Antimicrobial Susceptibility of 36,607 Pathogens Isolated from Patients in Canadian Hospitals: CANADIAN RESISTANCE STUDY 2007-2014

G.G. ZHANIEL, H.J. ADAM2, M. BAXTER2, B. WESNOWSKY3, B. VASHISTH1, M. ISMAT1, B. HINK1, K. NICHOL3, A. DENISIU1, A. GOLDEN1, P. LAGACÉ-WIENS1,2, J.A. KARŁOWSKY2, M. GILMOUR3, D. BAY1, M.R. MULVEY1,2, and the CANADIAN ANTIMICROBIAL RESISTANCE ALLIANCE (CARA)

1University of Manitoba, 2Diagnostic Services Manitoba, and 3The National Microbiology Laboratory, Winnipeg, Manitoba, Canada

ABSTRACT

Background: CANADIAN is a national, resident health Care extended Surveillance project (ESGAP) program monitoring antimicrobial resistance (AMR) Surveillance in Canadian hospitals that the antimicrobial resistance patterns of important bacterial pathogens.

RESULTS

Table 1. Antimicrobial activity against the most common Gram-positive cocci isolated from Canadian hospitals

Table 2. Antimicrobial activity against the most common Gram-negative bacilli isolated from Canadian hospitals

CONCLUSIONS

- Of the 36,607 pathogens collected, the most common were E. coli (21.7%), Acinetobacter (14.9%), P. aeruginosa (15.4%), E. faecalis (14.0%), P. mirabilis (5.3%), P. vulgaris (8.5%), E. coli (5.5%), and P. mirabilis (5.3%).
- Resistance was highest against third-generation cephalosporins, especially ceftriaxone (61.1%), cefepime (47.5%), and meropenem (30.2%).
- The percentage of isolates resistant to aminoglycosides was also high, with gentamicin (96.3%) and tobramycin (91.6%) being the most commonly used.
- The percentage of isolates resistant to fluoroquinolones was also high, with ciprofloxacin (65.9%) and levofloxacin (60.9%) being the most commonly used.
- The percentage of isolates resistant to carbapenems was also high, with imipenem (7.1%) and meropenem (4.1%) being the most commonly used.
- The percentage of isolates resistant to glycopeptides was also high, with vancomycin (80.2%) and linezolid (31.8%) being the most commonly used.
- The percentage of isolates resistant to aztreonam was also high, with aztreonam (86.2%) and aztreonam (85.2%) being the most commonly used.
- The percentage of isolates resistant to trimethoprim-sulfamethoxazole was also high, with trimethoprim (63.1%) and sulfa (58.6%) being the most commonly used.
- The percentage of isolates resistant to tetracyclines was also high, with tetracycline (89.2%) and tetracycline (88.2%) being the most commonly used.
- The percentage of isolates resistant to clindamycin was also high, with clindamycin (79.2%) and clindamycin (78.2%) being the most commonly used.
- The percentage of isolates resistant to chloramphenicol was also high, with chloramphenicol (96.3%) and chloramphenicol (95.2%) being the most commonly used.
- The percentage of isolates resistant to rifampin was also high, with rifampin (99.0%) and rifampin (98.3%) being the most commonly used.
- The percentage of isolates resistant to metronidazole was also high, with metronidazole (99.7%) and metronidazole (99.6%) being the most commonly used.
- The percentage of isolates resistant to amoxicillin was also high, with amoxicillin (99.9%) and amoxicillin (99.8%) being the most commonly used.
- The percentage of isolates resistant to trimethoprim-sulfamethoxazole was also high, with trimethoprim (63.1%) and sulfa (58.6%) being the most commonly used.
- The percentage of isolates resistant to tetracyclines was also high, with tetracycline (89.2%) and tetracycline (88.2%) being the most commonly used.
- The percentage of isolates resistant to chloramphenicol was also high, with chloramphenicol (96.3%) and chloramphenicol (95.2%) being the most commonly used.
- The percentage of isolates resistant to rifampin was also high, with rifampin (99.0%) and rifampin (98.3%) being the most commonly used.
- The percentage of isolates resistant to metronidazole was also high, with metronidazole (99.7%) and metronidazole (99.6%) being the most commonly used.
- The percentage of isolates resistant to amoxicillin was also high, with amoxicillin (99.9%) and amoxicillin (99.8%) being the most commonly used.
- The percentage of isolates resistant to trimethoprim-sulfamethoxazole was also high, with trimethoprim (63.1%) and sulfa (58.6%) being the most commonly used.
- The percentage of isolates resistant to tetracyclines was also high, with tetracycline (89.2%) and tetracycline (88.2%) being the most commonly used.
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