

that have been the traditional focus of refugee health assessment such as tuberculosis, cholera, intestinal infections are not prevalent in Iraqi refugees, but non-infectious, chronic conditions, such as obesity, hypertension, diabetes, dyslipidemia, are prevalent and important concerns in this population, mental health issues should also be considered and screened.

<http://dx.doi.org/10.1016/j.ijid.2012.05.409>

Type: Poster Presentation

Final Abstract Number: 53.009

Session: Epidemiology & Public Health

Date: Saturday, June 16, 2012

Time: 12:45–14:15

Room: Poster & Exhibition Area

Costs of severe pneumonia associated with respiratory viruses among children aged <5 years in four tertiary hospitals in Bangladesh, 2010

M. Bhuiyan^{1,*}, S.P. Luby², N. Ishrat Alamgir³, N. Homaira¹, A. Al Mamun¹, J. Khan¹, E.S. Gurley¹, K. Sturm-Ramirez², R. Uz Zaman¹, M.-A. Widdowson², E. Azziz-Baumgartner²

¹ icddr, Dhaka, Bangladesh

² Centers for Disease Control and Prevention, Atlanta, GA, USA

³ BRAC University, Dhaka, Bangladesh

Background: Although respiratory viruses contribute significantly to pneumonia disease burden among children aged <5 years in Bangladesh, little is known about the economic burden of virus-associated pneumonia. We estimated the costs of respiratory virus-associated severe pneumonia in Bangladesh.

Methods: During May to October 2010, we identified hospitalized children aged <5 years who met the WHO case-definition of severe pneumonia at four tertiary hospitals and tested positive for either influenza, respiratory syncytial virus (RSV), human parainfluenza virus type 1, 2 & 3 (HPIV), adenovirus or human metapneumovirus (HMPV). Interviewers visited case-patients' homes within 30 days of hospital discharge and administered a structured questionnaire to parents to determine the cost of illness from the patient's perspective. We added direct medical cost (physician consultation, hospital bed, medicines and diagnostic tests), direct non-medical cost (food, lodging and travel) and indirect cost (caregivers' lost income) to estimate the cost of illness. Respondents helped us to categorize medical costs as out-of-pocket or hospital-supported. Interviewers asked respondents about how they paid for treatment and if the payment had an impact on their monthly household expenditures.

Results: We interviewed parents of 57 enrolled children. The median direct cost of an episode of virus-associated severe pneumonia was US\$37 (IQR 23–53), median indirect cost was US\$15 (IQR 9–28) and median cost of illness was US\$57 (IQR 39–81). The median cost of illness was US\$65 for RSV-associated severe pneumonia, US\$48 for adenovirus, US\$42 for HPIV and US\$24 for influenza viruses. On average, 87% of direct medical cost was paid out-of-pocket. The median monthly household income was US\$129 (IQR 86–216) and the cost of illness exceeded 50% of the monthly income for 18 (32%) households. Fifty-three percent (30/57) of households had to reduce food expenditure during the month of illness. Thirty-one (54%) households obtained loans with a median annual interest of 90% to meet illness-associated expenses.

lies in Bangladesh. Future studies should explore potential ways to cover the treatment costs, thereby helping to decrease household-level economic impact of childhood pneumonia.

<http://dx.doi.org/10.1016/j.ijid.2012.05.410>

Type: Poster Presentation

Final Abstract Number: 53.010

Session: Epidemiology & Public Health

Date: Saturday, June 16, 2012

Time: 12:45–14:15

Room: Poster & Exhibition Area

Molecular characterization of antibiotic resistant bacteria isolated from chicken meats sold at supermarkets in Bangkok, Thailand

C. Chaisatit^{1,*}, C. Tribuddharat¹, S. Dejsirilert², C. Pulsrikarn²

¹ Mahidol University, Bangkok, Thailand

² National Institute of Health, Nonthaburi, Thailand

Background: Antibiotic resistant bacteria contaminated in foods pose a major health risk and possibly a large economy loss. In Thailand, even prevalence data are available, little is known about molecular characteristics of these bacteria. Our objective is to determine the prevalence and molecular characteristics of antibiotic resistant *Salmonella* spp. and *Escherichia coli* from fresh chicken meats sold at supermarkets in Bangkok.

Methods: Two hundred sealed packages of chicken meats were collected and processed aseptically according to standard methods. An antimicrobial susceptibility testing (AST) by disk diffusion method and most probable number (MPN) were performed. For *Salmonella*, serogrouping, and serotyping were also determined. Class 1 integron was identified by PCR and dot blot hybridization, and was confirmed by DNA sequencing. Genetic relatedness of *Salmonella* isolates was determined by: plasmid profile study, randomly amplified polymorphic DNA (RAPD-PCR), and multilocus sequence typing (MLST).

Results: The prevalence of *Salmonella* spp. and *E. coli* were 18.67% (14/75), and 53% (106/200), respectively. MPN analysis revealed that 56.66% of the samples (34/60) violated the limit of allowable coliform bacteria in raw chicken meat, with the highest value of 46,000. Multi-drug resistant phenotype was found in both *Salmonella* spp. and *E. coli*. Class 1 integron was detected by PCR amplification with primers specific to *intI1* and found in 42.86% (6/14), and 37.74% (40/106) in *Salmonella* spp. and *E. coli*, respectively. Resistance genes identified in this study were *aadA2*, *aadA4*, *aadA12*, *aadA22*, and *aadA23* (for aminoglycoside resistance); *dfrA5* (for trimethoprim resistance); and *lnuF* (for lincosamide resistance). The spread of resistant bacteria among supermarkets was evidenced from typing data incorporated with demographic data. Four of *Salmonella* isolates were subjected to MLST analysis. MLST results were ST 50, ST 96, ST 1543, and ST 1549, which matched well with strains from Vietnam, Denmark, Chile, USA, Tunisia, and Australia reflecting worldwide spread.

Conclusion: This study demonstrated that antibiotic resistant bacteria and integron elements now have been spread among food producing animals, and can be spread to human through consumption of undercooked food. Antibiotic use in human and animals should be tighter monitored in order to limit the emergence of antibiotic resistant bacteria.

<http://dx.doi.org/10.1016/j.ijid.2012.05.411>