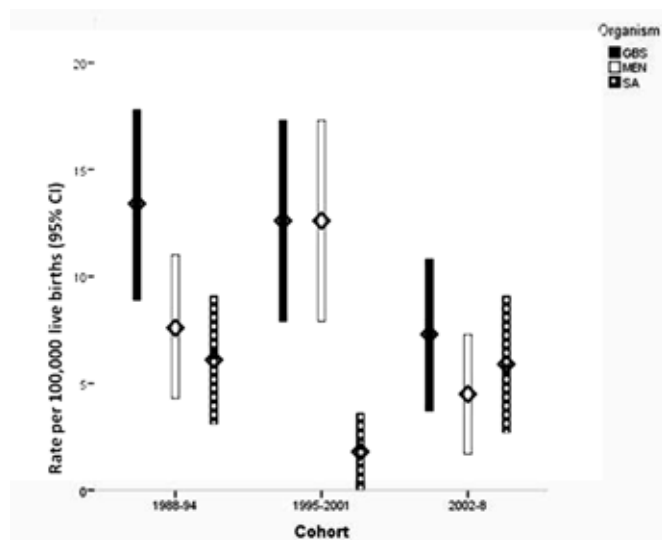


Abstract 276 Table 1

Deaths from infection % (infectious/ total deaths)	1988–1994	1995–2001	2002–2008
Neonatal (<29 days)	11% (139/1242)	13% (116/869)	15% (106/685)
Neonatal (<29 days)	16% (121/780)	17% (75/431)	19% (68/359)
Total infant deaths (0–364 days)	13% (260/2022)	15% (191/1300)	17% (174/1044)
Proportion of infectious deaths <28w gestation	18%	15% (191/1300)	44%

Deaths from GBS fell, and a fall in meningococcal (MEN) infections follows universal immunisation (1999). Infections from staphylococcus aureus (SA) were unchanged.



Abstract 276 Figure 1

Conclusions Despite better care and immunisations, the proportion of infant mortality from infections has increased. Term infants have benefited from changes in management but preterm infants have not, and deserve urgent prioritisation.

277 DIAGNOSING *KINGELLA KINGAE* OSTEOARTICULAR INFECTIONS IN YOUNG CHILDREN VIA SPECIFIC OROPHARYNGEAL SWAB PCR

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Background Diagnosing osteoarticular infections (OAI) caused by the increasingly recognized pathogen, *K. Kingae*, in young children remains challenging. The purpose of this study was to investigate whether specific oropharyngeal swab PCR could predict *K. Kingae* OAI in this population.

Methods A total of 123 children aged 6 to 48 months, presenting atraumatic osteoarticular complaints were prospectively enrolled. All were clinically evaluated, underwent hematologic and radiological investigations. Blood and oropharyngeal swab samples were tested with a *K. kingae* specific PCR assay. OAI was defined as the presence of pathogenic bacteria in bone, joint or blood samples, or magnetic resonance imaging consistent with infection despite negative microbiology. Positive culture or PCR for *K. kingae* in blood, bone or synovial fluid confirmed OAI due to this pathogen.

Results Forty children met the OAI case definition; 30 had *K. kingae* OAI, one had OAI due to another organism, and 9 had no

microbiologic diagnosis. All 30 oropharyngeal swabs from the patients with *K. kingae* OAI, and 8 swabs from the 84 patients without OAI or with OAI caused by another organism, were positive. The sensitivity and specificity of oropharyngeal swab PCR for *K. kingae* OAI were 100% and 90.5%, respectively; positive and negative predictive values were 78.9%, and 100%, respectively.

Conclusions Detection of *K. kingae* DNA in oropharyngeal swabs from children presenting clinical findings of OAI is highly predictive for *K. kingae* OAI. This test represents thus a valuable diagnostic tool, which could improve the recognition of OAI in young children.

278 INTERLEUKIN AND NEUROTROPHIC FACTOR PLASMA EXPRESSION ARE RELATED TO DISEASE SEVERITY IN CHILDREN WITH INFLUENZA A (H1N1) VIRUS INFECTION

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Background and Aims In the last years the world has been facing a new pandemic caused by a H1N1 influenza virus, showing particular virulence in children. Cytokines and neurotrophic factors seem to play an important role in severity and progression of this infection. In our study we evaluate cytokine (IL-1b and IL-6) and neurotrophic factor [Nerve Growth Factor (NGF), Brain Derived Neurotrophic Factor (BDNF), and Glial Derived Neurotrophic Factor (GDNF)] expression and their association with clinical-laboratory findings and outcome of children with H1N1 influenza virus infection.

Methods We performed a prospective observational clinical study on 15 children with H1N1 influenza virus infection and 15 controls with lower respiratory tract infection (LRTI). Cytokines and neurotrophic factor plasma levels were measured using an immunoenzymatic assay.

Results Significantly higher plasma levels of IL-1b, IL-6, NGF and BDNF were demonstrated in all patients with H1N1 infection respect to controls, while GDNF plasma levels did not undergo significant variations in the two groups. IL-6, NGF and BDNF expression was also significantly correlated with some laboratory and clinical findings, such as fever, cough, specific radiological lesions, and platelet count. No correlation was found between interleukin and neurotrophic factor expression and final outcome.

Conclusions H1N1 virus infection induces an early and significantly up-regulation of both interleukins (IL1b and IL-6) and neurotrophic factors (BDNF and NGF) respect to LRTI patients. The overexpression of these molecular markers is likely to play a neuro-immunomodulatory role in H1N1 infection and may contribute to airway inflammation and disease severity and progression.

279 ANTIOXIDANT EFFECTS OF N-ACETYLCYSTEINE IN A NEONATAL RAT MODEL OF NECROTIZING ENTEROCOLITIS

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Background and Aim Hypoxia and ischemia appear to play an important role in the pathogenesis of necrotizing enterocolitis (NEC) which is related to oxygen-derived free radical formation. This study was designed to evaluate the role of oxidative stress and potentially beneficial effects of N-acetylcysteine (NAC) in a neonatal rat model of NEC.