5.8–6.7**	**94.8**
LA and the Caribbean	**933**	**858–1 009**	**8.1**	**7.5–8.8**	**79.3**
Caribbean	48	33–63	6.7	4.7–8.8	
Central America	295	263–326	9.1	8.2–10.1	
South America	591	524–658	7.9	7.0–8.8	
North America[d]	**480**	**479–482**	**10.6**	**10.5–10.6**	**100**
Oceania					**91.0**
Australia/New Zealand	20	20–20	6.4	6.3–6.6	
Rest of Oceania	16	11–20	6.4	4.6–8.2	

CI, confidence interval; PI, prediction interval.

[a] Countries categorized according to United Nations classification.

[b] Whereas PIs were calculated for country estimates based on the model, CIs were derived for the regional/subregional aggregate estimates that utilized data from studies as well as modelled estimates.

[c] Refers to the proportion of live births for which data were available and model-based estimates were not generated.

[d] Excluding Mexico, which is included under Latin America.

and social service sectors worldwide. Like many other indicators in the area of maternal and perinatal health, preterm birth rates reflect the stark health disparities between developed and developing countries. Our analysis shows that the burden of preterm birth is disproportionately concentrated in Africa and Asia, where about 85% of all preterm births occur (31% and 54%, respectively). In comparison, around 7.4% such births occur in Europe and North America together. It should be noted that the high absolute numbers and proportionate share of the overall burden in developing regions are linked to the greater number of deliveries in those regions.

Preterm birth is one of the most significant problems in perinatology. The findings of this analysis point towards the need to focus on identification of risk factors and preventive interventions in the disadvantaged regions of the world where the concentration of preterm births is highest. Moreover, striking inequalities exist between developed and developing countries in terms of the survival chances of a preterm infant. In many developing countries, infants weighing less than 2000 g (corresponding to about 32 weeks of gestation in the absence of intrauterine growth retardation) have little chance of survival. In contrast, the survival rate of infants born at 32 weeks in developed countries is similar to that of infants born at term. According to recent evidence from the United States, about 50% of infants born as early as 22–25 weeks of gestation may survive, and half of the survivors were without moderate to profound impairment at 18–22 months of age.[21,22]

Clearly, different risk factors play a role in the high rates of preterm birth in different regions. In North America, the increasing age of women giving birth, which leads to more maternal complications and Caesarean sections, may partially explain the high rates. Increased rates of multiple pregnancies may be another explanation. In Africa, on the other hand, high levels of preterm birth are probably due to intrauterine infection or lack of availability of drugs, such as tocolytic agents.[23] Identifying ways to address preventable causes of preterm birth should be a top priority in developing regions of the world.

One of the strengths of this analysis is that it was constructed on the basis

of a large systematic review aimed at mapping the epidemiological distribution of maternal and perinatal health. Using the rigorous methods of systematic reviews, including a comprehensive search strategy, we screened 64 585 citations and included 2580, of which 489 (8.2%) presented data on preterm birth.[16] To bring the data up to date, we later performed a search specifically for nationally representative data on preterm birth rates for the time period 2002–2007 and identified a further 25 data sets. Maximum efforts were made to identify regional, survey and local reports from countries where a nationalized data monitoring system does not exist or vital statistics are incomplete. The stringent inclusion and exclusion criteria used to select data on preterm births and the detailed information extracted from the primary articles ensured a structured and consistent assessment of each rate and, thus, the quality of the analysis. This strategy also allowed us to avoid bias in data evaluation and rate prediction. When estimating rates based on the statistical models, utmost care was taken to verify accuracy and reproducibility.

The data presented here should, however, be interpreted with caution. As in any systematic review, data extraction and analysis depend on the quality and strength of available primary information. Major discrepancies in study types, assessment of gestational age and population admixture existed in individual reports, as well as incomplete reporting of such characteristics. For some countries, data were obtained from medical facilities or from official agencies. The representativeness or completeness of those reports may be limited. Many of the studies included in this analysis diagnosed preterm birth on the basis of the timing of the last menstrual period or a clinical estimate rather than ultrasound. In addition, for some regions estimates of preterm births were based on a limited number of studies and sites, whereas for North America a more comprehensive range of studies was available for calculating the estimates. Limitations of data and diagnostic procedures may result in underestimation of the true incidence in a given setting. For these reasons, we did not attempt to develop country-level estimates with this data set and present here only subregional, regional and global summaries. Standard definitions and consistent measurement procedures are needed to facilitate development of more precise estimates for meaningful international comparisons.

An additional challenge for future analyses is finding ways to distinguish and quantify very early, early and late preterm births. These categories present important differences in terms of neonatal survival, short- and long-term morbidity and health resources investment, and thus are critical to analyse.

Data coverage was lower for Africa and Latin America and the Caribbean (less than 80% of deliveries) in comparison with the other regions. However, it is reassuring that the models derived for those two regions, which were used to estimate rates in a larger number of countries than the models for other regions, had better predictive power than the other models.

It should also be noted that the aggregate figures for regions and the estimates for countries used in the analysis could hide inequalities between population groups within countries and regions. For example, racial differences in preterm birth rates are well documented in studies from the United States.[24] Further reports should consider exploring such inequalities.

Conclusion

This analysis demonstrates that preterm birth is a significant perinatal health problem across the globe, not only in terms of associated mortality but also with regard to short- and long-term morbidity and financial implications for health-care systems. Very high rates are observed in North America as well as Africa, but the burden in terms of absolute numbers disproportionately affects developing countries, especially those in Africa and South Asia. Unfortunately, there are currently no effective diagnostic measures for preterm labour resulting in preterm birth, and no effective early interventions for prevention. The use of modern technology allows survival of many preterm neonates in developed countries, but such care is not widely available in developing countries. As this situation changes and countries develop and apply technologies that raise survival rates, the morbidity burden will increase. Thus, the development of strategies for improving access to effective care in developing countries must remain a top research and operational priority. Developing such strategies will depend on a better understanding of the etiology of preterm birth and improved estimates of the incidence of preterm birth at the country level. Our analysis is a step forward in this direction. ■

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Résumé

Incidence mondiale de la naissance avant terme : revue systématique de la mortalité et de la morbidité maternelle

Objectif Analyser les taux de prématurité dans le monde pour évaluer l'incidence de ce problème de santé publique, cartographier la distribution par régions des naissances avant terme et mieux connaître les stratégies d'évaluation existantes.

Méthodes Les données relatives aux naissances avant terme dans le monde ont été extraites dans le cadre d'une revue systématique antérieure des données publiées et non publiées sur la mortalité et la morbidité maternelles, produites entre 1997 et 2002. Ces données ont été complétées par une recherche supplémentaire couvrant la période 2003-2007. Des modèles de régression multiple spécifiques aux différentes régions ont été utilisés pour estimer les taux de prématurité dans les pays ne disposant pas de données.

Résultats Nous avons estimé qu'en 2005, 12,9 millions de naissances, soit 9,6 % de la natalité mondiale totale, étaient intervenues avant terme. Environ 11 millions (85 %) de ces naissances prématurées étaient concentrées en Afrique et en

Asie, tandis que l'Europe et l'Amérique du Nord (Mexique inclus) accueillaient chacune 0,5 million de naissances de ce type et l'Amérique latine et les Caraïbes 0,9 million. Les taux de prématurité les plus élevés étaient relevés en Afrique et en Amérique du Nord (11,9 % et 10,6 % de l'ensemble des naissances, respectivement) et les plus bas en Europe (6,2 %).

Conclusion La naissance avant terme constitue un important problème de santé périnatale partout dans le monde. Les pays en développement, en particulier ceux d'Afrique et du Sud de l'Asie, subissent la plus forte charge en termes absolus, bien qu'un taux de prématurité élevé soit aussi observé en Amérique du Nord. Une meilleure compréhension des causes de naissance prématurée et de meilleures estimations de l'incidence des naissances avant terme à l'échelle des pays sont nécessaires pour améliorer l'accès à des soins obstétricaux et néonatals efficaces.

Resumen

Incidencia mundial de parto prematuro: revisión sistemática de la morbilidad y mortalidad maternas

Objetivo Analizar las tasas de prematuridad a nivel mundial para evaluar la incidencia de este problema de salud pública, determinar la distribución regional de los partos prematuros y profundizar en el conocimiento de las actuales estrategias de evaluación.

Métodos Los datos utilizados sobre las tasas de prematuridad a nivel mundial se extrajeron a lo largo de una revisión sistemática anterior de datos publicados e inéditos sobre la mortalidad y morbilidad maternas notificados entre 1997 y 2002. Esos datos se complementaron mediante una búsqueda que abarcó el periodo 2003–2007. Las tasas de prematuridad de los países sin datos se estimaron mediante modelos de regresión múltiple específicos para cada región.

Resultados Estimamos que en 2005 se registraron 12,9 millones de partos prematuros, lo que representa el 9,6% de todos los nacimientos a nivel mundial. Aproximadamente 11 millones (85%)

de ellos se concentraron en África y Asia, mientras que en Europa y América del Norte (excluido México) se registraron 0,5 millones en cada caso, y en América Latina y el Caribe, 0,9 millones. Las tasas más elevadas de prematuridad se dieron en África y América del Norte (11,9% y 10,6% de todos los nacimientos, respectivamente), y las más bajas en Europa (6,2%).

Conclusión El parto prematuro es un problema de salud perinatal importante en todo el mundo. Los países en desarrollo, especialmente de África y Asia meridional, son los que sufren la carga más alta en términos absolutos, pero en América del Norte también se observa una tasa elevada. Es necesario comprender mejor las causas de la prematuridad y obtener estimaciones más precisas de la incidencia de ese problema en cada país si se desea mejorar el acceso a una atención obstétrica y neonatal eficaz.

ملخص

معدل الانتشار العالمي لولادات الخدج: مراجعة منهجية لمعدلات وفيات ومراضة الأمهات

الغرض: تحليل معدلات ولادات الخدّج عالمياً لقياس انتشار هذه المشكلة الصحية العمومية، وتحديد خرائط التوزيع الإقليمي لولادات الخدج، والإلمام باستراتيجيات التقييم الموجودة.

الطريقة: جرى استخلاص البيانات الخاصة بالمعدلات العالمية لولادات الخدج أثناء مراجعة منهجية سابقة للبيانات المنشورة وغير المنشورة الخاصة بوفيات ومراضة الأمهات المسجلة بين عامي 1997 و 2002. وألحق بهذه البيانات بحث تكميلي يغطي الفترة 2003 – 2007. واستُخدمت نماذج تحوف متعددة خاصة بالأقاليم لتقدير معدلات ولادات الخدّج للبلدان التي ليس لديها بيانات.

الموجودات: قدّر الباحثون أن في عام 2005، كان هناك 12.9 مليون ولادة خدج، أو 9.6% من جميع الولادات العالمية. وتتركز حوالي 11 مليون (85%)

من هذه الولادات في قارتي أفريقيا وأسيا، بينما يقع حوالي نصف مليون من هذه الولادات في كل من أوروبا وشمال أمريكا (باستثناء المكسيك)، وتقع 0.9 مليون ولادة خدج في أمريكا اللاتينية ومنطقة الكاريبي. ووقعت أعلى معدلات ولادات الخدج في أفريقيا وشمال أمريكا (11.9% و 10.6% من جميع الولادات، بالترتيب)، ووقعت أقل المعدلات في أوروبا (6.2%).

الاستنتاج: تُعد ولادة الخدج مشكلة صحية عمومية هامة في الفترة المحيطة بالولادة في جميع أنحاء العالم. وتنوء البلدان النامية وحدها، ولاسيما في أفريقيا وجنوب أسيا من أثقل الأعباء من حيث الأعداد المطلقة، بالرغم من مشاهدة معدلات مرتفعة أيضاً في شمال أمريكا. ومن الضروري الإلمام الجيد بأسباب ولادات الخدج وتحسين مستوى تقدير وقوعها على الصعيد القطري من أجل تحسين الحصول على رعاية فعالة للحمل والولادة.

Research
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