Your irresistible personal portrait: A way to reduce antibiotic resistance?

David M. Patrick, MD, FRCPC, MHSc, Malcolm Maclure, ScD, Bill Mackie, MD, Rachel McKay, MSc

Confidentially, could you resist looking at your pattern of antibiotic prescribing and comparing it with evidence? Without anyone else knowing? If you are a GP in active practice, you will soon receive a sealed, coded envelope containing a confidential portrait (seen by no one) of your prescribing of antibiotics for urinary tract infections (UTI). Its goal is to reverse recent growth in antibiotic resistance. Yes, we can! Studies have demonstrated the potential for reduced antibiotic resistance following reduced antibiotic prescribing.[1]

Ten years ago, BC's provincial health officer published a report on antimicrobial resistance which contained recommendations for areas of action.[2] It is fair to say that considerable progress has been made on most of the recommendations related to the practice of medicine. BCCDC and the Do Bugs Need Drugs? program conduct regular surveillance on antibiotic consumption and resistance in BC. Our data show overall use of antibiotics rose between 2002 and 2005, and then levelled off. Between 2005 and 2008 we saw an 8.7% reduction in antibiotic use with acute sinusitis and a 17% reduction with acute pharyngitis. There has been a 35% to 57% reduction in use of antibiotics in children, with the largest reduction among children less than 1 year of age.

Unfortunately, the use of antibiotics with acute bronchitis remains high. Ominously, the overuse of fluoroquinolones now threatens to render this class of antibiotic ineffective for treating urinary tract infections (UTI) as *E. coli* resistance surges. Despite guidelines stating that moxifloxacin should be used only after another antibiotic, preliminary data suggest the vast majority of prescriptions for this drug in BC in 2009 were not preceded by another antibiotic.

Judicious use of antibiotics in human medicine is imperative in controlling the spread of antibiotic resistant organisms. Evidence indicates that personalized feedback to physicians is an effective way to reduce unnecessary prescribing of antibiotics in outpatients.[3] The EQIP group, a joint initiative of the BC Ministry of Health Services, the BCMA, and UBC Faculty of Medicine's Department of Anesthesiology, Pharmacology, and Therapeutics, creates individualized de-identified prescribing portraits for BC physicians on a variety of topics. EQIP has recently collaborated with the Do Bugs Need Drugs? program to create portraits of antibiotic prescribing associated with UTI and upper respiratory tract infections (URTI). The portraits will be mailed out in a staggered manner in coming months, so impacts on prescribing can be assessed comparing geographic areas that receive the portraits early versus delayed areas.

Now that we are finally making progress in putting our own house in order, we should applaud BCMA's endorsement of investigation into the deleterious effects on nonveterinary use of antibiotics in agricultural operations.[4] The effects on the environment and the contribution to emergence of antibiotic-resistant organisms in humans must be understood and addressed.[5] While trends in human use in BC are slowly improving, we have made little or no progress on the issue in agriculture and veterinary practice. In several countries in northern Europe, strict controls apply in agriculture.

Dr Patrick is the director of Epidemiology Services at the BCCDC, and a professor in the School of Population and Public Health at the University of British Columbia. Dr Maclure is professor and BC chair in Patient Safety in the Department of Anesthesiology, Pharmacology, and Therapeutics at UBC and co-director of Research and Evidence Development in Pharmaceutical Services Division of the BC Ministry of Health Services. Dr Mackie is current chair of the BCMA Environmental Health Committee, past president of the BCMA, past chair of the BCMA Council on Health Promotion, and clinical associate professor UBC Faculty of Medicine. Rachel McKay is a surveillance analyst in Epidemiology Services at the BCCDC.

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