

and prudent antibiotic prescribing are needed.

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A large point-source outbreak of *Salmonella typhimurium* Phage Type 9 in Sydney, Australia, March 2007

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Background: This paper reports one of the largest point-source *Salmonella* outbreaks in Australia.

Methods: Following initial notification of 5 cases who had purchased food from a shop, 319 cases were identified by active and passive surveillance through health care providers and laboratories. Using a standardised telephone questionnaire, we interviewed 283 people (89%). The questionnaire collected demographic data, exposure history and illness details. We confirmed symptoms of the other 36 cases by record review or clinician interview. Follow-up interviews were conducted on randomly-selected cases ($n=45$) after 6 weeks to obtain information on illness duration and severity. Data were analysed using SAS version 9. A separate food authority reviewed food handling practices, collecting environmental and food samples. Eight food handlers were screened. Results of *Salmonella* cultures, phage typing and Multi-Loci Variable Number of Tandem Repeats Analysis were collated.

Results: The epidemic curve is at Figure 1. All cases ate food from the shop, with 312 consuming food purchased on one of 4 consecutive days. Incubation periods ranged from 1–118 hours (median 10 hours). Table 1 describes characteristics of cases. 43% required hospital admission. Follow-up of the subset of 45 cases identified prolonged symptoms (mean duration 14 days). 173 cases (54%) had laboratory confirmed *S. Typhimurium* on stool or blood culture. Six food handlers had positive stool cultures, including one who was asymptomatic. Environmental investigation identified poor food handling practices, including cross-contamination of cooked food with raw egg products. Isolates from human, food and environmental samples were identical. Traceback investigating whether eggs were the initial source of *S. Typhimurium* in this outbreak was inconclusive. Following intervention by authorities, the food outlet closed.

Conclusion: This outbreak caused significant morbidity and high hospitalisation rates. It provides an argument for increased regulation of small premises that handle raw egg products.

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Prevalence of Beta Hemolytic Group Streptococci Among Elementary School Children in Zanjan

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Background: Pharyngitis and rheumatic fever caused by Beta Hemolytic group A streptococci possess the prominent importance among common infectious diseases.

Since the carriers play an important role in its transmission among the susceptible individual, specially school child, this study was conducted to determine the prevalence of pharyngeal colonization of Streptococci among elementary school children in Zanjan.

Material and methods: The studying population include 1345 randomly selected school student from four different boy schools, each comprising of five standard grade, during spring 2005. Pharyngeal swabs were collected from each asymptomatic individual and subsequently cultured on blood agar media. Following incubation at 37 degree, with the help of morphological assay and standard biochemical tests, the visible colonies were examined for confirmative diagnosis.

Results: The prevalence of pharyngeal beta hemolytic streptococci was determined as 41%, in spite of difference in infection rate of different schools and grades, the statistical analysis, revealed no significant difference in obtained results from socioeconomic and demographic point of view.

Conclusion: The obtained results seeks a great attention toward implication of organized planning and schedules, in order to reduce the incidence of streptococcal pharyngitis and its proceeding sequels.

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Meningococcal Disease Epidemiology in Asia

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Background: Awareness of meningococcal disease has increased in Europe, the Americas, and Africa, leading to the development and introduction of new meningococcal vaccine formulations. Despite repeated epidemics in many Asian regions, in particular China, with pandemic spread of hypervirulent clones, meningococcal disease epidemiology in Asia is only partially known.

Methods: We collected and reviewed studies and surveillance data on a national or regional level by performing searches on PubMed, regional WHO homepages, and the websites of the ministries of health with "meningitis", "meningococcal disease", "- outbreak", "- incidence", and the name of country as search phrases.

Results: Hyperendemic meningococcal disease of hypervirulent serogroup A clones was typical in China and parts of what was then the USSR (including Mongolia), which spread to the Indian subcontinent, until the late 20th century, and is being replaced by endemic serogroup B and