Evaluation of a population-level academic detailing intervention on UTIs in British Columbia’s nursing homes
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Urinary tract infections in nursing homes
• In 2014, the volume of prescribing in British Columbia’s (BC) nursing homes was double the general population’s (2% vs. 0.02% per 1000 population per day).1,2
• 18.5% of residents prescribed antibiotics were treated for urinary tract infections (UTIs), the most common in-hospital indicator for an antibiotic.3,4
• However, up to 55% of antibiotics prescribed for UTIs in nursing homes can be considered inappropriate.5
• Knowledge translation efforts from our earlier research motivated the BC Provincial Academic Detailing (PAD) to address unnecessary treatment of UTIs in BC’s 301 nursing home facilities.6

Academic detailing intervention
• From June to December, 2016, eight pharmacist-trained academic detailers from BC PADvisited 131 publicly-subsidized nursing homes.
• Physicians, nurses, nurse practitioners and care aides attended meetings.
• Knowledge translation efforts from our earlier research motivated the BC Provincial Academic Detailing (PAD) to address unnecessary treatment of UTIs in BC’s 301 nursing home facilities.

Research question and hypothesis
• Is PAD’s academic detailing intervention associated with a decrease in the trend of antibiotics linked to a UTI indication?
• We hypothesized that the intervention group’s trend decreased in the post-intervention period, while the control’s pre-existing trends would continue as before.

Results

Interrupted time series evaluation

Results summary
• During the study period, 6,868 residents received 25,141 UTI-linked prescriptions.
• While the expected post-intervention rate for the intervention group was -1.1 (~1.8 to -0.3) DOS per month, the observed trend was -2.6 (~2.8 to -0.7) DOS per month, 169.6% lower than expected [-50.7%, 863.7%]. The control’s average post-intervention trend was unchanged: -0.1 (-0.6, 0.2) DOS per month.

Strengths and limitations
• Presently, this is one of the few large-scale studies of antibiotic stewardship in nursing homes. This paucity of context-specific evidence purportedly hinders more widespread implementation of antibiotic stewardship in nursing homes.
• We are awaiting denominator data to improve the multilevel model and better interpret the trends.
• Our analysis looked only at prescribing by fee-for-service providers, which may bias results from the general population. However, a sensitivity analysis for linkage bias indicated that results were robust to this bias (data not shown).

Conclusion
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Future directions
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References
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Figure 1. Coverage of nursing homes in BC’s local health areas (LHAs) by BC PAD from June to December, 2016