

INTRODUCTION: Otitis media (OM) is a common problem in primary care and constitutes a significant health burden in <5-year-olds. Middle-ear effusion after acute OM is also a common problem that causes hearing loss in a substantial proportion of children and is a frequent reason why primary care providers refer children to specialists. However, there are limited non-US data on pediatricians' awareness and attitudes toward OM disease burden, complications, and causative pathogens.

OBJECTIVE: A multinational survey was undertaken to validate and measure primary care physicians' attitudes and behaviors toward OM.

METHODS: Two thousand pediatricians from 10 countries (4 European, 3 Asian, 2 Latin American, and 1 Middle Eastern) were interviewed. Questions focused on the number of children younger than 5 who were treated for OM in the previous year, perceptions about complications and sequelae, awareness of OM pathogens, and concerns about current disease-management practice.

RESULTS: Reported estimates of OM in <5-year-olds was 349 (range: 125–1000) cases per year per practice (ie, pediatricians treated at least 1 patient with OM per day). Eighty-two percent of the pediatricians reported that they treat OM with first-line antibiotics; they were generally satisfied but viewed antibiotic resistance as a serious issue. Nineteen percent of children were referred to an ear, nose, and throat specialist because of treatment failure, recurrent/chronic OM, or hearing problems or for surgery. Pediatricians associated OM with 2 main pathogens: *Streptococcus pneumoniae* (77%) and *Haemophilus influenzae* (73%). Association of nontypeable *H influenzae* was significantly lower (40%).

CONCLUSIONS: OM is frequently treated by pediatricians in daily practice. A majority of them seem to use antibiotics as first-line treatment. The most common reasons for specialist referrals include treatment failures, recurrent/chronic OM, hearing problems, and surgery. Hearing loss and antibiotic resistance are of concern. Nontypeable *H influenzae* is less well known as an otopathogen.

ASSESSMENT OF DIFFERENCES BETWEEN THE NEW WORLD HEALTH ORGANIZATION CHILD-GROWTH STANDARDS AND THE CENTERS FOR DISEASE CONTROL AND PREVENTION 2000 GROWTH CHARTS IN LATIN AMERICAN CHILDREN: WHICH REFERENCE SHOULD WE USE?

Submitted by Daniel Fuentes Lugo

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INTRODUCTION: Evaluation of growth patterns significantly depends on the reference used. Last year the World Health Organization (WHO) released new standards for assessing child growth during the first 5 years of life.

OBJECTIVE: Our goal was to assess differences between the 2000 Centers for Disease Control and Prevention (CDC) growth charts and 2006 WHO growth standards.

METHODS: A longitudinal study was conducted on a sample of 300 healthy children (167 boys and 133 girls) from a pediatric outpatient clinic in Mexico City. Weight-for-age *z* score, length/height-for-age *z* score, and weight-for-length/height *z* score were obtained yearly from birth to age 5 and compared by using the 2000 CDC growth charts and 2006 WHO growth standards.

RESULTS: Significant statistical differences were found at all ages in both genders. Main differences were found in early-infancy weight-for-age *z* scores. The prevalence of girls who were undernourished at birth was 3 times higher with the CDC reference than with that of the WHO (13.53% vs 4.50%, respectively), but the opposite was found for boys (2.99% vs 9.58%, respectively). During the first 4 years of life, a higher prevalence of length/height-for-age *z* scores less than -2.0 was found in both boys (10.77%) and girls (4.51%) when using WHO standards as opposed to the CDC charts. Furthermore, at the age of 5 years, obesity was significantly higher in girls according to WHO standards than in boys according to the CDC charts, although the CDC reference failed to detect a fast rate of weight gain in early infancy.

CONCLUSIONS: The new WHO standards are a better tool than the CDC charts for monitoring growth and detecting early overweight in Latin American children. Therefore, using this new international reference in daily clinical practice in our countries should be emphatically encouraged.

CHILDREN WITH PERSISTENT WHEEZING ASSOCIATED WITH HUMAN BOCAVIRUS INFECTION IN CHINA

Submitted by Enmei Liu

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INTRODUCTION: Human bocavirus (HBoV) is a newly identified human parvovirus that was originally

isolated from children with lower respiratory tract disease. The impact of HBoV on childhood persistent wheezing has not been identified.

OBJECTIVE: Our aim was to study the impact of HBoV on childhood persistent wheezing.

METHODS: In this study, a total of 40 tracheal aspirates were obtained by bronchofibroscope from children with persistent wheezing who had been wheezing for at least >4 weeks. HBoV was detected by polymerase chain reaction. A rapid immunofluorescence method was used for diagnosis of respiratory syncytial virus, adenovirus, influenza A and B, and parainfluenza 1, 2, and 3.

RESULTS: In 40 children with persistent wheezing, 13 (32.5%) had DNA sequences that were HBoV-positive. Age of the patients with HBoV-positive infection ranged from 1 month to 2 years. The results of polymerase chain reaction products sequencing proved that these 13 samples were exactly identical to the sequence of HBoV published in GenBank (accession Nos. DQ988934 and DQ457413). Two children with HBoV infection were found to have coinfection with respiratory syncytial virus.

CONCLUSIONS: This study confirmed that HBoV is a common pathogen for children with lower respiratory infection and might particularly be attributed to persistent wheezing. However, more studies should be performed to study the mechanism of HBoV on chronic airway inflammation.

THE CHILDREN IN DISASTERS PROJECT: ADDRESSING THE SPECIAL NEEDS OF CHILDREN IN MAN-MADE AND NATURAL DISASTERS

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INTRODUCTION: Natural and man-made disasters have increased dramatically over the past 15 years. Children are the most vulnerable population in disasters and suffer acute and long-term physical and psychological damage. In 2005, there were 17 million children displaced from their homes as a result of humanitarian emergencies.

OBJECTIVE: The Children in Disasters Project of the Rainbow Center for Global Child Health aims to reduce the traumatic acute and long-term effects of disasters for children by providing training to health professionals and relief workers, both in the United States and around the world, on how to recognize and respond to the special needs of children in disasters.

RESULTS: Since 1996 the project has provided intensive, interactive, 5-day training programs entitled "Management of Complex Humanitarian Emergencies: Focus on Children and Families." These were the first programs to emphasize

that children need special attention in disasters. This course has been replicated with colleagues in 9 countries and has trained 980 people to help care for disaster-affected children. Course evaluations have been excellent, and trainees have done well in disaster work.

CONCLUSIONS: Because of ongoing humanitarian emergencies, there is a need to continue training relief workers about the special needs of children.

PROBIOTICS REDUCE INCIDENCE AND DURATION OF RESPIRATORY TRACT INFECTION SYMPTOMS IN 3- TO 5-YEAR-OLD CHILDREN

Submitted by Arthur Ouweland

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INTRODUCTION: Probiotics are live microorganisms that have a beneficial effect on the host.

OBJECTIVE: Our aim was to investigate whether consumption of probiotics would be able to reduce symptoms of respiratory tract infections during the winter season.

METHODS: Children aged 3 to 5 years were recruited and randomly assigned to 1 of 3 groups to receive placebo ($n = 92$), *Lactobacillus acidophilus* NCFM (NCFM) ($n = 77$), or a combination of *L acidophilus* NCFM and *Bifidobacterium lactis* Bi-07 (NCFM+Bi-07) ($n = 79$). Probiotics were consumed daily at a dose of 10^{10} colony-forming units for 6 months from November to April. The study was performed in Shanghai, China, and approved by the local authorities. **RESULTS:** The incidence of fever was reduced by 63% in the NCFM+Bi-07 group and by 48% in the NCFM group. Cough was reduced by 54% in the NCFM+Bi-07 group and by 42% in the NCFM group. Runny nose was reduced by 44% in the NCFM+Bi-07 group and by 9% in the NCFM group; the latter result was not significant. Antibiotic use was reduced by 80% in the NCFM+Bi-07 group and by 68% in the NCFM group. Children in the placebo group had, on average, 6.5 days with symptoms, those in the NCFM group had 4.5 days with symptoms, and those in the NCFM+Bi-07 group had 3.4 days with symptoms.

CONCLUSIONS: Daily consumption of NCFM and Bi-07 and of NCFM alone significantly reduced the incidence and duration of respiratory tract infection symptoms in children. The combination of the 2 probiotics tended to perform better than the NCFM alone.

PREVALENCE AND INCIDENCE OF A NEWLY DEFINED TYPE OF DIABETES IN CHILDREN, ADOLESCENTS, AND ADULTS IN THE LARGEST INTERNATIONAL SERIES TO DATE

Submitted by Annabelle S. Slingerland

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