View metadata, citation and similar papers at core.ac.uk
brought to you by CORE
provided by Elsevier - Publisher Connector

non-Polio AFP rate on Polio eradication.

Material and Methods: Published AFP surveillance data of India of 2006 and 2007.

Findings: The highest non-Polio AFP rate in India is seen in the polio hyper endemic state of Bihar. In 2006 the rate was 19 with an adequate stool rate of 82%. A total of 189 cases of Polio were reported from Bihar that year of which only 61 were confirmed. That means only 32% of Polio cases could be confirmed instead of 82% going by the adequate stool collection rate. In 2007 only 52% (22/42) of Polio cases could be confirmed even though adequate stool collection rate is 87% and non-Polio AFP rate 19.26 (as on 8th September 2007). Similar findings are found in the other hyper endemic state of Uttar Pradesh and Nationally though of lesser degree. Very high non-Polio AFP rate should have resulted in a marked increase in the proportion of Polio cases confirmed as the true indication of enhanced surveillance sensitivity, which did not happen in India.

Conclusion: Very high non-Polio AFP rate did not really increase the sensitivity of AFP surveillance in India as shown by the large proportion of compatible cases and could be potentially harmful for Polio eradication by masking the true rate of confirmation of Polio cases. There is a need to review AFP surveillance in those areas with very high non-Polio AFP rate.

doi:10.1016/j.ijid.2008.05.467

23.002

Application of Geographical information System (GIS) in Outbreak of Hand, Foot and Mouth Disease (HFMD) in Sarawak

C.H. Ooi*, A. Kiyu, G. Brooke

Sarawak Health Department, Kuching, Malaysia

Background: HFMD surveillance data subsequent to a cluster of death involving 29 children in Sarawak state during a HFMD outbreak in 1997 indicated that HFMD is endemic in Sarawak with further major outbreaks occurring every three years in 2000, 2003 and 2006. Results of study on GIS application in HFMD surveillance done in a district in Sarawak in 2000 suggested that there could be spatial clustering of HFMD cases with some small areas with high incidence of HFMD cases in an outbreak which have low incidence in subsequent outbreak. In the outbreak in 2006, application of GIS in HFMD surveillance was extended to whole Sarawak with objectives to determine whether GIS is useful in complementing the existing conventional HFMD surveillance and for better documentation of outbreak to enable better control of outbreaks.

Methods: GIS enabled HFMD surveillance database was created and implemented statewide in 2006. Geographical residence location of HFMD cases were captured with Garmin Global Positioning System receiver and overlayed on basemaps. In areas with clustering of HFMD cases, analysed maps were overlayed on satellite images for refine visualization of outbreak areas and spread. Spatial analysis of data were regularly done during outbreak to assist decision makers to fine tune outbreak control decisions.

control measures for the HFMD outbreak. Spatial and spatio-temporal clustering analysis of HFMD cases which were done regularly during the outbreak enabled detected of hotspots areas with high incidence of HFMD and its geographical spread.

Conclusion: GIS data on spatial distribution of HFMD cases had been found to be useful in assisting decision making in outbreak control measures. Documentation of HFMD cases spatially in 2006 in Sarawak state will be helpful in the future outbreaks which is expected to be in 2009.

doi:10.1016/j.ijid.2008.05.468

23.003

Susceptibility of *H. influenzae* and *M. catarrhalis* in Asia and Europe: 2007 GLOBAL Surveillance Program

D.C. Draghi*, V. Alluru, N.P. Brown, C. Thornsberry, D.F. Sahm, C.M. Pillar

Eurofins Medinet, Inc., Herndon, VA, USA

Background: Haemophilus influenzae (HI) and *Moraxella catarrhalis* (MC) are among the most common etiological agents of community-acquired pneumonia (CAP). Regional differences in susceptibility can occur among these pathogens. The GLOBAL Surveillance initiative provides comprehensive in vitro susceptibility data for respiratory pathogens, particularly focused on widely used oral agents prescribed for the treatment of these pathogens.

Methods: During 2007, HI ($n = 492$) and MC ($n = 140$) were isolated from patient specimens collected from 4 regions in Asia (AS; Hong Kong [HK], South Korea [SK], China [CH], and Taiwan [TW]). Isolates were centrally tested by broth microdilution (CLSI M7-A7) against levofloxacin (LFX), ampicillin (AMP), amoxicillin-clavulanate (AC), azithromycin (AZI), clarithromycin (CLA), cefuroxime (CFX), and trimethoprim-sulfamethoxazole (SXT). Susceptibility (S) data were interpreted according to CLSI M100-S17 breakpoints (BP) and analyzed according to b-lactamase (BL) status.

Results: The current S rates (%) overall among the oral agents for HI were 99.6 for LFX; 69.1 for AMP; and 52.6 for SXT. For HI, the MIC90s (mg/L) were 0.03 for LFX; 2 for AC; 2 for AZI; 2 for CFX; >8 for AMP; and >4 for SXT. LFX-S, AZI-S, and AC-S rates among HI isolates were >97%, regardless of region. SXT-S (35.3% in TW to 61.5% in SK), AMP-S (37.6% in TW to 92.6% in CH), and CLA-S (58.8% in TW to 75.0% in SK) rates among HI varied substantially by region. The rate of HI that were BL positive (+) overall for AS was 30.1%; however, BL+ rates varied considerably by country (6.9% in CH to 61.2% in TW). The BL+ rate for MC was 99.3%. Against MC, all tested agents were highly active (>95% S with the exception of AMP (BP unavailable). MC were 100% S to both LFX and AZI which also had the lowest MIC90s (0.06 mg/L) of the tested agents. Regional variation in activity against MC was most notable for SXT (80.0% in TW to 100% in HK) and ERY (90% in TW to 100% in SK).

Conclusions: Susceptibility among HI in AS remained high (≥98%) for many of the commonly used oral agents (LFX, AZI, AC, and CFX), regardless of beta-lactamase production