Presence of Quinupristin/Dalfopristin-Resistant *Enterococcus faecium* in Stool Specimens from Healthy People and in Retail Chicken Products in the United States

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Backgound: Quinupristin/dalfopristin (Q/D) has recently been approved for treatment of infections due to vancomycin-resistant E. faecium (EF), but is only used in severely ill hospitalized patients. Since 1974, virginiamycin (V) (a streptogramin related to Q/D) has been used to promote growth in poultry. Studies in Europe showed that use of V in poultry promotes emergence and dissemination of Q/D-resistant EF (Q/DRE) in humans. A prevalence study of Q/DRE in stool specimens from healthy people and in retail chicken products in the U.S. was conducted.

Methods: From 7/98 - 6/99, 4 labs in GA, MD, MN and OR used enterococci selective media (CNA) and Q/D-resistant selective media (Q/DM) (Ford agar supplemented with arabinose, Q/D and ampicillin) to culture stools and chicken products. Species identification and antimicrobial susceptibility testing by broth microdiluation was conducted at CDC.

Results: Using CNA, enterococci were isolated from 278 (68%) of 410 stools. 148 (53%) have been tested. 44 (30%) were EF. 3 (7%) of 44 EF were Q/DRE. Carriage rate of Q/DRE was 1.4%. Using Q/DM, enterococci were isolated from 110 (27%) stools. 38 (35%) have been tested. 28 (74%) were EF. None were Q/DRE. Using CNA, enterococci were isolated from 344 (84%) of 410 chickens. 193 (56%) have been tested. 8 (4%) were EF. 6 (75%) of 8 were Q/DRE. Prevalence of Q/DRE using CNA was 3%. Using Q/DM, enterococci were isolated from 327 (80%) of 410 chickens. 209 (64%) have been tested. 171 (82%) were EF. 160 (94%) of 171 were Q/DRE. Prevalence of Q/DRE in chickens using Q/DM was 62%.

Conclusions: We demonstrated community carriage of Q/DRE in healthy humans prior to widespread use of Q/D in hospitals. Such resistance may provide the seeds for Q/DRE infections in hospitalized patients. Continued use of virginiamycin in chickens may compromise the effectiveness of Q/D in humans.

Suggested citation:

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