Hanson HM, Léveillé T, Cole M, et al.
Effect of a multi-method quality improvement intervention on antipsychotic medication use among residents of long-term care.
BMJ Open Qual 2021.

Supplementary File

Table S1
Clinical Probability Inputs Used in the Economic Model

Variable	No AUA project		AUA project	
Probability of inappropriate antipsychotic use (SE; 95% CI)	0.281 (0.0022; 0.279-0.288)		0.219 (0.0020; 0.215-0.223)	
	Antipsychotic use	**No antipsychotic use**	**Antipsychotic use**	**No antipsychotic use**
Probability of improvement in NPS (SE; 95% CI)	0.728 (0.013; 0.702-0.754)	0.800 (0.010; 0.781-0.819)	0.730 (0.016; 0.698-0.761)	0.774 (0.011; 0.752-0.796)
Probability of ED visit (SE; 95% CI)	0.057 (0.006; 0.045-0.069)	0.043 (0.005; 0.034-0.053)	0.094 (0.0.015; 0.065-0.125)	0.048 (0.008; 0.033-0.063)
Probability of hospitalization (SE; 95% CI)	0.067 (0.006; 0.054-0.080)	0.045 (0.003; 0.038-0.052)	0.146 (0.035; 0.076-0.216)	0.044 (0.004; 0.036-0.051)

Hanson HM, Léveillé T, Cole M, et al.
Effect of a multi-method quality improvement intervention on antipsychotic medication use among residents of long-term care.
BMJ Open Qual 2021.

Table S2
Cost Inputs Used in the Economic Model (in 2014 CAD)

	Estimated total cost	Estimated cost per resident	Minimum	Maximum	Sources
AUA project					
Learning Workshops (LWs)	$77,535.74	$43.10	$21.55	$64.65	AUA project records;
Project Staff Manager (0.5 FTE for 20mo) Administrative assistant (0.75 FTE for 20mo) Practice leads (1.0 FTE for 15mo and 1.0 FTE for 12mo) Nurse educator [education content writer] (1.0 FTE for 4mo)	$459,234.00				Minimum and maximum estimates are within +/-50% of the average calculated estimate
Other expenses	$87,026.00				
Inappropriate antipsychotic use (per day)	--	$0.34	$0.17	$0.50	AUA project records; Minimum and maximum estimates are within +/-50% of the average calculated estimate
Emergency Department (ED) visit	--	$500.23	$250.12	$750.35	Hospital ED costs estimated from CIHI Report on Seniors ED Visits in Ontario; Emergency physician costs estimated from Provincial Schedule of Medical Benefits; Minimum and maximum estimates are within +/-50% of the average calculated estimate
Hospitalization	--	$21,514	$21,476	$22,074	Average hospital costs, and minimum and maximum estimates were provided from the CIHI Patient Cost Estimator

Hanson HM, Léveillé T, Cole M, et al.
Effect of a multi-method quality improvement intervention on antipsychotic medication use among residents of long-term care.
BMJ Open Qual 2021.

Table S3
Results of Select One-Way Sensitivity and Scenario Analyses Comparing AUA Project to No AUA Project

Inputs	Strategy	Cost ($)	Incremental cost ($)	Effectiveness (inappropriate antipsychotic avoided)	Incremental effectiveness (inappropriate antipsychotic avoided)	Incremental cost per inappropriate antipsychotic avoided
One-way sensitivity analyses						
Probability of inappropriate antipsychotic use: Decreased by 50% (0.1405), No AUA project	No AUA project	1,088.72	--	0.860	--	--
	AUA project	1,543.14	454.42	0.781	-0.079	DOMINATED (-$5,788.77)
Increased by 50% (0.4215), No AUA project	No AUA project	1,293.89	--	0.579	--	--
	AUA project	1,543.14	249.74	0.781	0.203	$1,233.29
Decreased by 50% (0.1095), AUA project	No AUA project	1,191.06	--	0.719	--	--
	AUA project	1,271.63	80.58	0891	0.172	$469.83
Increased by 50% (0.3285), AUA project	No AUA project	1,191.06	--	0.719	--	--
	AUA project	1,814.64	623.58	0.672	-0.048	DOMINATED (-$13,128.09)
Scenario analysis						
In-kind costs of intervention implementation	No AUA project	1,191.06	--	0.719	--	--
	AUA project	1,755.38	564.33	0.781	0.062	$9,102.09

Hanson HM, Léveillé T, Cole M, et al.
Effect of a multi-method quality improvement intervention on antipsychotic medication use among residents of long-term care.
BMJ Open Qual 2021.

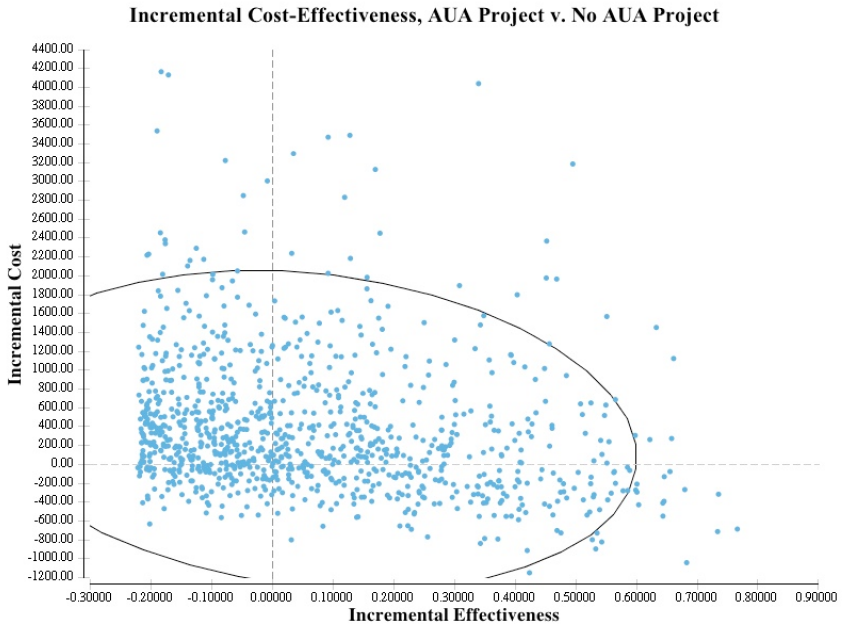

Figure S1: Monte Carlo incremental scatterplot showing the probabilistic sensitivity analysis of AUA project compared to no AUA project.