

The burden of non-adherence to latent tuberculosis infection (LTBI) drug therapy and the potential cost-effectiveness of adherence interventions in Canada: A simulation study

Technical Appendix

Additional Figures:

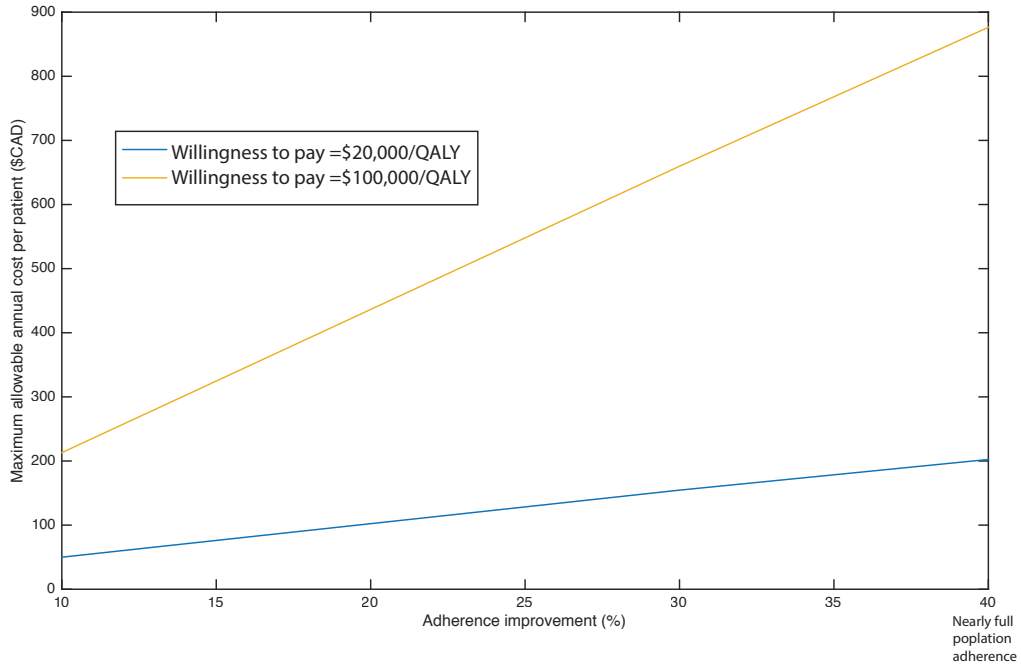


Figure S1. The relationship between maximum allowable cost and efficacy

The relationship was dependent on the willingness to pay per QALY threshold and lead to wide variation in the estimates. While the threshold does not theoretically vary at the regulatory level, it is not a well-established value. The maximum value of the interventions could be subject to debate based on the WTP threshold.

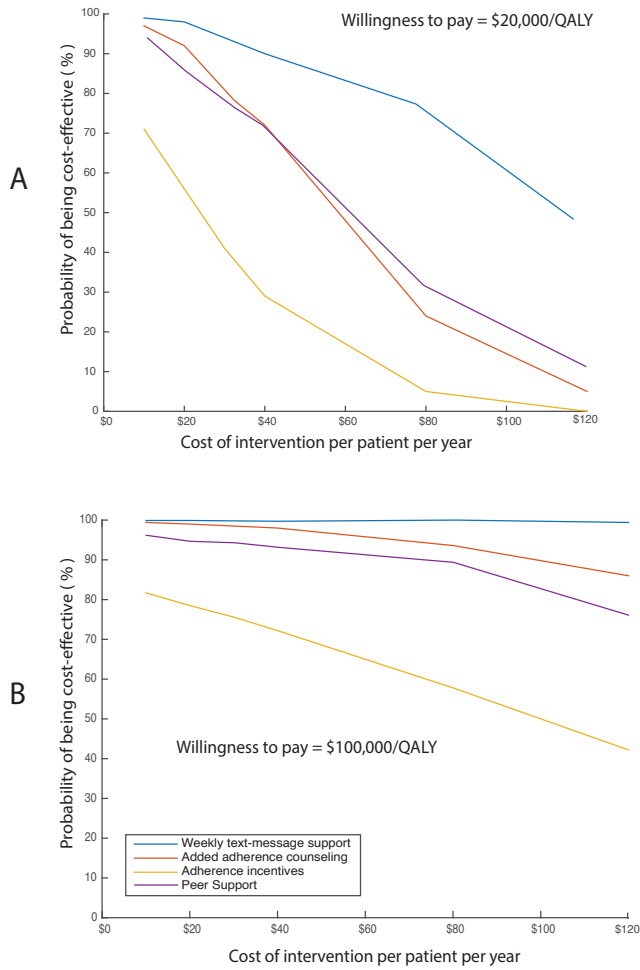


Figure S2. The impact of the WTP threshold on the CEAC when interventions were individually compared to standard care

Fig S2A. The likelihood of value quickly drops as the intervention costs rise at a WTP of \$20,000. Fig S2B. At a WTP of \$100,000, all interventions were less sensitive to cost changes and more comparable in likelihood of value with the exception of adherence incentives. SMS interventions remained the least sensitive to uncertainty in its cost.

Additional Tables:

Table S1: The potential health impacts of existing adherence interventions over 25 years

	Standard Care	Two-way SMS adherence support	Adherence incentives	Enhanced adherence counseling	Peer-support
Average Discounted QALY	17.3320	17.3370	17.3329	17.3340	17.3342
TB Cases*	90.7	67.87	86.6	81.5	80.7
TB Deaths*	8.0	6.0	7.6	7.2	7.1

* Per 100,000 person years

Table S2: The potential health impact of existing adherence interventions over 5 and 10 years

	Standard Care	Weekly SMS adherence support	Adherence incentives	Enhanced adherence counseling	Peer-support
5 year treatment outcomes					
Average Discounted QALY	4.5254	4.5256	4.5255	4.5257	4.5256
TB Cases*	75.6	66.5	72.2	68.0	67.3
TB Deaths*	6.7	5.9	6.4	6.0	5.9
10 year treatment outcomes					
Average Discounted QALY	8.5503	8.5509	8.5505	8.5508	8.5509
TB Cases*	86.7	76.3	82.8	78.0	77.2
TB Deaths*	6.7	7.6	7.3	6.9	6.8

* Per 100,000 person years

Table S3: Outcomes associated with current and full adherence scenarios over 5 and 10 years

	Standard care	100% Adherence	Difference in outcomes
5-year treatment outcomes			
Average discounted costs	\$858	\$980	\$122
Average discounted QALY	4.5212	4.5223	0.0011
Average ICER	Reference	\$110,066	--
TB cases*	75.1	29.3	45.8
TB deaths*	6.6	2.6	4.0
10-year treatment outcomes			
Average discounted costs	\$942	\$1,014	\$72
Average discounted QALY	8.5518	8.5550	0.0032
Average ICER	Reference	\$22,850	--
TB cases*	86.4	35.2	51.2
TB deaths*	7.6	3.1	4.5

* Per 100,000 person years