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A Cost-Benefit Analysis of The Pearl Project

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Executive Summary

This technical report highlights the first economic analysis to determine the returns for every dollar invested in the Pearl Project through a cost-benefit analysis by comparing projections of Pearl's clients over the status quo where many former youths who grew up in the care of a Children's Aid Society struggle in adjusting to adulthood and living independently. The study was based on the previous economic analysis conducted in human social services, particularly in the field of transitional foster youth in three countries, the United States (U.S.), Australia and Canada. Most of the analyses have been conducted in the U.S. There are variations in underlying assumptions and discount rates used in such studies which have an impact on any final estimation.

For validation, models presented in the literature were replicated and the same results reported in the literature were achieved. Therefore, using the same methodology, two cost-benefit models over a time horizon of 40 years of the adult working life of program participants were based on (1) discounted present value at 1.5%, which served as the based case, and (2) constant dollars (0% discount rate) in 2018. Ontario data available were used to derive the monetized benefits and costs from administering the Pearl Project. The data on cost estimates retrieved from the literature review of economic analysis and Statistic Canada 2016 Census were adjusted for inflation and reported for 2018 dollars. The investigation was conducted from a government's perspective in mind and thus showed the cost savings projected to the benefit of the Government of Ontario as a primary funder of the Pearl Project.

There were some underlying assumptions. It was assumed that *The Pearl Project* was a "surrogate parent" so that transitional youths in the Pearl Project were expected to have life outcomes comparable to the youths living with their biological parents in a traditional home with resources. For calculation purposes, we considered a "hypothetical" five-year period as the duration to accomplish participants' short-term to intermediate goals where it may take about five years to complete a university bachelor's degree and find a job. Costs assumed that Pearl members would complete the Pearl Project with the possibility of a few dropouts (averaging 6.4% annually).

The cost savings show the benefits that can be achieved if the Pearl Project participants' lives significantly improved to match that of the general population over the status quo of neglected youths who experience poor life outcomes. The benefits were derived from improved skill development (and higher education), averted prison costs, avoided mental health costs and avoided welfare use. The results after modeling for a 40-year career lifetime (using a discount rate of 1.5%) show that if all Pearl clients are successful, it will increase both lifetime earnings and tax revenues because of skill development and higher education resulting in \$4,176,545; mental health services cost savings, \$504,589; cost savings from welfare use, \$502,401; and averted incarceration costs of \$9,772. At an annual average cost of \$7,558 per Pearl client, the

discounted present value at 1.5% projected lifetime accrued benefits for all Pearl members was \$5,193,307, and the cost was \$551,875 resulting in a net benefit of \$4,641,432. The resultant benefit-cost ratio from discounted present values was 9.40 to 1, implying that there was a government return of \$9.40 per \$1 invested. In Year 6 the model showed a positive net benefit.

A sensitivity analysis of the benefit-cost ratio was conducted using discount rates of 0% and 3% to get a sense of lower and upper bounds of the ratio of 9.4 to 1. At a 0% discount rate or constant dollars, the benefit-cost ratio was 12.0 to 1 or 7.6 to 1 using a 3% discount rate. Monte Carlo simulations were conducted to incorporate uncertainty in program effectiveness and to ensure the robustness of the estimations. The parameters included in the simulation were those known to affect the benefit-cost ratio estimations. These parameters were the discount rate, the Pearl Project dropout rate, differences in graduation rates between Pearl members and the status quo for each educational level and skill development, differences in rates of welfare usage, mental health usage, and possible incarceration rates.