The epidemiology and costs of ankle injuries: A review of the literature

Introduction
Ankle sprains are one of the most common injuries presenting to emergency departments, representing 3% to 5% of all visits in the UK, and 10% of all injury-related visits in the USA. Ankle injuries have significant physical and economic consequences for the affected individuals.

Objectives
To describe the epidemiology of ankle sprains and fractures among the general population; and to determine the direct and indirect costs related to the diagnosis and treatment of ankle injuries.

Methods
A comprehensive literature review of Ovid MEDLINE, EMBASE, Cochrane DSR, ACP Journal Club, AMED, Ovid Healthstar, and CINAHL was conducted for English-language studies on ankle sprains and fractures published from 1980 to 2010.

Results
The search identified 2394 studies of which 47 were selected for analysis. A majority of the studies were published in the last decade. The incidence of ankle sprains was 2 to 7 per 1000 person-years, while the incidence of ankle fractures was 1 per 1000 person-years. The costs of emergency ankle sprain management ranged from $126.13 to $2356.21 per patient (2009 CAD), depending on age. The costs of ankle fractures were $1692.82 to $15802.26 (2009 CAD) per patient. The economic evaluations were conducted from the societal or healthcare system perspective.

Conclusions
Information on the epidemiology of ankle sprains and fractures may help plan for health policy and the provision of health services. Moreover, the cost data may inform future studies undertaking economic evaluations of the diagnosis and treatment of ankle injuries.

Primary bone cancer in 0–49 year olds in Great Britain, 1980–2005 and fluoride in drinking water: A case of inequalities?

Introduction
Primary bone cancers (PBC) occur most often in young people. Osteosarcoma and Ewing sarcoma family of bone tumours (ESFT) are most commonly diagnosed in children but aetiology remains unclear. Fluoride has been proposed as a potential causal agent for PBC. The study investigated whether incidence of PBC was linked with fluoride in drinking water.

Method
Incidence data on cases aged <50 years diagnosed during 1980–2005 were obtained from all ten regional cancer registries in Great Britain (GB). These data were combined with small-area population census, digital boundary and fluoride monitoring data. Negative binomial regression was used to examine the relationship between incidence rates and census small-area fluoride levels. These models were fitted to small-area census data aggregated into three age bands and by gender with the logarithm of the ‘at risk’ population as an offset.

Results
There were 2566 osteosarcoma cases aged 0–49 years: 317 aged 0–14, 1315 aged 15–29 and 434 aged 30–49 years. For ESFT there were 1650 cases aged 0–49 years: 659 aged 0–14, 300 aged 15–29 and 191 aged 30–49 years. After adjustment for age and gender, no statistically significant association was found between osteosarcoma or ESFT and fluoride: RR for one part per million increase in fluoride level = 0.993, 95% CI 0.843 to 1.171 and 0.880, 95% CI 0.696 to 1.064 respectively.

Current policy for anaemia prevention in Bedouin toddlers in the Negev appropriate?

Introduction
Iron deficiency anaemia still affects a quarter of the world’s population increasing risk of infectious disease morbidity, impaired growth and mental development. According to current policy children undergo screening for iron deficiency anaemia at age 9–12M.

Methods
Prospective Study
The study population included Moslem Bedouin 2.5–3–Y-old children that followed from 6M in Well Baby Clinic. All participants of parents were interviewed during enrolment and monthly meetings. The blood samples were taken from children at enrolment and during last follow-up visit. Anaemia (Hb<11 g/dl) and Iron Deficiency Index (≥2 of 6 abnormal indicators, including Haemoglobin, Haematocrit, Mean Corpuscular Volume, Red blood cell distribution Width, serum ferritin, and transferrin saturation) were defined.

Results
The study population included 180 infants. The mother’s young age was found as a risk factor for mild anaemia. Male sex was associated with a higher rate of moderate anaemia compared with female sex (76.2% and 52.8%, respectively, p=0.043). Children with anaemia had lower average of dietary iron consumption than children with normal levels of Hb (p=0.009). Iron deficiency anaemia at age 6M was a significant and independent risk factor for toddlers’ anaemia (OR=3.47, p<0.001) controlling for the mother’s age, child gender and consumption of dietary iron.

Conclusion
The most significant factor for anaemia among this population is iron deficiency anaemia at the age of 6M. Prevention, early detection (at age 6M) and appropriate treatment of anaemia in the first year of life are critical to prevent anaemia and its consequences later life.