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**Publication**

World Health Statistics 2016: Monitoring health for the SDGs

The World Health Statistics series is WHO’s annual compilation of health statistics for its 194 Member States. World Health Statistics 2016 focuses on the proposed health and health-related Sustainable Development Goals (SDGs) and associated targets. It represents an initial effort to bring together available data on SDG health and health-related indicators. In the current absence of official goal-level indicators, summary measures of health such as (healthy) life expectancy are used to provide a general assessment of the situation.

**Birth Defects**

Zika Virus and Birth Defects — Reviewing the Evidence for Causality


Sonja A. Rasmussen, M.D., Denise J. Jamieson, M.D., M.P.H., Margaret A. Honein, Ph.D., M.P.H., and Lyle R. Petersen, M.D., M.P.H

**Summary**

The Zika virus has spread rapidly in the Americas since its first identification in Brazil in early 2015. Prenatal Zika virus infection has been linked to adverse pregnancy and birth outcomes, most notably microcephaly and other serious brain anomalies. To determine whether Zika virus infection during pregnancy causes these adverse outcomes, we evaluated available data using criteria that have been proposed for the assessment of potential teratogens. On the basis of this review, we conclude that a causal relationship exists between prenatal Zika virus infection and microcephaly and other serious brain anomalies. Evidence that was used to support this causal relationship included Zika virus infection at times during prenatal development that were consistent with the defects observed; a specific, rare phenotype involving microcephaly and associated brain anomalies in fetuses or infants with presumed or confirmed congenital Zika virus infection; and data that strongly support biologic
plausibility, including the identification of Zika virus in the brain tissue of affected fetuses and infants. Given the recognition of this causal relationship, we need to intensify our efforts toward the prevention of adverse outcomes caused by congenital Zika virus infection. However, many questions that are critical to our prevention efforts remain, including the spectrum of defects caused by prenatal Zika virus infection, the degree of relative and absolute risks of adverse outcomes among fetuses whose mothers were infected at different times during pregnancy, and factors that might affect a woman’s risk of adverse pregnancy or birth outcomes. Addressing these questions will improve our ability to reduce the burden of the effects of Zika virus infection during pregnancy.

Folic acid fortification and prevalences of neural tube defects, orofacial clefts, and gastroschisis in California, 1989 to 2010.


Yang W, Carmichael SL, Shaw GM.

Abstract

BACKGROUND

We examined whether prevalences of neural tube defects (NTDs), orofacial clefts, and gastroschisis changed more rapidly after than before folic acid fortification in California.

METHODS

This population-based study used vital statistics and birth defects registry data. The study population included all live births and stillbirths delivered in central California counties from 1989 to 2010. Cases included deliveries with NTDs, orofacial clefts, and gastroschisis. Weighted least squares regression was used to estimate slopes during prefortification (before 1997) and postfortification (after 1998), respectively. The difference of the two slopes with the 95% confidence interval (CI) was calculated.

RESULTS

For all NTDs combined, slopes indicated that NTD prevalence was decreasing by 8.7 (slope: -8.7; 95% CI, -13.5–3.9) cases per 100,000 deliveries per year before fortification and by 1.7 (slope: -1.7; 95% CI, -3.7-0.3) after fortification; thus the decline had slowed by 7.0 (95% CI, 2.7-11.3) cases per 100,000 deliveries per year. For orofacial clefts, slopes for cleft lip with/without palate as well as for cleft palate alone indicated that the postfortification slope was lower than the prefortification slope suggesting a more accelerated decrease in the postfortification time period. For gastroschisis, the slope after fortification was lower compared with prefortification, indicating a less accelerated prevalence increase in the postfortification time period. Stratification by race/ethnicity did not substantially alter results.

CONCLUSIONS

We observed a slower decline in prevalence of NTDs, an emergence of a decline in orofacial clefts, and a slower increase in gastroschisis, during the postfortification period in central California, relative to the prefortification period.

Newborn

Stillbirths: rates, risk factors, and acceleration towards 2030.


Abstract

An estimated 2.6 million third trimester stillbirths occurred in 2015 (uncertainty range 2.4-3.0 million). The number of stillbirths has reduced more slowly than has maternal mortality or mortality in children younger than 5 years, which were explicitly targeted in the Millennium Development Goals. The Every Newborn Action Plan has the target of 12 or fewer stillbirths per 1000 births in every country by 2030. 94 mainly high-income countries and upper middle-income countries have already met this target, although with noticeable disparities. At least 56 countries, particularly in Africa and in areas affected by conflict, will have to more than double present progress to reach this target. Most (98%) stillbirths are in low-income and middle-income countries. Improved care at birth is essential to prevent 1.3 million
(uncertainty range 1.2-1.6 million) intrapartum stillbirths, end preventable maternal and neonatal deaths, and improve child development. Estimates for stillbirth causation are impeded by various classification systems, but for 18 countries with reliable data, congenital abnormalities account for a median of only 7.4% of stillbirths. Many disorders associated with stillbirths are potentially modifiable and often coexist, such as maternal infections (population attributable fraction: malaria 8.0% and syphilis 7.7%), non-communicable diseases, nutrition and lifestyle factors (each about 10%), and maternal age older than 35 years (6.7%). Prolonged pregnancies contribute to 14.0% of stillbirths. Causal pathways for stillbirth frequently involve impaired placental function, either with fetal growth restriction or preterm labour, or both. Two-thirds of newborns have their births registered. However, less than 5% of neonatal deaths and even fewer stillbirths have death registration. Records and registrations of all births, stillbirths, neonatal, and maternal deaths in a health facility would substantially increase data availability. Improved data alone will not save lives but provide a way to target interventions to reach more than 7000 women every day worldwide who experience the reality of stillbirth.

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**Topical emollient for preventing infection in preterm infants.**


Cleminson J, McGuire W.

**Abstract**

**BACKGROUND**

Breakdown of the developmentally immature epidermal barrier may permit entry for micro-organisms leading to invasive infection in preterm infants. Topical emollients may improve skin integrity and barrier function and thereby prevent invasive infection, a major cause of mortality and morbidity in preterm infants.

To assess the effect of topical application of emollients (ointments, creams, or oils) on the incidence of invasive infection, other morbidity, and mortality in preterm infants.

**METHODS**

We used the standard search strategy of the Cochrane Neonatal Review group to search the Cochrane Central Register of Controlled Trials (CENTRAL 2015, Issue 7), MEDLINE via PubMed (1966 to August 2015), EMBASE (1980 to August 2015), and CINAHL (1982 to August 2015). We also searched clinical trials databases, conference proceedings, previous reviews and the reference lists of retrieved articles for randomised controlled trials and quasi-randomised trials.

Randomised or quasi-randomised controlled trials that assessed the effect of prophylactic application of topical emollient (ointments, creams, or oils) on the incidence of invasive infection, mortality, other morbidity, and growth and development in preterm infants.

Two review authors assessed trial eligibility and risk of bias and undertook data extraction independently. We analysed the treatment effects in the individual trials and reported the risk ratio and risk difference for dichotomous data and mean difference for continuous data, with respective 95% confidence intervals. We used a fixed-effect model in meta-analyses and explored the potential causes of heterogeneity in subgroup analyses.

**RESULTS**

We identified 18 eligible primary publications (21 trial reports). A total of 3089 infants participated in the trials. The risk of bias varied with lack of clarity on methods to conceal allocation in half of the trials and lack of blinding of caregivers or investigators in all of the trials being the main potential sources of bias. Eight trials (2086 infants) examined the effect of topical ointments or creams. Most participants were very preterm infants cared for in health-care facilities in high-income countries. Meta-analyses did not show evidence of a difference in the incidence of invasive infection (typical risk ratio (RR) 1.13, 95% confidence interval (CI) 0.97 to 1.31; low quality evidence) or mortality (typical RR 0.87, 95% CI 0.75 to 1.03; low quality evidence). Eleven trials (1184 infants) assessed the effect of plant or vegetable oils. Nine of these trials were undertaken in low- or middle-income countries and all were based in health-care facilities rather than home or community settings. Meta-analyses did not show evidence of a difference in the incidence of invasive infection (typical RR 0.71, 95% CI 0.51 to 1.01; low quality evidence) or mortality (typical RR 0.94, 95% CI 0.81 to 1.08; moderate quality evidence). Infants massaged with vegetable oil had a higher rate of weight gain (about 2.55 g/kg/day; 95% CI 1.76 to
3.34), linear growth (about 1.22 mm/week; 95% CI 1.01 to 1.44), and head growth (about 0.45 mm/week; 95% CI 0.19 to 0.70). These meta-analyses contained substantial heterogeneity.

CONCLUSIONS
The available data do not provide evidence that the use of emollient therapy prevents invasive infection or death in preterm infants in high-, middle- or low-income settings. Some evidence of an effect of topical vegetable oils on neonatal growth exists but this should be interpreted with caution because lack of blinding may have introduced caregiver or assessment biases. Since these interventions are low cost, readily accessible, and generally acceptable, further randomised controlled trials, particularly in both community- and health care facility-based settings in low-income countries, may be justified.