CONSTELLATION FUND

QUANTITATIVE ANALYSIS OVERVIEW

Thank you for participating in our impact analysis process, and for the important work your organization is leading in the community!

The Constellation Fund supports its poverty-fighting mission by weighing careful qualitative evaluations with quantitative analyses that are driven by peer-reviewed research, local demographic information, and data directly from nonprofits. What follows is a summary of our quantitative findings, which are balanced alongside our qualitative learnings to drive our grantmaking decisions. However, it is important to put this information into the appropriate context.

Benefit-Cost Analysis

Constellation calculates the value of poverty-fighting benefits that accrue to program participants at or below 185% of the federal poverty guideline. The primary two measurables throughout all of our metrics are lifetime improvements to health and income. We take care to apply metrics that capture both direct and intersectional impacts (e.g. educational outcomes resulting from stabilized housing). To better isolate the impact of an organization, Constellation builds and uses counterfactuals, comparing what happens to participants in a given program against what would have likely have happened had they not received the assistance. These counterfactual estimates are subtracted from our outcomes so as not to overestimate actual impact. All of this work results in a private benefit-cost ratio (BCR), which encapsulates the amount of measurable poverty-fighting benefits created by a potential grant from Constellation for every dollar of that cost. It is worth emphasizing that a private BCR is different than a social BCR, which generally includes public returns on investment (e.g. savings to taxpayers). Constellation acknowledges and applauds such benefits; however, since these benefits generally accrue to people living above the poverty line, they are intentionally excluded from our analysis of impacts for individuals and families living in poverty. As a result, our BCRs are often lower that those of a social BCR.

Additional Context

CONSTELLATION'S METRICS ARE:	CONSTELLATION'S METRICS ARE NOT:
A Standard for Comparing Opportunities: Metrics allow for the weighting of similar and dissimilar programs.	**The Only Criteria for Making Grant Decisions:** Observations and qualitative information has a coequal role in our approach to grantmaking.
A Tool for Achieving Transparency: Constellation welcomes outside voices to examine, criticize, and improve the metrics.	**Report Cards on Potential Grantees:** A nonprofit can fulfill its own mission without scoring high on Constellation's metrics.
A Diagnostic Device: What do highest-scoring organizations have in common? Lowest?	**Exact and Unchanging:** Neither the data captured nor the calculations applied are perfect and, with additional research and refinement, our metrics are designed to evolve.
A Method for Assessing Constellation: We measure our own impact the same way we measure other organizations: how much poverty-fighting good we do with each dollar we spend.	**The Only Approach to Smart Philanthropy:** Other funding organizations may employ different but useful standards.

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ANALYSIS REPORT

Organization Name:

Annex Teen Clinic

Grant Recommendation:

Yes

Impact Area: Health	Geography: North Minneapolis; Northwest Hennepin County

Organization Budget:	Program Budget:	Total Benefits:
$2,465,707	N/A	$17,208,930

ORGANIZATION OVERVIEW

ORGANIZATION DESCRIPTION:

Since 1971, Annex Teen Clinic has provided low cost, sexuality-related health care, education, counseling, and outreach to adolescents in Northwest Hennepin County and North Minneapolis. All services are confidential and are offered at a low cost (using a sliding fee scale) or at no cost. The Annex Teen Clinic's overall target population is youth and adolescents (age 12-25) who are at risk for unplanned pregnancies and in need of reproductive health care. These individuals experience significant health disparities due to their age, race, ethnicity, gender, sexual identity, income levels, insurance access, transportation issues, and concerns about confidentiality.

GRANT PURPOSE:

A $60,000 grant from the Constellation Fund will be used to support Annex's general operations in clincial services and sexual health education. Funding would support the Clinic in a Box program, which provides community-based birth control, STI testing, and treatment for adolescents through age 25 without insurance coverage and fill a funding gap for sexual health education.

BENEFITS

ANALYSIS OF BENEFIT-COST RATIO:

Annex's high BCR ($6.98) results from several factors. Annex serves a very large number of youth (close to 2000) in its sexual health outreach and education programming, a number that Constellation actually adjusted down considerably from the original reported amount to account for frequency of attendance and length of programming. It should be noted that Constellation developed new metrics for this specific analysis: birth control leading to improved health, STI testing and treatment, and sexual health education for youth. We found that the impact on QALY for all these interventions to be higher than many other health interventions, driving Annex's BCR higher.

PROJECTED BENEFITS SUMMARY:	
G11.H.I.V. testing, increasing number of quality-adjusted life years	$592,335
Birth control leading to improved health, increasing number of quality-adjusted life years	$1,287,399
STI screening/treatment leading to improved health, increasing number of quality-adjusted life years	$6,637,664
G7. Cancer: Screenings and biopsy (all), increasing number of quality-adjusted life years	$6,869
Sexual health education for youth leading to improved health, increasing number of quality-adjusted life years	$8,684,662.61
TOTAL IMPACT	$17,208,930

ORGANIZATION'S BENEFIT-COST RATIO:

Benefits:	17,208,930
Costs:	$2,465,707
TOTAL IMPACT	$6.98 : 1

ANNEX TEEN CLINIC DATA & COMPUTATIONS

METRIC	G11.H.I.V. testing, increasing number of quality-adjusted life years	TOTALS
Equation	(# individuals tested)x (% individuals get tested solely because of the program)x (# QALY increase due to screening)x ($ QALY)	
Explanation	Number of individuals screened: **[1224]** The number of participants reported by grantee. Percentage of participants who are screened solely because of the program: estimated by Constellation Fund staff using relevant counterfactuals whenever appropriate. We found that roughly 33% of youth are tested for HIV: https://pediatrics.aappublications.org/content/137/2/e20152700. Thus, we use **[67%]** as an approximation of the percent of youth served by Annex who wouldn't have gotten tested otherwise. Number of QALY increase due to testing: **[0.03]** value for H.I.V. testing in a high-risk population (Muennig, Glied & Simon, 2005). This estimate includes the benefits of improved quality of life and longer survival for the person tested due to timely treatment, as well as the reduction of transmission of H.I.V. to others. Average age of participant: **[18]** Age of benefit accrual for participant: **[74]** $ value per QALY: **[$50,000]** Present discount benefits from age 74 to average age of participating children: [($Estimated Benefits) / (1 + Discount Rate)$^{(\text{Life Expectancy} - \text{Average Age})}$]	
References	Muennig, P., Glied, S. & Simon, J. (2005). Estimation of the health benefits produced by Robin Hood Foundation grant recipients. New York, NY: Robin Hood.	
	TOTAL:	$592,334.93

METRIC	Birth control leading to improved health	TOTALS
Equation	(# of participants) x (% individuals care due to program) x (Q1: Impact of program on QALY) x ($QALY)	
Explanation	The benchmark study evaluated 13 methods of contraception among women aged 15 to 50 years with respect to differences in health gains among other health outcomes. The study compared these methods with a hypothetical reference case of nonuse of contraception. The reversible contraceptive methods evaluated were: combination oral contraceptives (OCs); transdermal contraceptive patch (patch); vaginal ring; male condom (condom); diaphragm; copper intrauterine device (IUD); levonorgestrel-releasing IUD; depot medroxyprogesterone acetate (DMPA); estrogen–progestin monthly injectable; and two behavioral methods, periodic abstinence and withdrawal; as well as two permanent methods, tubal sterilization and vasectomy. The general metric is based on the average gain in QALY from the 13 contraceptive methods in the study; however, the metric can be modified to estimate the benefits of specific method. Number of participants: Reported by program. **[1582]** Percentage of individuals receiving care due to program: **[26%]** Percentage of women aged 18–49 at risk of unintended pregnancy who do not used contraceptive in Minnesota (Douglass, et al., 2017). Q1: Impact of program on QALY: **[0.13]** Average gain in QALY from 13 contraceptive methods reported by Sonnenberg, et al, (2004). Average age of participant: **[18]** Age of benefit accrual for participant: **[74]** $ value per QALY: **[$50,000]** Present discount benefits from age 74 to average age of participating children: [($Estimated Benefits) / (1 + Discount Rate)$^{(\text{Life Expectancy} - \text{Average Age})}$]	
References	Douglas-Hall, A., Kost, K., and Kavanaugh M. (2017) State-Level Estimates of Contraceptive Use in the United States, 2017. New York: Guttmacher Institute, 2018. https://doi.org/10.1363/2018.30267.	

	Sonnenberg, Frank A., et al. (2004). Costs and net health effects of contraceptive methods. Contraception, 69(6), 447-459. https://doi.org/10.1016/j.contraception.2004.03.008	
		TOTAL: $1,287,398.65

METRIC	STI screening/treatment leading to improved health (QALY)	TOTALS
Equation	(# of participants) x (% Participants receiving test/treatment due to program) x (Q: # QALY added solely because of STI screening) x ($ QALY)	
Explanation	Number of participants: **[398.4 male; 1593.6 female]** Reported by program. Program reported 1992 total individuals screened, with an 80% of those being women and 20% being men. % Participants receiving test/treatment due to program: **[7% male; 80% female]** Percent of low income female and male individuals who are tested in the U.S.A. (Cuffe, et al.,2016). Q1: # QALY added solely because of STI screening: **[0.4].** Beck, et al (2016). Average age of participant: **[18]** Age of benefit accrual for participant: **[74]** Present discount benefits from age 74 to average age of participating children: [($Estimated Benefits) / (1 + Discount Rate)$^{(\text{Life Expectancy} - \text{Average Age})}$] $ value per QALY: **[$50,000]**	
References	Beck, E., Armbruster, B., Birkett, M., & Mustanski, B. (2016). PRM51 - The Benefits of A Holistic View: Considering Multiple Health Outcomes for HIV and STI Testing. *Value in Health*, *19*(7), A366. https://doi.org/10.1016/j.jval.2016.09.115 Cuffe, K. M., Newton-Levinson, A., Gift, T. L., McFarlane, M., & Leichliter, J. S. (2016). Sexually Transmitted Infection Testing Among Adolescents and Young Adults in the United States. *Journal of Adolescent Health*, *58*(5), 512–519. https://doi.org/10.1016/j.jadohealth.2016.01.002	
		TOTAL: $6,637,664.46

METRIC	G7. Cancer: Screenings and biopsy (all), increasing number of quality-adjusted life years	TOTALS
Equation	(# individuals screened)x (% individuals getting screened solely because of the program)x (# QALY increase due to screening)x ($ QALY)	
Explanation	Number of individuals screened: **[135]** The number of participants reported by grantee. Percentage of participants who are screened solely because of the program: estimated by Constellation Fund staff. **[20%]** We use screening rates for low-income individuals in Minnesota as counterfactual baselines for different types of cancer (MN Department of Health, 2017): Cervical cancer: **[86%]** Number of QALY increase due to treatment: Cervical cancer - **[0.01]** value of cervical cancer screening, compared with no screening (Mandelblatt et al., 2002). Average age of participant: **[23]** Age of benefit accrual for participant: **[74]** $ value per QALY: **[$50,000]** Present discount benefits from age 74 to average age of participating children: $[(\$\text{Estimated Benefits}) / (1 + \text{Discount Rate})^{(\text{Life Expectancy} - \text{Average Age})}]$	
References	Center for the Evaluation of Value and Risk in Health, Tufts Medical Center (n.d.). Cost Effectiveness Analysis Registry. Retrieved from https://research.tufts-nemc.org/cear4/SearchingtheCEARegistry/SearchtheCEARegistry.aspx Heijnsdijk, E. a. M., de Carvalho, T. M., Auvinen, A., Zappa, M., Nelen, V., Kwiatkowski, M., … de Koning, H. J. (2015). Cost-effectiveness of prostate cancer screening: a simulation study based on ERSPC data. Journal of the National Cancer Institute, 107(1), 366. doi.org/10.1093/jnci/dju366 Mandelblatt, M., Lawrence, W., Womack, S., Yi, B., Jacobsen, D., Hwang, Y., Gold, K., Barter, J. & Shah, K. (2002). Benefits and costs of using HPV testing	

	to screen for cervical cancer. Journal of the American Medical Association, 287(18), 2372-2381. doi:10.1001/jama.287.18.2372 Mittmann, N., Stout, N. K., Tosteson, A. N. A., Trentham-Dietz, A., Alagoz, O., & Yaffe, M. J. (2018). Cost-effectiveness of mammography from a publicly funded health care system perspective. CMAJ Open, 6(1), E77–E86. doi.org/10.9778/cmajo.20170106. Tafazzoli, A., Roberts, S., Ness, R. & Dittus, R. (2005). A comparison of screening methods for colorectal cancer using simulation modeling. In M. E. Kuhl, N. M. Steiger, F. B. Armstrong & J. A. Jones (Eds.), Proceedings of the 2005 Winter Simulation Conference. Piscataway, NJ: Institute of Electrical and Electronics Engineers. doi.org/10.1109/WSC.2005.1574512 Minnesota Department of Health (2017). Quick facts: Cancer screening in Minnesota. Retrieved from http://www.health.state.mn.us/divs/healthimprovement/data/quick-facts/screening.html	
	TOTAL:	$6,869.44

METRIC	Sexual health education for youth	TOTALS
Equation	(# of participants) x (Q:1) x ($ QALY)	
Explanation	Intervention description: Two models of school-based sexual education can be used as benchmark. Model 1: Teacher-based comprised a 20 session classroom-based program over 2 years (10 sessions at age 13–14 years, and 10 at age 14–15 years). Teachers were taught in groups of thirteen during a 5-day training course run by a health promotion practitioner. Model 2: Peer-led, comprised three sessions during one term. The training was undertaken in groups of twelve peer educators per training session over a 2-day intensive course led by a health promotion practitioner. The impact on QALY from these programs is high (0.19); but, note that the interventions are significantly more intensive than regular sexual education. We compare length and content of grantee's program to any of these two programs and determine whether to apply the full impact on QALYs from the literature or a discounted value if the grantee's program does not match the quality of the programs in the literature. Number of participants: **[1,940]** Reported by program. Q1: # QALY added solely because of sex education: **[0.19].** Added QALY are with respect to traditional sex education at schools, (Cooper, et al., 2012). Average age of participant: **[16]** Age of benefit accrual for participant: **[74]** $ value per QALY: **[$50,000]** Present discount benefits from age 74 to average age of participating children: [($Estimated Benefits) / (1 + Discount Rate)$^{(\text{Life Expectancy} - \text{Average Age})}$]	
References	Cooper, K., et al. (2012). AN Economic Model Of School-Based Behavioral Interventions To Prevent Sexually Transmitted Infections. International Journal of Technology Assessment in Health Care, 28(4), 407-414. https://doi-org.ezp2.lib.umn.edu/10.1017/S0266462312000475	
	TOTAL:	$8,684,662.61