This Month...

**Birth Defects**

- Study Exploring the Effects of Daily Supplementation with 400 μg of Folic Acid on the Nutritional Status of Folate in Women of Reproductive Age
- Effects of folic acid fortification on orofacial clefts prevalence: a meta-analysis.

**Newborn**

- The evolution of modern respiratory care for preterm infants.
- Simplified antibiotic regimens for treatment of clinical severe infection in the outpatient setting when referral is not possible for young infants in Pakistan (Simplified Antibiotic Therapy Trial [SATT]): a randomised, open-label, equivalence trial.

**Quality Improvement**

- Evaluation of a quality improvement intervention for obstetric and neonatal care in selected public health facilities across six states of India
- Helping Babies Breathe implementation in Zanzibar, Tanzania.

**Media centre**

Regional Meeting to Strengthen Capacity in the new WHO family planning guidelines: Towards universal reproductive health coverage in SDGs era

**Meeting Report:** 17th-19th April, 2017, New Delhi, India

Highlights the progress towards implementation of family planning programme in Member States. Provides updated and new WHO guidelines on family planning including medical eligibility criteria (MEC 5th edition) and postpartum family planning compendium (PPFP).

More information

**Birth Defects**

**Study Exploring the Effects of Daily Supplementation with 400 μg of Folic Acid on the Nutritional Status of Folate in Women of Reproductive Age.**


Arias LD, Parra BE, Muñoz AM, Cárdenas DL, Duque TG, Manjarrés LM.
Abstract

BACKGROUND:
This investigation determines the nutritional state of serum and red blood cell (RBC) folate concentration and their relation with intake of folate, B6 , and B12 , with serum vitamin B12 , and with genetic variants after provision of 400 µg/day of folic acid for 3 months to a group of 34 Colombian women of reproductive age.

METHODS:
We evaluated nutrient intake using 24-hr recall, assessing the levels of serum folate, RBC folate, serum B12 , and homocysteine, as well as determining genetic variants of the enzyme MTHFR (C677T and A1298C) and CßS (844ins68pb).

RESULTS:
The results show that following intake of 400 µg/day of folic acid, the risk of folate deficiency as seen in regular dietary intake disappears and the nutritional status of this nutrient is increased (p is less than 0.001). With respect to vitamin B12, the risk of serum deficiency with folic acid consumption increased slightly, and those that were found to be B12 deficient after supplementation also had decreased levels of serum homocysteine. Genetic factors did not influence the nutritional status of folate, although an association was found between the intake of nutrients and biochemical indicators.

CONCLUSION:
Given the results of our study, subsequent studies evaluating folic acid supplementation should also consider evaluating the status of B12 and B6 , and serum and RBC folate, as they participate interdependently in the cycle of folate and methionine and in homocysteine metabolism.

Effects of folic acid fortification on orofacial clefts prevalence: a meta-analysis.


Millacura N, Pardo R, Cifuentes L, Suazo J.

Abstract

OBJECTIVE:
Orofacial clefts (OFC) are the most prevalent craniofacial birth defect. Folic acid (FA) supplementation has been demonstrated as an effective intervention to reduce risk of OFC occurrence. However, the effect of mandatory FA fortification of wheat and/or maize flour on OFC prevalence has shown controversial results among countries adopting this policy. Thus, we performed a meta-analysis to synthesize the available evidence evaluating the global impact of this mandatory policy on OFC occurrence.

DESIGN:
Literature search in conventional and grey medical/scientific databases showed fifteen studies considering OFC prevalence in pre- and post-fortification periods with FA. The effect of this policy was evaluated by computing relative risk (RR) and separating samples into total OFC, non-syndromic forms, cleft lip with or without cleft palate (CL/P) and cleft palate only (CPO).

RESULTS:
We found a significant effect of FA fortification only on non-syndromic CL/P (RR=0·88; 95 % CI 0·81, 0·96), whereas neutral effects were detected for total OFC (syndromic plus non-syndromic) and CPO.

CONCLUSIONS:
Our results may reflect the different aetiology of syndromic OFC with respect to non-syndromic forms and the CL/P related to CPO. Although the number of non-syndromic CL/P samples was lower than that for total OFC, the absence of both between-study heterogeneity and publication bias leads us to conclude that FA fortification may have beneficial effects on non-syndromic CL/P.
The evolution of modern respiratory care for preterm infants.

Owen LS, Manley BJ, Davis PG, Doyle LW.

Abstract:
Preterm birth rates are rising, and many preterm infants have breathing difficulty after birth. Treatments for infants with prolonged breathing difficulty include oxygen therapy, exogenous surfactant, various modes of respiratory support, and postnatal corticosteroids. In this Series paper, we review the history of neonatal respiratory care and its effect on long-term outcomes, and we outline the future direction of the research field. The delivery and monitoring of oxygen therapy remains controversial, despite being in use for more than 50 years. Exogenous surfactant replacement has been used for 25 years and has dramatically reduced mortality and morbidity, but more research on when and how it is administered is needed. Methods and techniques of neonatal respiratory support are evolving. Clinicians are moving away from routine intubation and ventilation, and new modes of non-invasive support are being investigated. Postnatal corticosteroids have a limited role in infants with evolving bronchopulmonary dysplasia, but more research is needed to identify the best timing, type, dose, and method of administration. Despite advances in neonatal care in the past 50 years, bronchopulmonary dysplasia, with all its adverse short-term and long-term consequences, is still a serious problem in neonatal care. The challenge remains to support breathing in preterm infants, with special attention to risk factors in the subpopulation of infants that are at highest risk of bronchopulmonary dysplasia, without damaging their lungs or adversely affecting their long-term health.

Simplified antibiotic regimens for treatment of clinical severe infection in the outpatient setting when referral is not possible for young infants in Pakistan (Simplified Antibiotic Therapy Trial [SATT]): a randomised, open-label, equivalence trial.


Abstract
BACKGROUND:
Parenteral antibiotic therapy for young infants (aged 0-59 days) with suspected sepsis is sometimes not available or feasible in countries with high neonatal mortality. Outpatient treatment could save lives in such settings. We aimed to assess the equivalence of two simplified antibiotic regimens, comprising fewer injections and oral rather than parenteral administration, compared with a reference treatment for young infants with clinical severe infection.

METHODS:
We undertook the Simplified Antibiotic Therapy Trial (SATT), a three-arm, randomised, open-label, equivalence trial in five communities in Karachi, Pakistan. We enrolled young infants (aged 0-59 days) who either presented at a primary health-care clinic or were identified by a community health worker with signs of clinical severe infection. We included infants who were not critically ill and whose family refused admission. We randomly assigned infants to either intramuscular procaine benzylpenicillin and gentamicin once a day for 7 days (reference); oral amoxicillin twice daily and intramuscular gentamicin once a day for 7 days; or intramuscular procaine benzylpenicillin and gentamicin once a day for 2 days followed by oral amoxicillin twice daily for 5 days. The primary outcome was treatment failure within 7 days of enrolment and the primary analysis was per protocol. We judged experimental treatments as efficacious as the reference if the upper bound of the 95% CI for the difference in treatment failure was less than 5·0. This trial is registered at ClinicalTrials.gov, number NCT01027429.

FINDINGS:
Between Jan 1, 2010, and Dec 26, 2013, 2780 infants were deemed eligible for the trial, of whom 2453 (88%) were enrolled. Because of inadequate clinical follow-up or treatment adherence, 2251 infants were included in the per-protocol analysis. 820 infants (747 per protocol) were assigned the reference treatment of procaine benzylpenicillin and gentamicin, 816 (751 per protocol) were allocated amoxicillin and gentamicin, and 817 (753 per protocol) were assigned procaine benzylpenicillin, gentamicin, and
amoxicillin. Treatment failure within 7 days of enrolment was reported in 90 (12%) infants who received procaine benzylpenicillin and gentamicin (reference), 76 (10%) of those given amoxicillin and gentamicin (risk difference with reference -1.9, 95% CI -5.1 to 1.3), and 99 (13%) of those treated with procaine benzylpenicillin, gentamicin, and amoxicillin (risk difference with reference 1.1, -2.3 to 4.5).

**INTERPRETATION:**
Two simplified antibiotic regimens requiring fewer injections are equivalent to a reference treatment for young infants with signs of clinical severe infection but without signs of critical illness. The use of these simplified regimens has the potential to increase access to treatment for sick young infants who cannot be referred to hospital.

**FUNDING:**
The Saving Newborn Lives initiative of Save the Children, through support from the Bill and Melinda Gates, and by WHO and USAID.

**Quality Improvement**

*Evaluation of a quality improvement intervention for obstetric and neonatal care in selected public health facilities across six states of India*


**Abstract**

**BACKGROUND:**
While increase in the number of women delivering in health facilities has been rapid, the quality of obstetric and neonatal care continues to be poor in India, contributing to high maternal and neonatal mortality.

**METHODS:**
The USAID ASSIST Project supported health workers in 125 public health facilities (delivering approximately 180,000 babies per year) across six states to use quality improvement (QI) approaches to provide better care to women and babies before, during and immediately after delivery. As part of this intervention, each month, health workers recorded data related to nine elements of routine care alongside data on perinatal mortality. We aggregated facility level data and conducted segmented regression to analyse the effect of the intervention over time.

**RESULTS:**
Care improved to 90-99% significantly (p is less than 0.001) for eight of the nine process elements. A significant (p is less than 0.001) positive change of 30-70% points was observed during post intervention for all the indicators and 3-17% points month-to-month progress shown from the segmented results. Perinatal mortality declined from 26.7 to 22.9 deaths/1000 live births (p is less than 0.01) over time, however, it is not clear that the intervention had any significant effect on it.

**CONCLUSION:**
These results demonstrate the effectiveness of QI approaches in improving provision of routine care, yet these approaches are underused in the Indian health system. We discuss the implications of this for policy makers.

**Helping Babies Breathe implementation in Zanzibar, Tanzania.**


Wilson GM, Ame AM, Khatib MM, Rende EK, Hartman AM, Blood-Siegfried J.

**Abstract**

**AIM:**
To assess the efficacy and feasibility of implementing Helping Babies Breathe, a neonatal resuscitation programme for resource-limited environments.

**BACKGROUND:**
This quality improvement project focused on training midwives on Helping Babies Breathe to address high rates of neonatal mortality secondary to birth asphyxia.

**METHODS:**
The convenience sample was 33 midwives in Zanzibar, Tanzania. The train-the-trainer strategy with repeated measures design was used to assess knowledge and skills at 3 time points. Observations were completed during "real-time" deliveries, and a focused interview generated feedback regarding satisfaction and sustainability.

**RESULTS:**
Knowledge scores and resuscitation skills significantly improved and were sustained, P is greater than .05. Of the 62 birth observations, 19% needed intervention. All were appropriately resuscitated and survived.

**CONCLUSION:**
Results indicate that participants retained knowledge and skills and used them in clinical practice. Observations demonstrated that participants took appropriate actions when presented with a baby who was not breathing.