
ROBIN HOOD

Metrics Equations – Table of Contents

Earnings metrics

Non-earning metrics

Health metrics

Earnings, Education metrics

Metric #	Name of Metric	Equation
1	Early Childhood, high-quality preschool	(XX children enrolled in a high-quality preschool) * (XX percent of children attend a high-quality preschool solely because of this program) * ($50,650 value of preschool)

Explanation:

The number of children enrolled in a high-quality preschool is based on the actual number reported by our grantee.

The percentage of children who attend a high-quality preschool solely because of the program is estimated by Robin Hood staff.

We estimate the benefit of high-quality pre-kindergarten programs by estimating their impact on the rate of high school graduation among enrollees and, through that mechanism, the impact on future earnings and health. We also estimate the impact of high-quality pre-K programs on juvenile delinquency, child abuse, parenting skills, parental earnings and fees that parents no longer need to pay for child care. As outlined below, we estimate the total benefit of pre-K programs on poor New Yorkers from all enumerated impacts to be $50,650 per student.

High school graduation: Earnings impact

First, we estimate the impact of high-quality pre-kindergarten programs on high school graduation rates. We start by assuming a counterfactual graduation rate of 50 percent (NYCDOE, 2009): 50 percent of the black and Hispanic students who apply to pre-kindergarten programs funded by Robin Hood (mostly black and Hispanic students) would graduate high school in the absence of our programs. Next, we assume that high-quality pre-kindergarten programs of the type of Robin Hood funds boost the odds that students eventually graduate from high school by 30 percent. The 30 percent figure emerges from sophisticated longitudinal studies of three high-quality pre-K programs: Abecedarian (Campbell & Ramey, 2010), Perry (Schweinhart et al., 2005) and Chicago (Reynolds et al., 2010) studies.

We then estimate the impact of academic progress on earnings. We infer that 50 percent of students living in poverty and who graduate high school do not enroll in college. They earn $6,500 a year more than do high school dropouts on average. Of the 50 percent of high school graduates who do enroll in college, 60 percent do not graduate college and will earn $11,500 more per year on average than do high school dropouts; 15 percent of those who enroll in college earn an A.A. degree, earning $19,000 more per year on average than do high school dropouts; and 25 percent of those who enroll in college earn a B.A. degree, earning $39,000 more per year on average than do high school dropouts.

High school graduation: Health impact

We estimate that high school graduation boosts the future health status of students by 1.80 QALYs, an estimate based on the work of Muennig (Muennig, Franks & Gold, 2005;

Metric #	Name of Metric	Equation
		Levin, Belfield, Muennig & Rouse, 2007). Robin Hood assigns a value of $50,000 per QALY. The overall benefit of preschool on high school graduation and subsequent higher educational attainment is $50,004 , calculated as follows: Present discounted value of ((0.50 baseline high school graduation rate * 0.30 increase in high school graduation rate * 50 percent do not go on to college * $6,500 earnings increase) + (0.50 baseline high school graduation rate * 0.30 increase in high school graduation rate * 50 percent do go on to college * 0.60 will not get a degree * $11,500 earnings increase) + (0.50 baseline high school graduation rate * 0.30 increase in high school graduation rate * 50 percent do go on to college * 0.15 earn an A.A. degree * $19,000 earnings increase) + (0.50 baseline high school graduation rate * 0.30 increase in high school graduation rate * 50 percent do go on to college * 0.25 earn an B.A. degree * $39,000 earnings increase)) = $1,950 at present value, assuming the children are 4 years old, that earning benefits begin at age 20, with real growth estimated at 3 percent and discounted at 5 percent, is $36,504. (0.50 baseline high school graduation rate * 0.30 increase in high school graduation rate * 1.80 QALY * $50,000 per QALY) = $13,500 estimated health benefits arising from improved educational attainment = $36,504 + 13,500 = $50,004 total estimated earnings and health benefits arising from improved educational attainment due to high-quality preschool *Juvenile delinquency* We estimate that high-quality pre-K programs reduce the rate of future juvenile delinquency among the enrollees by about 35 percent. The estimate emerges from research, including Reynolds, Temple, Robertson & Mann, 2002. We assume a counterfactual rate of juvenile delinquency – the rate of juvenile delinquency that would have applied to the enrollees in Robin Hood's pre-K programs had they not had the opportunity to enroll – of 9 percent. The 9 percent figure is based on findings of research on urban, low-income teenagers (Ludwig, Duncan & Hirschfeld, 1999; Lochner, 2005). We estimate that avoiding re-arrest and conviction raises lifetime earnings by an average of 22 percent (Joseph, 2001). We estimate the average future earnings of those who attend our grantee's program at about $20,000, based on earnings estimates from Levin, Belfield, Muennig & Rouse (2007), roughly split between those with a high school degree and those without. The overall benefit of decreased juvenile delinquency is $2,602, calculated as follows: Present discounted value of ((0.09 baseline juvenile delinquency rate) * (0.35 avoid juvenile delinquency due to preschool) * ($20,000 estimated future earnings) * (0.22 estimated earnings increase due to avoided juvenile

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		delinquency) = $139, at present value, assuming the children are 4 years old, that earning benefits begin at age 20, with real growth estimated at 3 percent and discounted at 5 percent, is $2,602. *Child abuse* We estimate a 50 percent reduction in child abuse due to high-quality preschool, based on Reynolds et al. (2010) (which reports that rates of child abuse fall to 5 percent from 10 percent). We estimate that the value of preventing child abuse (in terms of health status and health care costs) is about $24,000, based on the findings of Aos, Lieb, Mayfield, Miller & Pennucci (2004). This estimate captures the present discounted value of future improvements in health status and reductions in future medical outlays. Note that we apply this estimated benefit to a reduction in future abuse even though we may not have information on whether a "case" of abuse has already occurred for which future remediation is not possible. To complete the calculation below, we assume a counterfactual rate of child abuse of 12 percent (based on the Aos, Lieb, Mayfield, Miller & Pennucci [2004] meta-analysis) in an urban, low-income population. The overall benefit of decreased child abuse is $1,440, calculated as follows: ((0.12 baseline child abuse rate) * (0.50 estimated decrease in child abuse rate) * ($24,000 value of avoiding child abuse)) = $1,440 *Improved parenting* We estimate that the future health status of children rises by an average of 0.02 QALY if their parents acquire improved parenting skills. The estimate is based loosely on an estimate for the impact on children of reduced domestic violence (Muennig, Franks & Gold, 2005). Although in most cases the decrease in domestic violence (D.V.) may only be tangentially related to improved parenting, the D.V.-based estimate serves as a useful proxy until we find a better estimate. We estimate that about 33 percent of parents will improve their parenting skills due to a strong parenting intervention, based on Webster-Stratton's (2005) findings. Robin Hood assigns a value of $50,000 per QALY. The overall benefit of improved parenting is $330, calculated as follows: ((0.02 estimated QALY value of improved parenting) * (0.33 parents improve) *($50,000 per QALY)) = $330 *Child care fees saved* Parents with incomes under the poverty line pay no child care/preschool fees if they are able to get into a subsidized slot. However, in New York City, only 30 percent of eligible families find available slots (Kolben & Holcomb, 2009). Thus, 70 percent of eligible families in poverty pay for child care/preschool. Families that do not receive a subsidized slot must pay between 1 and 10 percent of their gross income for child care. Assuming average earnings of $20,000 (based on Levin, Belfield, Muennig & Rouse,

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	2007) and assuming the family pays 5 percent of earnings on child care, the expected outlay per year will be $1,000. The estimated amount of child care fees saved is $700, calculated as follows: ((0.70 eligible families do not receive subsidy) * ($1,000 cost saved due to Robin Hood funding) = $700 *Parents more likely to work* We estimate that enrollment in pre-K programs increase employment of parents by 6 percent. Matthews (2006) reports that families in poverty receiving subsidies for child care are between 12 to 15 percent more likely to work. In New York City 46 percent of families in poverty are employed (New York City Commission for Economic Opportunity, 2006). An increase of 12 percent over the 46 percent rate means that about 6 percent more families would be employed due to free, full-day, high-quality preschool. We estimate the average earnings of parents whose children attend our grantees' program at about $20,000, based on earnings estimates from Levin, Belfield, Muennig & Rouse (2007), roughly split between those with a high school degree and those without. We apply these earnings to the percentage of newly employed parents just for the preschool year. The estimated benefit of increased probability of employment is $1,200, calculated as follows: ((0.06 increase in number of working families) * ($20,000 estimated average earnings) = $1,200 *Overall benefits* We estimate that the overall benefit of high-quality preschool on children and families is about $50,650 calculated as follows: $50,004 present discounted value of earnings benefits and education-related health benefits + $2,602 earnings benefits of decreased juvenile delinquency + $1,440 overall estimated benefit of decreased child abuse + $330 in QALY benefits of improved parenting + $700 in saved child care fees + $1,200 estimated increase in parental employment = $56,276, reduced by 10 percent to account for possible double-counting across benefits = $50,648, rounded to $50,650. **References:** Aos, S., Lieb, R., Mayfield, J., Miller, M. & Pennucci, A. (2004). Benefits and costs of prevention and early intervention programs for youth. Olympia: Washington State Institute for Public	

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	Policy. Campbell, F. A. & Ramey, C. T. (2010). Carolina Abecedarian Project. In A. J. Reynolds, A. J. Rolnick, M. M. Englund & J. A. Temple (Eds.), Childhood programs and practices in the first decade of life: A human capital integration (pp. 76-98). New York, NY: Cambridge University Press. Joseph, M. (2001). The effect of arrests on the earnings of young men: Evidence from the National Youth Survey. Chicago, IL: Harris Graduate School of Public Policy, University of Chicago. Kolben, N. & Holcomb, B. (2009). 2008 CCI primer: Key facts about early care and education in New York City. New York, NY: Child Care, Inc. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Lochner, L. (2005). Individual perceptions of the criminal justice system (Working Paper No. 9474). Cambridge, MA: National Bureau of Economic Research. Ludwig, J., Duncan, G. & Hirschfeld, P. (1999). Urban poverty and juvenile crime: Evidence from a randomized housing-mobility experiment. Washington, DC: U.S. Department of Housing and Urban Development. Matthews, H. (2006). Child care assistance helps families work: A review of the effects of subsidy receipt on employment. Washington, DC: Center for Law and Social Policy. Muennig, P., Franks, P. & Gold, M. (2005). The cost effectiveness of health insurance. American Journal of Preventive Medicine, 28(1), 59-64. Muennig, P., Glied, S. & Simon, J. (2005). Estimation of the health benefits produced by Robin Hood Foundation grant recipients. Report to Robin Hood. New York, NY: Robin Hood. New York City Commission for Economic Opportunity. (2006). Increasing opportunity and reducing poverty in New York City. New York, NY: Report to the Office of the Mayor. New York City Department of Education. (2009). High school graduation rate rises above 60 percent. Retrieved from http://schools.nyc.gov/Offices/mediarelations/NewsandSpeeches/2008-2009/20090622_grad_rates.htm Reynolds, A. J., Temple, J. A. & Ou, S. (2010). Impacts and implications of the Child-Parent Center preschool program. In A. J. Reynolds, A. J. Rolnick, M. M. Englund & J. A. Temple (Eds.), Childhood programs and practices in the first decade of life: A human capital integration (pp. 168-187). New York, NY: Cambridge University Press.	

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	Reynolds, A. J, Temple, J. A., Robertson, D. L. & Mann, E. A. (2002). Age 21 cost-benefit analysis of the Title I Chicago Child-Parent Centers. Educational Evaluation and Policy Analysis, 24(4), 267-303. Schweinhart, L., Monty, J., Xiang, Z., Barnett, W. S., Belfield, C. & Nores, M. (2005). Lifetime effects: The High/Scope Perry Preschool Study through age 40 (Monographs of the High/Scope Educational Research Foundation No. 14). Ypsilanti, MI: High/Scope Press. Webster-Stratton, C. (2005). The Incredible Years: A training series for the prevention and treatment of conduct problems in young children. In E. D. Hibbs & P. S. Jensen (Eds.), Psychosocial treatments for child and adolescent disorders (2nd ed.). Washington, DC: American Psychological Association.	
2	Education: English as a Second Language (E.S.L.), English literacy skills improvement	Present discounted value of the following calculation: [(XX participants complete a year of E.S.L.) * (XX percent of participants receive assistance solely because of this program) * ($13,000 average earnings for a recent immigrant with low skills) * (2 percent increase in earnings due to improved English literacy)]
	Explanation: The number of participants who complete a year of E.S.L. is based on the actual number reported by our grantee. The percentage of participants who get assistance solely because of the program is estimated by Robin Hood staff. We estimate $13,000 in average earnings for low-skilled immigrants who have recently arrived to this country based primarily on a rough average of the findings Li (2001), Borjas (2006) and Lubotsky (2007). We base our estimate of 2 percent increase in earnings due to E.S.L. classes on the findings of Chiswick & Miller (2002), A. Gonzalez (2000), L. Gonzalez (2004) and Kim (2003), who find overall that although English skills do impact earnings, typical E.S.L. classes do not have a significant impact on English skills. **References:** Borjas, G. (2006). Making it in America: Social mobility in the immigrant population (Working Paper No. 12088). Cambridge, MA: National Bureau of Economic Research. Chiswick, B. & Miller, P. (2002). The complementarity of language and other human capital: Immigrant earnings in Canada (IZA Discussion Paper No. 451). Bonn, Germany: Institute for the Study of Labor.	

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	Gonzalez, A. (2000). The acquisition and labor market value of four English skills: New evidence from NALS. Contemporary Economic Policy, 18(3), 259-269. Gonzalez, L. (2004). Nonparametric bounds on the returns to language skills (IZA Discussion Paper No. 1098). Bonn, Germany: Institute for the Study of Labor Kim, J. (2003). Education, English language proficiency, and earnings of male immigrants in the U.S. labor market. Journal of Business and Economics Research, 1(3), 17-26. Li, P. (2001). The market worth of immigrants' educational credentials. Canadian Public Policy, 27(1), 23-38. Lubotsky, D. (2007). Chutes or ladders? A longitudinal analysis of immigrant earnings. Journal of Political Economy, 115(3), 820 – 867.	
3	Education: High school equivalency attainment with no further education	Present discounted value of the following calculation: [(XX participants who take the high school equivilency exam) * [(XX percent actual exam pass rate) – (50 percent counterfactual exam pass rate)] * [($17,600 average earnings with a high school equivilency diploma and no further education) – ($16,000 average earnings for a high school dropout and no further education)]]
	Explanation: The number of participants who take the high school equivilency exam is based on the actual number reported by our grantee. The percentage of participants who pass the high school equivilency exam is based on the actual number reported by our grantee. We base the 50 percent counterfactual pass rate for passing the high school equivilency exam in New York City on Schuyler Center for Analysis and Advocacy (2009). We base our estimate of the impact of academic progress on earnings on Levin, Belfield, Muennig & Rouse (2007). To Levin's earnings data (excluding the white subsample), we add an estimate of fringe benefits. Based on data from our grantees, we estimate that 60 percent of low-income workers receive fringe benefits (averaging 20 percent of their wages). **References:** Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Schuyler Center for Analysis and Advocacy. (2009). Getting serious about the GED: How New York can build a bridge from high school dropout to postsecondary success. Albany, NY:	

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	Author.	
4	Education: One year of college with no further education (having earned a high school equivilency diploma)	Present discounted value of the following calculation: [(XX participants who pass the high school equivilency exam) * [(XX percent of high school equivilency holders who complete a year of college) – (10 percent counterfactual success rate)] * [($25,000 average earnings with one year of college and no further education) – ($17,600 average earnings with a high school equivilency diploma and no further education)]]
	Explanation: The number of participants who pass the high school equivilency exam is based on the actual number reported by our grantee. The percentage of high school equivilency holders who complete a year of college is based on the actual number reported by our grantee. We base the 10 percent counterfactual rate for one year college retention by high school equivilency holders on a body of research indicating that approximately 20 percent of high school equivilency holders enroll in college, and half of them will drop out in the first year (Murnane, Willet, J. & Boudett, 1997; Schuyler Center for Analysis and Advocacy, 2009; Tyler & Lofstrom, 2008). We base our estimate of the impact of academic progress on earnings on Levin, Belfield, Muennig & Rouse (2007). To Levin's earnings data (excluding the white subsample), we add an estimate of fringe benefits. Based on data from our grantees, we estimate that 60 percent of low-income workers receive fringe benefits (averaging 20 percent of their wages). **References:** Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Murnane, R., Willet, J. & Boudett, K. (1997). Does a GED lead to more training, post-secondary education, and military service for school drop outs? *Industrial and Labor Relations Review*, *51(1),*100 - 116. Schuyler Center for Analysis and Advocacy. (2009). Getting serious about the GED: How New York can build a bridge from high school dropout to postsecondary success. Albany, NY: Author. Tyler, J. H. & Lofstrom, M. (2008). Is the GED an effective route to postsecondary education for school dropouts? (Working Paper No. 13816). Cambridge, MA: National Bureau of Economic Research.	

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5	Education: Two years of college with no further education (having earned a high school equivalency diploma)	Present discounted value of the following calculation: [(XX participating high school equivilency holders who complete a year of college) * [(XX percent of one-year college completers who complete a second year of college) – (70 percent counterfactual success rate)] * [($27,500 average earnings with two years of college and no further education) – ($25,000 average earnings with one year of college and no further education)]]
	Explanation: The number of high school equivilency holders who complete a year of college is based on the actual number reported by our grantee. The percentage of one-year college completers who complete a second year of college is based on the actual number reported by our grantee. We base the 70 percent counterfactual rate for completing a second year of college by high school equivilency holders on City University of New York reports (CUNY, 2008), which indicate that 35 percent of college enrollees with a high school equivalency will remain enrolled at the end of the second year, with 50 percent dropping out in the first year. We base our estimate of the impact of academic progress on earnings on Levin, Belfield, Muennig & Rouse (2007). To Levin's earnings data (excluding the white subsample), we add an estimate of fringe benefits. Based on data from our grantees, we estimate that 60 percent of low-income workers receive fringe benefits (averaging 20 percent of their wages). **References:** City University of New York (CUNY). (2008). College readiness of New York City's GED recipients. New York, NY: CUNY Office of Institutional Research and Assessment. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University.	
6	Education: A.A. degree with no further education (having earned a high school equivalency diploma)	Present discounted value of the following calculation: [(XX high school equivilency holders enrolled in college) * [(XX percent of participating high school equivilency holders enrolled in college who obtain an A.A. degree) – (10 percent counterfactual success rate)] * [($35,000 average earnings with an A.A. degree and no further education) – ($17,600 average earnings with a high school equivilency diplomaand no further education)]]
	Explanation: The number of high school equivilency holders enrolled in college is based on the actual number reported by our grantee.	

Metric #	Name of Metric	Equation
	The percentage of high school equivilency holders enrolled in college who obtain an A.A. degree is based on the actual number reported by our grantee. We base the 10 percent counterfactual rate of A.A. attainment for high school equivilency holders based on City University of New York reports (CUNY, 2008) indicating a 12 percent graduation rate—we round to 10 percent. We base our estimate of the impact of academic progress on earnings on Levin, Belfield, Muennig & Rouse (2007). To Levin's earnings data (excluding the white subsample), we add an estimate of fringe benefits. Based on data from our grantees, we estimate that 60 percent of low-income workers receive fringe benefits (averaging 20 percent of their wages). References: City University of New York (CUNY). (2008). College readiness of New York City's GED recipients. New York, NY: CUNY Office of Institutional Research and Assessment. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University.	
7	Education: High school graduation with no further education (regular, four-year graduation rate)	Present discounted value of the following equation: [(XX participating high school students, adjusted, who enter high school as 9th graders) * [(XX percent actual high school graduation rate) – (50 percent counterfactual graduation rate] * [($22,500 average earnings with a high school diploma and no further education) – ($16,000 average earnings for a high school dropout and no further education)]]
	Explanation: The number of high school students who enter high school as ninth graders is based on the actual number reported by our grantee. The percentage of students who graduate from high school is based on the actual number reported by our grantee. We base the 50 percent counterfactual rate of high school graduation for low-income, minority students on reports by the New York City Department of Education (2009), and corroborated widely in the research literature (Swanson, 2008; Jacobsen & Mohker, 2009; Lesnick, Goerge, Smithgall & Gwynne, 2010). We base our estimate of the impact of academic progress on earnings on Levin, Belfield, Muennig & Rouse (2007). To Levin's earnings data (excluding the white subsample), we add an estimate of fringe benefits. Based on data from our grantees, we estimate that 60 percent of low-income workers receive fringe benefits (averaging 20 percent of their wages). References: Jacobsen, L. & Mohker, C. (2009). Pathways to boosting the earnings of low-income students by	

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	increasing their educational attainment. (Report to the Bill and Melinda Gates Foundation). Washington, DC: Hudson Institute Center For Employment Policy. Lesnick, J., Goerge, R., Smithgall, C. & Gwynne, J. (2010). A longitudinal analysis of third-grade students in Chicago in 1996-97 and their educational outcomes (Report to the Annie E. Casey Foundation). Chicago, IL: Chapin Hall, University of Chicago. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. New York City Department of Education. (2009). High school graduation rate rises above 60 percent. Retrieved from http://schools.nyc.gov/Offices/mediarelations/NewsandSpeeches/2008-2009/20090622_grad_rates.htm Swanson, C. B. (2008). Cities in crisis: A special analytic report on high school graduation. Bethesda, MD: Editorial Projects in Education Research Center.	
8	Education: High school graduation with no further education (transfer schools)	Present discounted value of the following equation: [(XX participating transfer school students) * [(XX percent actual high school graduation rate) – (15 percent counterfactual graduation rate)] * [($22,500 average earnings with a high school diploma and no further education) – ($16,000 average earnings for a high school dropout and no further education)]]
	Explanation: The number of transfer school graduates is based on the actual number reported by our grantee. The percentage of students who graduate from high school is based on the actual number reported by our grantee. We base the 15 percent counterfactual rate of high school graduation for students attending New York City transfer high schools on Metis Associates (2010). For students in "last chance" transfer high schools, the probabilities for graduation vary widely by age and number of credits. Our transfer school grantees report that the average student enters with between 11 and 14 credits. A recent evaluation of New York City transfer schools indicates that students entering with this many credits graduate at a rate of approximately 15 percent (Metis Associates, 2010). We base our estimate of the impact of academic progress on earnings on Levin, Belfield, Muennig & Rouse (2007). To Levin's earnings data (excluding the white subsample), we add an estimate of fringe benefits. Based on data from our grantees, we estimate that 60 percent of low-income workers receive fringe benefits (averaging 20 percent of their wages). **References:**	

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	Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Metis Associates. (2010). Evaluation of New York City's Learning to Work Initiative for over-age and under-credited High School youth: Student outcomes (2005-2008). New York, NY: Metis Associates.	
9	Education: High school graduation with no further education (as a result of an early childhood program)	Present discounted value of the following equation: [(XX participating children) * (50 percent of children graduate from high school on average) * (30 percent increase in the high school graduation rate solely because of this program) * [($22,500 average earnings with a high school diploma and no further education) – ($16,000 average earnings for a high school dropout and no further education)]]
	Explanation: The number of participating children is based on the actual number reported by our grantee. We base the 50 percent counterfactual rate of high school graduation for low-income, minority students on reports by the New York City Department of Education (2009) and corroborated widely in the research literature. We apply a 30 percent estimated average increase in the rate of high school graduation due to attendance in high-quality preschool based on the findings of well-known, gold standard longitudinal studies (a rough average across the high school graduation findings of the Abecedarian (Campbell & Ramey, 2010), Perry (Schweinhart et al., 2005) and Chicago (Reynolds, Temple & Ou, 2010) studies). We base our estimate of the impact of academic progress on earnings on Levin, Belfield, Muennig & Rouse (2007). To Levin's earnings data (excluding the white subsample), we add an estimate of fringe benefits. Based on data from our grantees, we estimate that 60 percent of low-income workers receive fringe benefits (averaging 20 percent of their wages). **References:** Campbell, F. A. & Ramey, C. T. (2010). Carolina Abecedarian Project. In A. J. Reynolds, A. J. Rolnick, M. M. Englund & J. A. Temple (Eds.), Childhood programs and practices in the first decade of life: A human capital integration (pp. 76-98). New York, NY: Cambridge University Press. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. New York City Department of Education. (2009). High school graduation rate rises above 60	

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	percent. Retrieved from http://schools.nyc.gov/Offices/mediarelations/NewsandSpeeches/2008-2009/20090622_grad_rates.htm Reynolds, A. J., Temple, J. A. & Ou, S. (2010). Impacts and implications of the Child-Parent Center preschool program. In A. J. Reynolds, A. J. Rolnick, M. M. Englund & J. A. Temple (Eds.), Childhood programs and practices in the first decade of life: A human capital integration (pp. 168-187). New York, NY: Cambridge University Press. Schweinhart, L., Monty, J., Xiang, Z., Barnett, W. S., Belfield, C. & Nores, M. (2005). Lifetime effects: The High/Scope Perry Preschool Study through age 40 (Monographs of the High/Scope Educational Research Foundation No. 14). Ypsilanti, MI: High/Scope Press.	
10	Education: One year of college with no further education (having graduated from high school as a result of an early childhood program)	Present discounted value of the following equation: [(XX additional high school graduates as a result of the early childhood program) * (50 percent of graduates continue to college) * (65 percent of college enrollees will complete a year of college) * [($25,000 average earnings with one year of college and no further education) – ($22,500 average earnings with a high school diploma and no further education)]]
	Explanation: Our estimate of additional high school graduates is based on the number of children attending preschool, along with a 30 percent estimated impact on the high school graduation rate due to high-quality preschool. This 30 percent impact is based on a rough average across the high school graduation findings of the Abecedarian (Campbell & Ramey, 2010), Perry (Schweinhart et al., 2005) and Chicago (Reynolds, Temple & Ou, 2010) studies. We base the 50 percent counterfactual rate of high school graduation for low-income, minority students on reports by the New York City Department of Education (2009), and corroborated widely in the research literature (Swanson, 2008; Jacobsen & Mohker, 2009; Lesnick, Goerge, Smithgall & Gwynne, 2010). We base the 65 percent counterfactual rate of first-year college retention primarily on City University of New York reports, but also on the wider concurrence on first-year college retention rates across the research literature (CUNY, 2008; Jacobsen & Mohker, 2009; Schuyler Center for Analysis and Advocacy, 2009). We base our estimate of the impact of academic progress on earnings on Levin, Belfield, Muennig & Rouse (2007). To Levin's earnings data (excluding the white subsample), we add an estimate of fringe benefits. Based on data from our grantees, we estimate that 60 percent of low-income workers receive fringe benefits (averaging 20 percent of their wages).	

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	References: Campbell, F. A. & Ramey, C. T. (2010). Carolina Abecedarian Project. In A. J. Reynolds, A. J. Rolnick, M. M. Englund & J. A. Temple (Eds.), Childhood programs and practices in the first decade of life: A human capital integration (pp. 76-98). New York, NY: Cambridge University Press. City University of New York (CUNY). (2008). College readiness of New York City's GED recipients. New York, NY: CUNY Office of Institutional Research and Assessment. Jacobsen, L. & Mohker, C. (2009). Pathways to boosting the earnings of low-income students by increasing their educational attainment. (Report to the Bill and Melinda Gates Foundation). Washington, DC: Hudson Institute Center For Employment Policy. Lesnick, J., Goerge, R., Smithgall, C. & Gwynne, J. (2010). A longitudinal analysis of third-grade students in Chicago in 1996-97 and their educational outcomes (Report to the Annie E. Casey Foundation). Chicago, IL: Chapin Hall, University of Chicago. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. New York City Department of Education. (2009). High school graduation rate rises above 60 percent. Retrieved from http://schools.nyc.gov/Offices/mediarelations/NewsandSpeeches/2008-2009/20090622_grad_rates.htm Reynolds, A. J., Temple, J. A. & Ou, S. (2010). Impacts and implications of the Child-Parent Center preschool program. In A. J. Reynolds, A. J. Rolnick, M. M. Englund & J. A. Temple (Eds.), Childhood Programs and Practices in the First Decade of Life: A Human Capital Integration (pp. 168-187). New York, NY: Cambridge University Press. Schuyler Center for Analysis and Advocacy. (2009). Getting serious about the GED: How New York can build a bridge from high school dropout to postsecondary success. Albany, NY: Author. Schweinhart, L., Monti, J., Xiang, Z., Barnett, W. S., Belfield, C. & Nores, M. (2005). Lifetime effects: The High/Scope Perry Preschool study through age 40 (Monographs of the High/Scope Educational Research Foundation No. 14). Ypsilanti, MI: High/Scope Press. Swanson, C. B. (2008). Cities in crisis: A special analytic report on high school graduation. Bethesda, MD: Editorial Projects in Education Research Center.	
11	Education: A.A. degree with no further education (having graduated from high school as a result of early childhood	Present discounted value of the following equation: [(XX additional high school graduates as a result of the early childhood program) * (50 percent of high school graduates will continue to college) * (20 percent of college enrollees will attain an A.A. degree) * [($35,000 average earnings with an A.A.

Metric #	Name of Metric	Equation
	program)	degree and no further education) – ($22,500 average earnings with a high school diploma and no further education)]]
	Explanation: Our estimate of additional high school graduates is based on the number of children attending preschool, along with a 30 percent estimated impact on the high school graduation rate due to high-quality preschool. This 30 percent impact is based on a rough average of the findings of longitudinal studies (Barnett, 1998; Campbell & Ramey, 2010; Reynolds, Temple & Ou, 2010; Schweinhart et al., 2005). We base the 50 percent counterfactual college enrollment rate for students in poverty on the findings of Jacobsen & Mohker (2009) and Lesnick, Goerge, Smithgall & Gwynne (2010). We base the 20 percent counterfactual rate for A.A. attainment largely on City University of New York reports for two-year college students (CUNY, 2008), although we note that the CUNY findings are corroborated across the research literature. We base our estimate of the impact of academic progress on earnings on Levin, Belfield, Muennig & Rouse (2007). To Levin's earnings data (excluding the white subsample), we add an estimate of fringe benefits. Based on data from our grantees, we estimate that 60 percent of low-income workers receive fringe benefits (averaging 20 percent of their wages). References: Barnett, W. S. (1998). Long-term effects on cognitive development and academic achievement. In W. S. Barnett & S. S. Boocock (Eds.), Early care and education for children in poverty: Promises, programs, and long-term results. Albany, NY: State University of New York Press. Campbell, F. A. & Ramey, C. T. (2010). Carolina Abecedarian Project. In A. J. Reynolds, A. J. Rolnick, M. M. Englund & J. A. Temple (Eds.), Childhood programs and practices in the first decade of life: A human capital integration (pp. 76-98). New York, NY: Cambridge University Press. City University of New York (CUNY). (2008). College readiness of New York City's GED recipients. New York, NY: CUNY Office of Institutional Research and Assessment. Jacobsen, L. & Mohker, C. (2009). Pathways to boosting the earnings of low-income students by increasing their educational attainment. (Report to the Bill and Melinda Gates Foundation). Washington, DC: Hudson Institute Center For Employment Policy. Lesnick, J., Goerge, R., Smithgall, C. & Gwynne, J. (2010). A longitudinal analysis of third-grade students in Chicago in 1996-97 and their educational outcomes (Report to the Annie E. Casey Foundation). Chicago, IL: Chapin Hall, University of Chicago. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University.	

Metric #	Name of Metric	Equation
	Reynolds, A. J., Temple, J. A. & Ou, S. (2010). Impacts and implications of the Child-Parent Center preschool program. In A. J. Reynolds, A. J. Rolnick, M. M. Englund & J. A. Temple (Eds.), Childhood programs and practices in the first decade of life: A human capital integration (pp. 168-187). New York, NY: Cambridge University Press. Schweinhart, L., Monti, J., Xiang, Z., Barnett, W. S., Belfield, C. & Nores, M. (2005). Lifetime effects: The High/Scope Perry Preschool study through age 40 (Monographs of the High/Scope Educational Research Foundation No. 14). Ypsilanti, MI: High/Scope Press.	
12	Education: B.A. degree with no further education (having graduated from high school as a result of an early childhood program)	Present discounted value of the following equation: [(XX additional high school graduates as a result of the early childhood program) * (50 percent of high school graduates will continue to college) * (10 percent of college enrollees will attain a B.A. degree) * [($55,000 average earnings with a B.A. degree and no further education) – ($22,500 average earnings with a high school diploma and no further education)]]
	Explanation: Our estimate of additional high school graduates is based on the number of children attending preschool, along with a 30 percent estimated impact on the high school graduation rate due to high-quality preschool. This 30 percent impact is based on a rough average of the findings of longitudinal studies (Barnett, 1998; Campbell & Ramey, 2010; Reynolds, Temple & Ou, 2010; Schweinhart et al., 2005). We base the 50 percent counterfactual college enrollment rate for students in poverty on the findings of Jacobsen & Mohker (2009) and Lesnick, Goerge, Smithgall & Gwynne (2010). We base our rough estimate of a 10 percent counterfactual rate for B.A. attainment largely on City University of New York reports (CUNY, 2008), based primarily on the probabilities for students at two-year colleges (see also Jacobsen & Mohker, 2009). We base our estimate of the impact of academic progress on earnings on Levin, Belfield, Muennig & Rouse (2007). To Levin's earnings data (excluding the white subsample), we add an estimate of fringe benefits. Based on data from our grantees, we estimate that 60 percent of low-income workers receive fringe benefits (averaging 20 percent of their wages). **References:** Barnett, W. S. (1998). Long-term effects on cognitive development and academic achievement. In W. S. Barnett & S. S. Boocock (Eds.), Early care and education for children in poverty: Promises, programs, and long-term results. Albany, NY: State University of New York Press. Campbell, F. A. & Ramey, C. T. (2010). Carolina Abecedarian Project. In A. J. Reynolds, A. J.	

Metric #	Name of Metric	Equation
	Rolnick, M. M. Englund & J. A. Temple (Eds.), Childhood programs and practices in the first decade of life: A human capital integration (pp. 76-98). New York, NY: Cambridge University Press. City University of New York (CUNY). (2008). College readiness of New York City's GED recipients. New York, NY: CUNY Office of Institutional Research and Assessment. Jacobsen, L. & Mohker, C. (2009). Pathways to boosting the earnings of low-income students by increasing their educational attainment. (Report to the Bill and Melinda Gates Foundation). Washington, DC: Hudson Institute Center For Employment Policy. Lesnick, J., Goerge, R., Smithgall, C. & Gwynne, J. (2010). A longitudinal analysis of third-grade students in Chicago in 1996-97 and their educational outcomes (Report to the Annie E. Casey Foundation). Chicago, IL: Chapin Hall, University of Chicago. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Reynolds, A. J., Temple, J. A. & Ou, S. (2010). Impacts and implications of the Child-Parent Center preschool program. In A. J. Reynolds, A. J. Rolnick, M. M. Englund & J. A. Temple (Eds.), Childhood programs and practices in the first decade of life: A human capital integration (pp. 168-187). New York, NY: Cambridge University Press. Schweinhart, L., Monti, J., Xiang, Z., Barnett, W. S., Belfield, C. & Nores, M. (2005). Lifetime effects: The High/Scope Perry Preschool study through age 40 (Monographs of the High/Scope Educational Research Foundation No. 14). Ypsilanti, MI: High/Scope Press.	
13	Education: Six-year college graduation (having graduated from high school)	Present discounted value of the following equation: [[(XX participating high school graduates) * [[(XX percent of actual high school graduates expected to earn a B.A.) - (XX percent counterfactual high school graduates earn a B.A.)] * ($XX income boost for B.A. attainment)] + [[(XX high school graduates expected to earn an A.A.) - (XX counterfactual high school graduates earn an A.A.)] * ($XX income boost for A.A. attainment)]]
	Explanation: The number of high school graduates is based on the actual number reported by our grantee. The percentage of high school graduates who enter and complete a B.A. degree and the percentage who complete an A.A. degree is estimated using historical six-year college graduation rates reported by the grantee. In the absence of historical, six-year graduation data, the percentage of high school graduates who would complete their degree is estimated using college enrollment data (reported by the grantee) and longitudinal studies on college persistence from of Jacobsen & Mohker (2009) and Lesnick, Goerge, Smithgall & Gwynne	

Metric #	Name of Metric	Equation
	(2010). The counterfactual percentage of high school graduates who complete a B.A. and the percentage who complete an A.A. degree are estimated by Robin Hood staff. We base the counterfactual estimates on the percentage of high school graduates from the program who enroll in two-year and four-year degree programs and the respective rates at which students who enroll in those programs would typically earn B.A. degrees, according to the research. The estimated counterfactual rate of high school graduates earning a B.A. is calculated as follows: [(XX participating high school graduates * 50 percent counterfactual college enrollment rate) * (80 percent counterfactual proportion enroll in 2-yr schools * 10 percent counterfactual rate of B.A. attainment for students who enroll at 2-yr schools + 20 percent counterfactual proportion enroll in 4-yr schools * 50 percent counterfactual rate of B.A. attainment for students at 4-yr schools)]/XX participating high school graduates. The estimated counterfactual rate of high school graduates earning an A.A. is calculated as follows: [(XX participating high school graduates * 50 percent counterfactual college enrollment rate) * (80 percent counterfactual proportion enroll in 2-yr schools * 20 percent counterfactual rate of A.A. attainment for students who enroll at 2-yr schools + 20 percent counterfactual proportion enroll in 4-yr schools * 10 percent counterfactual rate of A.A. attainment for students at 4-yr schools)]/XX participating high school graduates. We base the 50 percent counterfactual college enrollment rate for students in poverty, of whom 80 percent enroll in a two-year college, on the findings of Jacobsen & Mohker (2009) and Lesnick, Goerge, Smithgall & Gwynne (2010). We base the counterfactuals for B.A. and A.A. degree attainment for low-income students who enroll in two-year and four-year institutions on reports by City University of New York reports (CUNY, 2008; see also Jacobsen & Mohker, 2009). We base our estimate of the impact of academic progress on earnings on Levin, Belfield, Muennig & Rouse (2007). To Levin's earnings data (excluding the white subsample), we add an estimate of fringe benefits. Based on data from our grantees, we estimate that 60 percent of low-income workers receive fringe benefits (averaging 20 percent of their wages). References: City University of New York (CUNY). (2008). College readiness of New York City's GED recipients. New York, NY: CUNY Office of Institutional Research and Assessment. Jacobsen, L. & Mohker, C. (2009). Pathways to boosting the earnings of low-income students by increasing their educational attainment. (Report to the Bill and Melinda Gates Foundation). Washington, DC: Hudson Institute Center For Employment Policy. Lesnick, J., Goerge, R., Smithgall, C. & Gwynne, J. (2010). A longitudinal analysis of third-grade	

Metric #	Name of Metric	Equation
	students in Chicago in 1996-97 and their educational outcomes (Report to the Annie E. Casey Foundation). Chicago, IL: Chapin Hall, University of Chicago. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University.	
14	Education: Low literacy gains	Present discounted value of the following equation: [(XX participating students reach seventh-grade reading level) * (XX percent of these students receive assistance solely because of this program) * ($16,000 average earnings for a high school dropout) * (10 percent increase in earnings due to improved literacy)]
	Explanation: The number of students who reach a seventh-grade reading level is based on the actual number reported by our grantee. The percentage of students who get assistance solely because of the program is estimated by Robin Hood staff. We base our estimate of the impact of academic progress on earnings on Levin, Belfield, Muennig & Rouse (2007). To Levin's earnings data (excluding the white subsample), we add an estimate of fringe benefits. Based on data from our grantees, we estimate that 60 percent of low-income workers receive fringe benefits (averaging 20 percent of their wages). We estimate a 10 percent average earnings boost due to improved literacy based on Sum, Kirsch & Yamamoto (2004). This research indicates that individuals who improved from very low literacy levels (second- to seventh-grade equivalency) to more moderate literacy levels (seventh- to 10th-grade equivalency) experienced higher earnings. **References:** Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Sum, A., Kirsch, I. & Yamamoto, K. (2004, October). Pathways to labor market success: The literacy proficiency of U.S. adults. Princeton, NJ: Educational Testing Service, Policy Information Center.	
15	Education: Academic test score increases (New York State [N.Y.S.] English Language Arts [E.L.A.] and math tests)	Present discounted value of the following equation: [(XX participating students) * (XX percent of students increase their standardized achievement test score solely because of this program) * [(XX average test point increase) / (30 points on the N.Y.S. tests)] * ($20,000 average earnings for a low-income population) * (10 percent increase in earnings due to test point

Metric #	Name of Metric	Equation
		increase)]
	Explanation: The number of participating students is based on the actual number reported by our grantee. The percentage of students who increase their test score solely because of the program is estimated by Robin Hood staff. The average test point increase is based on the actual number reported by our grantee. Standard deviations for some important and often-used tests are known. For instance, based on the reported average standard deviations of the N.Y.S. E.L.A. and math tests (High Needs Urban subgroup), a whole standard deviation is on average approximately 30 standard points (New York State Department of Education, 2009a & 2009b) for E.L.A. and math tests. We estimate the average future earnings of our student cohorts very conservatively at about $20,000, based on our current earnings estimates from Levin, Belfield, Muennig & Rouse (2007). We estimate the impact of improvement in test scores on future earnings increases due to our grant based on the findings of Levine & Zimmerman (2010) and Krueger (2003). They find that an increase of one standard deviation in standardized test scores produces an approximate 10 percent increase in students' future earnings. References: Krueger, A. (2003). Economic considerations and class size. Economic Journal, 113(485), F34-F63. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Levine, P. & Zimmerman, D. (2010). Synthesizing the results. In P. B. Levine & D. J. Zimmerman (Eds.), Targeting investments in children: Fighting poverty when resources are limited. Cambridge, MA: National Bureau of Economic Research; and Chicago, IL: University of Chicago Press. New York State Department of Education. (2009a). New York State Testing Program, 2009: English Language Arts, Grades 3-8. Technical Report. Monterey, CA: CTB/McGraw-Hill. Retrieved from http://www.emsc.nysed.gov/osa/reports/2009/ela-techrep-09.prd New York State Department of Education. (2009b). New York State Testing Program, 2009: Mathematics, Grades 3-8. Technical Report. Monterey, CA: CTB/McGraw-Hill. Retrieved from http://www.emsc.nysed.gov/osa/reports/2009/math-techrep-09.prd	
16	Education: Academic test	Present discounted value of the following equation: [(XX

Metric #	Name of Metric	Equation
	score increases (TerraNova, CAT or Stanford 10 tests)	participating students) * (XX percent of students increase their standardized achievement test score solely because of this program) * [(XX average test point increase) / (40 points for the Terra Nova, CAT or Stanford 10)] * ($20,000 average earnings for a low-income population) * (10 percent increase in earnings due to test point increase)]

Explanation:

The number of participating students is based on the actual number reported by our grantee.

The percentage of students who increase their test score solely because of the program is estimated by Robin Hood staff.

The average test point increase is based on the actual number reported by our grantee.

Standard deviations for some important and often-used tests are known. For instance, the TerraNova, CAT and Stanford 10 tests have standard deviations across subtests of approximately 40 points (Bloom, Hill, Black & Lipsey, 2008).

We estimate the impact of improvement in test scores on future earnings increases due to our grant based on the findings of Levine & Zimmerman (2010) and Krueger (2003). They find that an increase of one standard deviation in standardized test scores produces an approximate 10 percent increase in students' future earnings.

We estimate the average future earnings of our student cohorts very conservatively at about $20,000, based on our current earnings estimates from Levin, Belfield, Muennig & Rouse (2007).

References:

Bloom, H., Hill, C., Black, A. & Lipsey, M. (2008). Performance trajectories and performance gaps as achievement effect-size benchmarks for educational interventions (MDRC Working Paper on Research Methodology). New York, NY: MDRC.

Krueger, A. (2003). Economic considerations and class size. Economic Journal, 113(485), F34-F63.

Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University.

Levine, P. & Zimmerman, D. (2010). Synthesizing the results. In P. B. Levine & D. J. Zimmerman (Eds.), Targeting investments in children: Fighting poverty when resources are limited. Cambridge, MA: National Bureau of Economic Research; and Chicago, IL: University of Chicago Press.

Metric #	Name of Metric	Equation
17	Parenting education: Improved parenting increases children's future earnings through an impact on school achievement (midquality program and home visiting)	Present discounted value of the following equation: [(XX participating children) * (XX percent of parents get assistance solely because of the program) * ($20,000 average earnings for a low-income population) * (0.18 effect size increase in children's test scores due to improved parenting) * (10 percent increase in earnings per 1.0 effect size increase in test scores)]

Explanation:

The number of participating children is based on the actual number reported by our grantee.

The percentage of parents who get assistance solely because of the program is estimated by Robin Hood staff.

We estimate the average future earnings of our student cohorts very conservatively at about $20,000, based on our current earnings estimates from Levin, Belfield, Muennig & Rouse (2007).

We estimate the 0.18 effect size impact of parenting on student academic achievement based on an average of effect sizes found across several studies, including Izzo, Weissberg, Kasprow & Fendrich (1999), Fan (2001), Love et al. (2002), Englund, Luckner, Whaley & Egeland (2004) and Gomby (2005). Note that this impact is for a whole cohort.

We apply an algorithm linking improved test scores to later adult earnings—a 1.0 effect size increase in test scores produces a 10 percent increase in average earnings (Krueger, 2003; Levine & Zimmerman, 2010).

References:

Englund, M., Luckner, A., Whaley, G. & Egeland, B. (2004). Children's achievement in early elementary school: Longitudinal effects of parental involvement, expectations, and quality of assistance. Journal of Educational Psychology, 96(4), 723-730.

Fan, X. (2001). Parental involvement and students' academic achievement: A growth modeling analysis. Journal of Experimental Education, 70(1), 27-61.

Gomby, D. S. (2005). Home visitation in 2005: Outcomes for children and parents (Invest in Kids Working Group Paper No. 7). Washington, DC: Partnership for America's Economic Success.

Izzo, C., Weissberg, R., Kasprow, W. & Fendrich, M. (1999). A longitudinal assessment of teacher perceptions of parent involvement in children's education and school performance. American Journal of Community Psychology, 27(6), 817-839.

Krueger, A. (2003). Economic considerations and class size. Economic Journal, 113(485), F34-

Metric #	Name of Metric	Equation
	F63. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Levine, P. & Zimmerman, D. (2010). Synthesizing the results. In P. B. Levine & D. J. Zimmerman (Eds.), Targeting investments in children: Fighting poverty when resources are limited. Cambridge, MA: National Bureau of Economic Research; and Chicago, IL: University of Chicago Press. Love, J., Kistker, E., Ross, C., Schochet, P., Brooks-Gunn, J., Paulsell, D., Boller, K., Constantine, J., Vogel, C., Fuligni, A. & Brady-Smith, C. (2002). Making a difference in the lives of infants and toddlers and their families: The impacts of Early Head Start. Princeton, NJ: Mathematica Policy Research, Inc. Webster-Stratton, C. (2005). The Incredible Years: A training series for the prevention and treatment of conduct problems in young children. In E. D. Hibbs & P. S. Jensen (Eds.), Psychosocial treatments for child and adolescent disorders (2nd ed.). Washington, DC: American Psychological Association.	
18	Parenting education: Improved parenting increases children's future earnings through an impact on school achievement (high-quality program)	Present discounted value of the following equation: [(XX participating children) * (XX percent of parents get assistance solely because of the program) * ($20,000 average earnings for a low-income population) * (0.36 effect size increase in children's test scores due to improved parenting) * (10 percent increase in earnings per 1.0 effect size increase in test scores)]
	Explanation: The number of participating children is based on the actual number reported by our grantee. The percentage of parents who get assistance solely because of the program is estimated by Robin Hood staff. We estimate the average future earnings of our student cohorts very conservatively at about $20,000, based on our current earnings estimates from Levin, Belfield, Muennig & Rouse (2007). We estimate the 0.36 effect size impact of very high-quality parenting interventions on student academic achievement based on a doubling of the average of effect sizes found across several studies of various parenting interventions, including Izzo Weissberg, Kasprow & Fendrich (1999), Fan (2001), Love et al. (2002) Englund, Luckner, Whaley & Egeland (2004) and Gomby (2005). Note that this impact is for a whole cohort. We apply an algorithm linking improved test scores to later adult earnings—a 1.0 effect size increase in test scores produces a 10 percent increase in average earnings (Krueger, 2003;	

Metric #	Name of Metric	Equation
	Levine & Zimmerman, 2010). References: Englund, M., Luckner, A., Whaley, G. & Egeland, B. (2004). Children's achievement in early elementary school: Longitudinal effects of parental involvement, expectations, and quality of assistance. Journal of Educational Psychology, 96(4), 723-730. Fan, X. (2001). Parental involvement and students' academic achievement: A growth modeling analysis. Journal of Experimental Education, 70(1), 27-61. Gomby, D. S. (2005). Home visitation in 2005: Outcomes for children and parents (Invest in Kids Working Group Paper No. 7). Washington, DC: Partnership for America's Economic Success. Izzo, C., Weissberg, R., Kasprow, W. & Fendrich, M. (1999). A longitudinal assessment of teacher perceptions of parent involvement in children's education and school performance. American Journal of Community Psychology, 27(6), 817-839. Krueger, A. (2003). Economic considerations and class size. Economic Journal, 113(485), F34-F63. Levine, P. & Zimmerman, D. (2010). Synthesizing the results. In P. B. Levine & D. J. Zimmerman (Eds.), Targeting investments in children: Fighting poverty when resources are limited. Cambridge, MA: National Bureau of Economic Research; and Chicago, IL: University of Chicago Press. Love, J., Kistker, E., Ross, C., Schochet, P., Brooks-Gunn, J., Paulsell, D., Boller, K., Constantine, J., Vogel, C., Fuligni, A. & Brady-Smith, C. (2002). Making a difference in the lives of infants and toddlers and their families: The impacts of Early Head Start. Princeton, NJ: Mathematica Policy Research, Inc. Webster-Stratton, C. (2005). The Incredible Years: A training series for the prevention and treatment of conduct problems in young children. In E. D. Hibbs & P. S. Jensen (Eds.), Psychosocial treatments for child and adolescent disorders (2nd ed.). Washington, DC: American Psychological Association.	
19	Education: Attendance—impact of asthma treatment on parental productivity	(XX participating children who increase attendance in school due to improved health) * (XX percent of parents increase their work productivity by 1 day solely because of this program) * ($55 per day of parental productivity)
	Explanation: The number of participating children who increase attendance in school is based on the actual number reported by our grantee. The percentage of parents who increase their work productivity solely because of the program	

Metric #	Name of Metric	Equation
	is estimated by Robin Hood staff. We base the $55 estimated daily productivity value on the earnings estimates of Levin, Belfield, Muennig & Rouse (2007), roughly split between those with a high school degree and those without. We conservatively estimate one additional day of parental productivity through children's increased school attendance due to the impact of asthma treatment on the basis of field reports and the work of Corso & Fertig (2009), who find a substantial improvement in school attendance due to high-quality asthma treatment. References: Corso, P. & Fertig, A. (2009). The long-term economic costs of asthma (Invest in Kids Working Group Paper No. 9). Washington, DC: Partnership for America's Economic Success.	

Earnings, Jobs Metrics

Metric #	Name of Metric	Equation
20	Eviction prevention: Decreased juvenile delinquency	Present discounted value of the following calculation: [(XX families were helped to avoid eviction) * (90 percent of families will stay housed over the year) * (20 percent of the children avoid foster care solely because of the program) * (50 percent of children if placed in foster care would have increased rate of delinquency) * [(12 percent of children in foster care are typically delinquent) – (9 percent counterfactual delinquency rate)] * * ($20,000 average earnings for a low-income population) * (22 percent decrease in earnings prevented by avoiding delinquency)]
	Explanation: The number of families that were helped to avoid eviction is based on the actual number reported by our grantee. We base the 90 percent estimate for the percentage of families that will likely remain housed in the coming year on research indicating that approximately 10 percent of families in poverty will fall into homelessness annually (Burt, 2001; Burt & Pearson, 2005). We base the 20 percent estimate for the percentage of children who would be placed in foster care due to the homelessness of their families on the research findings reported by the National Center for Family Homelessness and the Family Housing Fund. The 50 percent estimate for the percentage of children who would be better off if they avoided foster care is our best guess. Rigorous research indicates that for "marginal" cases (those cases for which case managers could disagree about placement), foster care placement increases the rate of juvenile delinquency by 35 percent (Doyle, 2007). In marginal cases, children are better off left with their families. Without knowing the family situations of the children, we estimate that 50 percent of the children accompanying their family into homelessness would be marginal cases. Our estimate for the 12 percent baseline rate of juvenile delinquency is based on research indicating that a typical juvenile arrest rate for low-income, urban areas is approximately 9 percent (Aos, Lieb, Mayfield, Miller & Pennucci, 2004; Ludwig, Duncan & Hirschfeld, 1999), with foster care placement increasing that rate by approximately 35 percent (Doyle, 2007), making the baseline rate for children in foster care about 12 percent. We estimate the average future earnings of our child cohorts very conservatively at about $20,000, based on our current earnings estimates from Levin, Belfield, Muennig & Rouse (2007). We base the 22 percent estimate for the impact of juvenile delinquency on earnings based on the	

Metric #	Name of Metric	Equation
	findings of Joseph (2001). **References:** Aos, S., Lieb, R., Mayfield, J., Miller, M. & Pennucci, A. (2004). Benefits and costs of prevention and early intervention programs for youth. Olympia, WA: Washington State Institute for Public Policy. Burt, M. (2001). What will it take to end homelessness? Washington, DC: The Urban Institute. Burt, M. & Pearson, C. (2005). Strategies for preventing homelessness. U.S. Department of Housing and Urban Development, Office of Policy Development and Research. Washington, DC: U.S. Department of Housing and Urban Development. Doyle, J. (2007, March). Child protection and child outcomes: Measuring the effects of foster care. Cambridge, MA: Massachusetts Instate of Technology, Sloan School of Management and National Bureau of Economic Research. Family Housing Fund. (1999). Homelessness and its effects on children. Minneapolis, MN: Author. Joseph, M. (2001). The effect of arrests on the earnings of young men: Evidence from the National Youth Survey. Chicago, IL: Harris Graduate School of Public Policy, University of Chicago. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Ludwig, J., Duncan, G. & Hirschfeld, P. (1999). Urban poverty and juvenile crime: Evidence from a randomized housing-mobility experiment. Washington, DC: U.S. Department of Housing and Urban Development. National Center for Family Homelessness. (1999). Homeless children: America's new outcasts. Newton Centre, MA: Author.	
21	Eviction prevention: Avoidance of foster care, impact on earnings	Present discounted value of the following calculation: [(XX families were helped to avoid eviction) * (90 percent of families will stay housed over the year) * (20 percent of the children avoid foster care solely because of the program) * (50 percent of children would be better off if they avoided foster care) * ($5,000 increase in earnings due to avoiding foster care)]
	Explanation: The number of families that were helped to avoid eviction is based on the actual number reported by our grantee. We base the 90 percent estimate for the percentage of families that will likely remain housed in the coming year on research indicating that approximately 10 percent of families in poverty will fall into	

Metric #	Name of Metric	Equation
	homelessness annually (Burt, 2001; Burt & Pearson, 2005). We base the 20 percent estimate for the percentage of children who would be placed in foster care due to the homelessness of their families on the research findings reported by the National Center for Family Homelessness (1999) and the Family Housing Fund (1999). The 50 percent estimate for the percentage of children who would be better off if they avoided foster care is our best guess. Rigorous research indicates that for "marginal" cases (those cases for which case managers could disagree about placement) children are better off left with their families. Without knowing the family situations of the children, we estimate that 50 percent of the children accompanying their family into homelessness would be marginal cases. We apply the $5,000 difference in earnings due to foster care (Doyle, 2007) to the number of children who have avoided foster care due to our grantee's efforts to keep them out of homelessness. **References:** Burt, M. (2001). What will it take to end homelessness? Washington, DC: The Urban Institute. Burt, M. & Pearson, C. (2005). Strategies for preventing homelessness. U.S. Department of Housing and Urban Development, Office of Policy Development and Research. Washington, DC: U.S. Department of Housing and Urban Development. Doyle, J. (2007, March). Child protection and child outcomes: Measuring the effects of foster care. Cambridge, MA: Massachusetts Institute of Technology, Sloan School of Management and National Bureau of Economic Research. Family Housing Fund. (1999). Homelessness and its effects on children. Minneapolis, MN: Author. National Center for Family Homelessness. (1999). Homeless children: America's new outcasts. Newton Centre, MA: Author.	
22	Job training and placement: Immigrants with high school diplomas	Present discounted value of the following calculation: [(XX participants enter the program) * (XX percent of participants who enter training, graduate and remain employed for one year solely because of the program) * [($XX average annual post-training earnings) – ($13,000 average annual earnings of immigrants with a high school diploma)]] Note: $13,000 baseline earnings are used here to approximate counterfactual earnings (earnings of participants in the absence of this program).
	Explanation: The number of participants who enter training, graduate and remain employed for one year is	

Metric #	Name of Metric	Equation
	based on the actual number reported by our grantee. We base the estimate of post-training earnings due to job training and placement for immigrants with high school diplomas on reports to Robin Hood from its grantees. We base the $13,000 estimate for average annual counterfactual earnings for immigrants with a high school education on a research-backed 30 percent decrease from the typical income of nonimmigrant individuals (Borjas, 2006; Lubotsky, 2007). We use average estimated earnings from Levin, Belfield, Muennig & Rouse (2007), without additional fringe amounts, as the basis for our calculation. In light of the evidence that most job training effects disappear within five years (MDRC, 2007; Greenberg, Deitch & Hamilton, 2010), we do not extend earnings benefits across the trainee's lifetime. However, because we believe that Robin Hood takes great pains to fund only the best job training programs—programs that we would expect to catalyze longer impacts—we allow our estimated benefits to extend over 10 years, double the time that the average program has impact. **References:** Borjas, G. (2006). Making it in America: Social mobility in the immigrant population (Working Paper No. 12088). Cambridge, MA: National Bureau of Economic Research. Greenberg, D., Deitch, V. & Hamilton, G. (2010). A synthesis of random assignment benefit-cost studies of welfare-to-work programs. Journal of Benefit-Cost Analysis, 1(1), 1-28. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Lubotsky, D. (2007). Chutes or ladders? A longitudinal analysis of immigrant earnings. Journal of Political Economy, 115(3), 820-867. MDRC. (2007). Welfare-to-work program benefits and costs: A synthesis of research. New York, NY: Author.	
23	Job training and placement: Formerly incarcerated	Present discounted value of the following calculation: [(XX participants enter the program) * (XX percent of participants who enter training, graduate and remain employed for one year solely because of the program) * [($XX average annual post-training wage) – ($8,700 average annual earnings for a formerly incarcerated population)]] Note: $8,700 baseline earnings are used here to approximate counterfactual earnings (earnings of participants in the absence of this program).
	Explanation:	

Metric #	Name of Metric	Equation
	The number of participants who enter training and the percentage that graduate and remain employed for one year are based on the actual number reported by our grantee. We base the estimate of post-training earnings due to job training and placement for formerly incarcerated trainees on reports to Robin Hood from its grantees. We base the $8,700 estimate for average annual counterfactual earnings for formerly incarcerated job trainees on research indicating that the average earnings for individuals just previous to incarceration is approximately $8,700 (Kleykamp, Rosenfeld & Scotti, 2008; Western , 2006). In light of the evidence that most job training effects disappear within five years (MDRC, 2007; Greenberg, Deitch & Hamilton, 2010), we do not extend earnings benefits across the trainee's lifetime. However, because we believe that Robin Hood takes great pains to fund only the best job training programs—programs that we would expect to catalyze longer impacts—we allow our estimated benefits to extend over 10 years, double the time that the average program has impact. References: Greenberg, D., Deitch, V. & Hamilton, G. (2010). A synthesis of random assignment benefit-cost studies of welfare-to-work programs. Journal of Benefit-Cost Analysis, 1(1), 1-28. Kleykamp, M., Rosenfeld, J. & Scotti, R. (2008). Wasting money, wasting lives: Calculating the hidden costs of incarceration in New Jersey. Trenton, NJ: Drug Policy Alliance. MDRC. (2007). Welfare-to-work program benefits and costs: A synthesis of research. New York, NY: Author. Western, B. (2006). Punishment and inequality in America. New York, NY: Russell Sage Foundation.	
24	Job training and placement: General jobless population with a high school diploma	Present discounted value of the following calculation: [(XX participants enter the program) * (XX percent of participants who enter training, graduate and remain employed for one year solely because of the program)* [($XX average annual post-training earnings) – ($11,200 average annual earnings for a jobless population with a high school diploma)]] Note: $11,200 baseline earnings are used here to approximate counterfactual earnings (earnings of participants in the absence of this program).
	Explanation: The number of participants who enter training and the percentage that graduate and remain employed for one year are based on the actual number reported by our grantee. We base the estimate of post-training earnings due to job training and placement for a typical jobless population with a high school diploma on reports to Robin Hood from its grantees. We base the $11,200 estimate for average annual counterfactual earnings for jobless people with a	

Metric #	Name of Metric	Equation
	high school education on findings that jobless individuals earn on average 40 percent less than their comparable peers who have been employed during the last year (Blau & Beller, 1992, cited in Western & Pettit, 2005). We use average estimated earnings from Levin, Belfield, Muennig & Rouse (2007), without additional fringe amounts, as the basis for our calculations. In light of the evidence that most job training effects disappear within five years (MDRC, 2007; Greenberg, Deitch & Hamilton, 2010), we do not extend earnings benefits across the trainee's lifetime. However, because we believe that Robin Hood takes great pains to fund only the best job training programs—programs that we would expect to catalyze longer impacts—we allow our estimated benefits to extend over 10 years, double the time that the average program has impact. **References:** Blau, F. & Beller, A. (1992). Black-white earnings over the 1970s and 1980s: Gender differences and trends. Review of Economics and Statistics, 74, 276-286. Greenberg, D., Deitch, V. & Hamilton, G. (2010). A synthesis of random assignment benefit-cost studies of welfare-to-work programs. Journal of Benefit-Cost Analysis, 1(1), 1-28. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. MDRC. (2007). Welfare-to-work program benefits and costs: A synthesis of research. New York, NY: Author. Western, B. & Pettit, B. (2005). Black-white wage inequality, employment rates, and incarceration. American Journal of Sociology, 111(7), 553-578.	
25	Job training and placement: General jobless population with no high school diploma	Present discounted value of the following calculation: [(XX participants enter the program) * (XX percent of participants who enter training, graduate and remain employed for one year solely because of the program)* [($XX average annual post-training earnings) - ($8,200 average annual earnings for a jobless population with no high school diploma)]]. Note: $8,200 baseline earnings are used here to approximate counterfactual earnings (earnings of participants in the absence of this program).
	Explanation: The number of participants who enter training and the percentage that graduate and remain employed for one year are based on the actual number reported by our grantee. We base the estimate of post-training earnings due to job training and placement for a typical jobless population with high school diplomas on reports to Robin Hood from its grantees. We base the $8,200 estimate for average annual counterfactual earnings for jobless people without	

Metric #	Name of Metric	Equation
	a high school education on findings that jobless individuals earn on average 40 percent less than their comparable peers who have been employed during the last year (Blau & Beller, 1992, cited in Western & Pettit, 2005). We use average estimated earnings from Levin, Belfield, Muennig & Rouse (2007), without additional fringe amounts, as the basis for our calculations. In light of the evidence that most job training effects disappear within five years (MDRC, 2007; Greenberg, Deitch & Hamilton, 2010), we do not extend earnings benefits across the trainee's lifetime. However, because we believe that Robin Hood takes great pains to fund only the best job training programs—programs that we would expect to catalyze longer impacts—we allow our estimated benefits to extend over 10 years, double the time that the average program has impact. **References:** Blau, F. & Beller, A. (1992). Black-white earnings over the 1970s and 1980s: Gender differences and trends. Review of Economics and Statistics, 74, 276-286. Greenberg, D., Deitch, V. & Hamilton, G. (2010). A synthesis of random assignment benefit-cost studies of welfare-to-work programs. Journal of Benefit-Cost Analysis, 1(1), 1-28. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. MDRC. (2007). Welfare-to-work program benefits and costs: A synthesis of research. New York, NY: Author. Western, B. & Pettit, B. (2005). Black-white wage inequality, employment rates, and incarceration. American Journal of Sociology, 111(7), 553-578.	
26	Job training and placement: General jobless population with some college	Present discounted value of the following calculation: [(XX participants enter the program) * (XX percent of participants who enter training, graduate and remain employed for one year solely because of the program)* [($XX average annual post-training earnings) – ($13,800 average annual earnings for a jobless population with some college)]] Note: $13,800 baseline earnings are used here to approximate counterfactual earnings (earnings of participants in the absence of this program).
	Explanation: The number of participants who enter training and the percentage that graduate and remain employed for one year are based on the actual number reported by our grantee. We base the estimate of post-training earnings due to job training and placement for a typical jobless population with some college on reports to Robin Hood from its grantees.	

Metric #	Name of Metric	Equation
	We base the $13,800 estimate for average annual counterfactual earnings for jobless people with some college education on findings that jobless individuals earn on average 40 percent less than their comparable peers who have been employed during the last year (Blau & Beller, 1992, cited in Western & Pettit, 2005). We use average estimated earnings from Levin, Belfield, Muennig & Rouse (2007), without additional fringe amounts, as the basis for our calculations. In light of the evidence that most job training effects disappear within five years (MDRC, 2007; Greenberg, Deitch & Hamilton, 2010), we do not extend earnings benefits across the trainee's lifetime. However, because we believe that Robin Hood takes great pains to fund only the best job training programs—programs that we would expect to catalyze longer impacts—we allow our estimated benefits to extend over 10 years, double the time that the average program has impact. References: Blau, F. & Beller, A. (1992). Black-white earnings over the 1970s and 1980s: Gender differences and trends. Review of Economics and Statistics, 74, 276-286. Greenberg, D., Deitch, V. & Hamilton, G. (2010). A synthesis of random assignment benefit-cost studies of welfare-to-work programs. Journal of Benefit-Cost Analysis, 1(1), 1-28. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. MDRC. (2007). Welfare-to-work program benefits and costs: A synthesis of research. New York, NY: Author. Western, B. & Pettit, B. (2005). Black-white wage inequality, employment rates, and incarceration. American Journal of Sociology, 111(7), 553-578.	
27	Job training and placement: Impact of initial wage for full-time employees (grantee reported pre-training wage data)	Present discounted value of the following calculation: [(XX participants enter the program) * (XX percent of participants who enter training, graduate and remain employed for one year solely because of the program)* [($XX average annual post-training earnings) – ($YY average annual pre-training earnings)]] Note: $YY baseline earnings are used here to approximate counterfactual earnings (earnings of participants in the absence of this program).
	Explanation: The number of participants who enter training and the percentage that graduate and remain employed for one year are based on the actual number reported by our grantee. We base the estimate of pre- and post-training earnings due to job training and placement on	

Metric #	Name of Metric	Equation
	reports to Robin Hood from its grantees.	
28	Job training and placement: Impact of initial wage for part-time employees (grantee reported pre-training wage data)	Present discounted value of the following calculation: [(XX participants enter the program) * (XX percent of participants who enter training, graduate and remain employed for one year solely because of the program)* [($XX average annual post-training earnings) – ($YY average annual pre-training earnings)]] Note: $YY baseline earnings are used here to approximate counterfactual earnings (earnings of participants in the absence of this program).
	Explanation: The number of participants who enter training and the percentage that graduate and remain employed for one year are based on the actual number reported by our grantee. We base the estimate of pre- and post-training earnings due to job training and placement on reports to Robin Hood from its grantees.	
29	Job training and placement: Immigrants with no high school diploma	Present discounted value of the following calculation: [(XX participants enter the program) * (XX percent of participants who enter training, graduate and remain employed for one year solely because of the program)* [($XX average annual post-training earnings) – ($9,600 average annual earnings of immigrants with no high school diploma)]] Note: $9,600 baseline earnings are used here to approximate counterfactual earnings (earnings of participants in the absence of this program).
	Explanation: The number of participants who enter training and the percentage that graduate and remain employed for one year are based on the actual number reported by our grantee. We base the estimate of post-training earnings due to job training and placement for immigrants with no high school diploma on reports to Robin Hood from its grantees. We base the $9,600 estimate for average annual counterfactual earnings for immigrants with no high school diploma on a research-backed 30 percent decrease from the typical income of nonimmigrant individuals (Borjas, 2006; Lubotsky, 2007). We use average estimated earnings from Levin, Belfield, Muennig & Rouse (2007), without additional fringe amounts, as the basis for our calculations. In light of the evidence that most job training effects disappear within five years (MDRC, 2007;	

Metric #	Name of Metric	Equation
	Greenberg, Deitch & Hamilton, 2010), we do not extend earnings benefits across the trainee's lifetime. However, because we believe that Robin Hood takes great pains to fund only the best job training programs—programs that we would expect to catalyze longer impacts—we allow our estimated benefits to extend over 10 years, double the time that the average program has impact. **References:** Borjas, G. (2006). Making it in America: Social mobility in the immigrant population (Working Paper No. 12088). Cambridge, MA: National Bureau of Economic Research. Greenberg, D., Deitch, V. & Hamilton, G. (2010). A synthesis of random assignment benefit-cost studies of welfare-to-work programs. Journal of Benefit-Cost Analysis, 1(1), 1 - 28. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Lubotsky, D. (2007). Chutes or ladders? A longitudinal analysis of immigrant earnings. Journal of Political Economy, 115(3), 820 – 867. MDRC. (2007). Welfare-to-work program benefits and costs: A synthesis of research. New York, NY: MDRC.	
30	Job training and placement: Immigrants with some college	Present discounted value of the following calculation: [(XX participants enter the program) * (XX percent of participants who enter training, graduate and remain employed for one year solely because of the program) * [($XX average annual post-training earnings) – ($16,200 average annual earnings of immigrants with some college)]] Note: $16,200 baseline earnings are used here to approximate counterfactual earnings (earnings of participants in the absence of this program).
	Explanation: The number of participants who enter training and the percentage that graduate and remain employed for one year are based on the actual number reported by our grantee. We base the estimate of post-training earnings due to job training and placement for immigrants with some college on reports to Robin Hood from its grantees. We base the $16,200 estimate for average annual counterfactual earnings for immigrants with some college education on a research-backed 30 percent decrease from the typical income of nonimmigrant individuals (Borjas, 2006; Lubotsky, 2007). We use average estimated earnings from Levin, Belfield, Muennig & Rouse (2007), without additional fringe amounts, as the basis for our calculations.	

Metric #	Name of Metric	Equation
	In light of the evidence that most job training effects disappear within five years (MDRC, 2007; Greenberg, Deitch & Hamilton, 2010), we do not extend earnings benefits across the trainee's lifetime. However, because we believe that Robin Hood takes great pains to fund only the best job training programs—programs that we would expect to catalyze longer impacts—we allow our estimated benefits to extend over 10 years, double the time that the average program has impact. **References:** Borjas, G. (2006). Making it in America: Social mobility in the immigrant population (Working Paper No. 12088). Cambridge, MA: National Bureau of Economic Research. Greenberg, D., Deitch, V. & Hamilton, G. (2010). A synthesis of random assignment benefit-cost studies of welfare-to-work programs. Journal of Benefit-Cost Analysis, 1(1), 1-28. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Lubotsky, D. (2007). Chutes or ladders? A longitudinal analysis of immigrant earnings. Journal of Political Economy, 115(3), 820-867. MDRC. (2007). Welfare-to-work program benefits and costs: A synthesis of research. New York, NY: Author.	
31	Job training and placement: Immigrants with college degree from a foreign country	Present discounted value of the following calculation: [(XX participants enter the program) * (XX percent of participants who enter training, graduate and remain employed for one year solely because of the program)* [($XX average annual post-training earnings) – ($32,800 average annual earnings of immigrants with some college)]] Note: $32,800 baseline earnings are used here to approximate counterfactual earnings (earnings of participants in the absence of this program).
	Explanation: The number of participants who enter training and the percentage that graduate and remain employed for one year are based on the actual number reported by our grantee. We base the estimate of post-training earnings due to job training and placement for immigrants with some college on reports to Robin Hood from its grantees. We base the $32,800 estimate for average annual counterfactual earnings for immigrants with a college degree from a foreign country on a research-backed 30 percent decrease from the typical	

Metric #	Name of Metric	Equation
	income of nonimmigrant individuals (Borjas, 2006; Lubotsky, 2007). We use average estimated earnings from Levin, Belfield, Muennig & Rouse (2007), without additional fringe amounts, as the basis for our calculations. In light of the evidence that most job training effects disappear within five years (MDRC, 2007; Greenberg, Deitch & Hamilton, 2010), we do not extend earnings benefits across the trainee's lifetime. However, because we believe that Robin Hood takes great pains to fund only the best job training programs—programs that we would expect to catalyze longer impacts—we allow our estimated benefits to extend over 10 years, double the time that the average program has impact. **References:** Borjas, G. (2006). Making it in America: Social mobility in the immigrant population (Working Paper No. 12088). Cambridge, MA: National Bureau of Economic Research. Greenberg, D., Deitch, V. & Hamilton, G. (2010). A synthesis of random assignment benefit-cost studies of welfare-to-work programs. Journal of Benefit-Cost Analysis, 1(1), 1-28. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Lubotsky, D. (2007). Chutes or ladders? A longitudinal analysis of immigrant earnings. Journal of Political Economy, 115(3), 820-867. MDRC. (2007). Welfare-to-work program benefits and costs: A synthesis of research. New York, NY: Author.	
32	Job training and placement: Internships	(XX participants placed in internships) * (XX percent obtained internships solely because of this program) * (3 months average length of internship) * ($XX average hourly wage) * (80 hours worked monthly) Note: assumes participants earn nothing without internship.
	Explanation: The number of participants who are placed in internships and the percentage that obtained those internships solely because of this program are based on the actual numbers reported by our grantee. The average length of internships and the average earnings are based on reports to Robin Hood from its grantees.	
33	Job training and placement: Job placements less than one year	(XX participants who enter training) * (XX percent graduate solely because of the program but only remain employed for less than one year) * (0.25 year average

Metric #	Name of Metric	Equation
		length of employment) * [($XX average annual post-training earnings) – ($YY average annual pre-training earnings)]] Note: $YY baseline earnings are used here to approximate counterfactual earnings (earnings of participants in the absence of this program).
	Explanation: The number of participants who enter training, graduate and remain employed for less than one year is based on the actual number reported by our grantee. We base the estimate of the impact of job training and placement on reports to Robin Hood from its grantees. For job placements that lasted less than one year, we apply the increased earnings for only three months.	
34	Job training and placement: Resulting fringe benefits	Present discounted value of the following calculation: [[(XX participants enter the program) * (XX percent of participants who enter training, graduate and remain employed for at least one year solely because of the program) (* [(XX percent of participants who acquire fringe benefits through their new employment) - (YY percent of participants who have fringe benefits prior to training)] * ($XX average annual post-training earnings) * (5 percent average value of fringe benefits)]
	Explanation: The number of participants who enter training and the percentage that graduate and remain employed for at least one year solely because of the program are based on the actual number reported by our grantee. Some percentage of placed and retained participants will receive fringe benefits through their new employer. Based on the actual percentages reported by our grantee, we count here only those receiving fringe benefits who did not have these benefits before their new employment. We base the estimate of post-training earnings due to job training and placement on reports to Robin Hood from its grantees. We base the 5 percent estimate for the average value of fringe benefits on the assumption that there are additional benefits of "better employment" for some portion of the cohort who actually receive fringe benefits. Vacation time, sick leave, family leave and retirement benefits all contribute to quality of life. Although we estimate the fringe rate at approximately 15 percent of the post-training earnings, we discount the total fringe rate by about one-third to account for FICA costs (which are not typically recouped by our grantee's trainees), and then for the portion of the fringe amount that covers health insurance, because health insurance benefits are applied in another equation. This leaves a	

Metric #	Name of Metric	Equation
	5 percent fringe rate that we add to our estimated earnings benefits.	
35	Job training and placement: Impact of future wage increases over and above wage of initial placement	Present discounted value of the following calculation: [[(XX participants enter the program) * (XX percent of participants who enter training, graduate and remain employed for at least one year solely because of the program) *(XX percent of participants who receive a promotion/wage boost) * ($XX average annual wage increase)]
	Explanation: The number of participants who enter training, the percentage that graduate and remain employed for at least one year solely because of the program and the percentage that then receive a wage boost over the initial placement wage are based on the actual number reported by our grantee. The number of participants in jobs who remain employed for one year and receive a promotion/wage boost is based on the actual number reported by our grantee. We base the estimate of future earnings increases on reports to Robin Hood from its grantees.	
36	Microfinance: Increased earnings for business owners (for businesses that last at least four years)	Present discounted value of the following calculation (3 years): [(XX individuals receive a loan) * (25 percent of businesses will last at least four years) * (XX percent of business owners increase their income solely because of the program) * [($XX average annual post-loan earnings) – ($YY average annual pre-loan earnings)]] Note: $YY baseline earnings are used here to approximate counterfactual earnings (earnings of participants in the absence of this program).
	Explanation: The number of individuals who receive a loan is based on the actual number reported by our grantee. We base our estimate for a 25 percent business survival rate of four years on findings of Knaup (2005) and the U.S. Bureau of Labor Statistics for the state of New York, which find the survival rate of new businesses hovering around 50 percent. We reduce this estimate by half to account for the smaller, more fragile new businesses lent to by our grantees. The percentage of business owners who increase their income solely because of the program is estimated by Robin Hood staff. We base the estimates for the percentage of new business owners who increase their income, and the amount of that increase, on reports to Robin Hood from its grantees. We apply a three-year benefit of increased earnings from new businesses that are estimated to exist for at least four	

Metric #	Name of Metric	Equation
	years, to account for the vulnerability of the earnings boost arising from new, very small businesses. References: Knaup, A. E. (2005, May). Survival and longevity in the business employment dynamics data. Monthly Labor Review. Washington, DC: U.S. Department of Labor, U.S. Bureau of Labor Statistics. U.S. Bureau of Labor Statistics. (2013). Table 7: Survival of private sector establishments by opening year. Washington, DC: U.S. Department of Labor. Retrieved from http://www.bls.gov/bdm/ny_age_total_table7.txt	
37	Microfinance: Increased earnings for business owners (for businesses that last 15 years)	Present discounted value of the following calculation (10 years): [(XX individuals receive a loan) * (10 percent of businesses will last at least 15 years) * (XX percent of business owners increase their income solely because of the program) * [($XX average annual post-loan earnings) – ($YY average annual pre-loan earnings)]] Note: $YY baseline earnings are used here to approximate counterfactual earnings (earnings of participants in the absence of this program).
	Explanation: The number of individuals who receive a loan is based on the actual number reported by our grantee. We base our estimate for a 10 percent business survival rate of 15 years on findings of the U.S. Bureau of Labor Statistics for the state of New York, which reports 15-year survival rates hovering around 20 percent. We reduce this estimate by half to account for the smaller, more fragile new businesses lent to by our grantees. The percentage of business owners who increase their income solely because of the program is estimated by Robin Hood staff. We base the estimates for the percentage of new business owners who increase their income, and the amount of that increase, on reports to Robin Hood from its grantees. We apply a 10-year benefit of increased earnings from new businesses estimated to exist for at least 15 years to account for the vulnerability of the earnings boost arising from new, very small businesses. References: U.S. Bureau of Labor Statistics. (2013). Table 7: Survival of private sector establishments by opening year. Washington, DC: U.S. Department of Labor. Retrieved from http://www.bls.gov/bdm/ny_age_total_table7.txt	

Metric #	Name of Metric	Equation
38	Microfinance: Jobs created through new businesses (for businesses that last at least four years)	Present discounted value of the following calculation (3 years): [(XX individuals receive a loan) * (XX new jobs created per loan) * (50 percent of new employees found a job solely as a result of the program) * (25 percent of businesses will last at least four years) * [($14,500 average annual earnings in a minimum wage job) – ($8,200 average annual earnings for a jobless population with no high school diploma)]] Note: $8,200 baseline earnings are used here to approximate counterfactual earnings (earnings of participants in the absence of this program).
	Explanation: The number of individuals who receive a loan is based on the actual number reported by our grantee. Our estimate of the number of new jobs per loan is based on field reports and our best guess. Our estimate for the 50 percent rate at which newly hired individuals would have become employed in the absence of our grantee's intervention is based on a typical jobless rate in areas of high poverty. We base our estimate for a 25 percent business survival rate of four years on findings of Knaup (2005) and the U.S. Bureau of Labor Statistics for the state of New York, which find the survival rate of new businesses hovering around 50 percent. We reduce this estimate by half to account for the smaller, more fragile new businesses lent to by our grantees. We find the difference between the earnings from this new employment and the estimated earning without the new employment, applying this difference as the boost in earnings due to the new job, in alignment with the job training metrics. We base the $14,500 estimate of new earnings on estimated annual earnings at full time, minimum wage. We base the $8,200 estimate for average annual counterfactual earnings for jobless people without a high school education on findings that jobless individuals earn on average 40 percent less than their comparable peers who have been employed during the last year (Blau & Beller, 1992, cited in Western & Pettit, 2005). We use average estimated earnings from Levin, Belfield, Muennig & Rouse (2007), without additional fringe amounts, as the basis for our calculations. We apply a three-year benefit of increased earnings from new businesses that are estimated to exist for at least four years, to account for the vulnerability of the earnings boost arising from new, very small businesses.	

Metric #	Name of Metric	Equation
	References: Blau, F. & Beller, A. (1992). Black-white earnings over the 1970s and 1980s: Gender differences and trends. Review of Economics and Statistics, 74, 276-286. Knaup, A. (2005, May). Survival and longevity in the business employment dynamics data. Monthly Labor Review. Washington, DC: U.S. Department of Labor, U.S. Bureau of Labor Statistics. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. U.S. Bureau of Labor Statistics. (2013). Table 7: Survival of private sector establishments by opening year. Washington, DC: U.S. Department of Labor. Retrieved from http://www.bls.gov/bdm/ny_age_total_table7.txt Western, B. & Pettit, B. (2005). Black-white wage inequality, employment rates, and incarceration. American Journal of Sociology, 111(7), 553-578.	
39	Microfinance: Jobs created through new businesses (for businesses that last 15 years)	Present discounted value of the following calculation (10 years): [(XX individuals receive a loan) * (XX new jobs created per loan) * (50 percent of employees found a job solely because of the program) * (10 percent of businesses will last 15 or more years) * [($14,500 average annual earnings in a minimum wage job) – ($8,200 average annual earnings for a jobless population with no high school diploma)]] Note: $8,200 baseline earnings are used here to approximate counterfactual earnings (earnings of participants in the absence of this program).
	Explanation: The number of individuals who receive a loan is based on the actual number reported by our grantee. Our estimate of the number of new jobs per loan is based on field reports and our best guess. Our estimate for the 50 percent rate at which newly hired individuals would have become employed in the absence of our grantee's intervention is based on a typical jobless rate in areas of high poverty. We base our estimate for a 10 percent business survival rate of 15 years on findings of the U.S. Bureau of Labor Statistics for the state of New York, which reports 15-year survival rates hovering	

Metric #	Name of Metric	Equation
	around 20 percent. We reduce this estimate by half to account for the smaller, more fragile new businesses lent to by our grantees. We find the difference between the earnings from this new employment and the estimated earning without the new employment, applying this difference as the boost in earnings due to the new job, in alignment with the job training metrics. We base the $14,500 estimate of new earnings on estimated annual earnings at full time, minimum wage. We base the $8,200 estimate for average annual counterfactual earnings for jobless people without a high school education on findings that jobless individuals earn on average 40 percent less than their comparable peers who have been employed during the last year (Blau & Beller, 1992, cited in Western & Pettit, 2005). We use average estimated earnings from Levin, Belfield, Muennig & Rouse (2007), without additional fringe amounts, as the basis for our calculations. We apply a 10-year benefit of increased earnings for new businesses estimated to exist for at least 15 years to account for the vulnerability of the earnings boost arising from new, very small businesses. **References**: Blau, F. & Beller, A. (1992). Black-white earnings over the 1970s and 1980s: Gender differences and trends. Review of Economics and Statistics, 74, 276-286. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. U.S. Bureau of Labor Statistics (2013). Table 7: Survival of private sector establishments by opening year. Washington, DC: U.S. Department of Labor. Retrieved from http://www.bls.gov/bdm/ny_age_total_table7.txt Western, B. & Pettit, B. (2005). Black-white wage inequality, employment rates, and incarceration. American Journal of Sociology, 111(7), 553-578.	
40	Reduced arrest: Re-arrest and conviction	Present discounted value of the following calculation: [(XX participants) * (XX percent of participants would typically be re-arrested and convicted) * (XX percent of individuals avoid conviction solely because of the program) * ($20,000 average earnings for a low-income population) * (10 percent decrease in earnings prevented by avoiding re-arrest and conviction)]
	Explanation: The number of participants is based on the actual number reported by our grantee.	

Metric #	Name of Metric	Equation
	The percentage of participants who would typically be re-arrested and convicted is estimated by Robin Hood staff. The percentage of participants who avoid conviction solely because of the program is estimated by Robin Hood staff. We base our estimate of the prevention of a 10 percent decrease in earnings due to avoiding re-arrest and conviction on the work of Western, Kling & Weiman (2001). We estimate the average future earnings of those who attend our grantee's program at about $20,000, based on earnings estimates from Levin, Belfield, Muennig & Rouse (2007), roughly split between those with a high school degree and those without. **References:** Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Western, B., Kling, J. & Weiman, D. (2001). The labor market consequences of incarceration (Working Paper No. 450). Princeton, NJ: Princeton University, Industrial Relations Section.	
41	Reduced arrest: Prevention of first-time arrest (as a result of early childhood program)	Present discounted value of the following calculation: [(XX participating children) * (9 percent of children are delinquent) * (35 percent of children reduce delinquency solely because of the program) * ($20,000 average earnings for a low-income population) * (22 percent decrease in earnings prevented by avoiding a first-time arrest)]
	Explanation: The number of participating children is based on the actual number reported by our grantee. We base the 9 percent estimated rate of juvenile delinquency on findings of research on urban, low-income teenagers (based on Ludwig, Duncan & Hirschfeld, 1999; Lochner, 2005). We base the 35 percent estimate for the effects of preschool on juvenile delinquency on research that indicates high-quality preschool reduces future juvenile delinquency by about 35 percent (especially Reynolds, Temple, Robertson & Mann, 2002). We estimate the average future earnings of those who attend our grantee's program at about $20,000, based on earnings estimates from Levin, Belfield, Muennig & Rouse (2007), roughly split between those with a high school degree and those without. We base our estimate of the prevention of a 22 percent decrease in earnings due to avoiding re-arrest and conviction on the work of Joseph (2001), which finds that juvenile arrest decreases adult earnings by about 22 percent. **References:**	

Metric #	Name of Metric	Equation
	Joseph, M. (2001). The effect of arrests on the earnings of young men: Evidence from the National Youth Survey. Chicago, IL: Harris Graduate School of Public Policy, University of Chicago. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Lochner, L. (2005). Individual perceptions of the criminal justice system (Working Paper No. 9474). Cambridge, MA: National Bureau of Economic Research. Ludwig, J., Duncan, G. & Hirschfeld, P. (1999). Urban poverty and juvenile crime: Evidence from a randomized housing-mobility experiment. Washington, DC: U.S. Department of Housing and Urban Development. Reynolds, A. J, Temple, J. A., Robertson, D. L. & Mann, E. A. (2002). Age 21 cost-benefit analysis of the Title I Chicago Child-Parent Centers. Educational Evaluation and Policy Analysis, 24(4), 267-303.	
42	Reduced arrest: Prevention of first-time arrest (as a result of parenting improvement by midquality programs)	Present discounted value of the following calculation: [(XX participating children) * (33 percent of children who experience consistent poor parenting will be delinquent) * (33 percent of those will not be delinquent due to parenting program) *($20,000 average earnings for a low-income population) * (22 percent decrease in earnings prevented by avoiding first-time arrest)]
	Explanation: *For midquality programs:* The number of participating children is based on the actual number reported by our grantee. We base the 33 percent estimate for the number of children with consistently poor parenting who become delinquent, and the 33 percent estimate for the number of children who do not become delinquent because their parents improve, on the findings of Webster-Stratton, Rinaldi & Reid (2009). We halve the estimated impact from two-thirds to one-third to account for programs of midquality. We base our estimate for the prevention of a 22 percent decrease in earnings due to avoiding re-arrest and conviction on the work of Joseph (2001), which finds that juvenile arrest decreases adult earnings by about 22 percent. We estimate the average future earnings of our child cohorts very conservatively at about $20,000, based on our current earnings estimates from Levin, Belfield, Muennig & Rouse (2007). **References:** Gomby, D. S. (2005). Home visitation in 2005: Outcomes for children and parents (Invest in Kids	

Metric #	Name of Metric	Equation
	Working Group Paper No. 7). Washington, DC: Partnership for America's Economic Success. Joseph, M. (2001). The effect of arrests on the earnings of young men: Evidence from the National Youth Survey. Chicago, IL: Harris Graduate School of Public Policy, University of Chicago. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Love, J., Kistker, E., Ross, C., Schochet, P., Brooks-Gunn, J., Paulsell, D., Boller, K., Constantine, J., Vogel, C., Fuligni, A. & Brady-Smith, C. (2002). Making a difference in the lives of infants and toddlers and their families: The impacts of Early Head Start. Princeton, NJ: Mathematica Policy Research, Inc. Webster-Stratton, C., Rinaldi, J. & Reid, J. (2009). Long-term outcomes of Incredible Years Parenting Programs: Predictors of adolescent adjustment. Seattle, WA: University of Washington. Retrieved from http://www.incredibleyears.com/library/items/long-term-outcomes-of-iy-parenting-pgrm_7-7-09.pdf	
43	Reduced arrest: Prevention of first-time arrest (as a result of parenting improvement by high-quality programs)	Present discounted value of the following calculation: [(XX participating children) * [(33 percent of children who experience consistent poor parenting will be delinquent) * (66 percent of children will not be delinquent due to parenting program)] * ($20,000 average earnings for a low- income population) * (22 percent decrease in earnings prevented by avoiding first-time arrest)]
	Explanation: *For high-quality, intensive parenting programs:* The number of participating children is based on the actual number reported by our grantee. We base the 33 percent estimate for the number of children with consistently poor parenting who become delinquent, and the 66 percent estimate for the number of children who do not become delinquent through the impact of a high-quality parenting program because their parents improve, on the findings of Webster-Stratton, Rinaldi & Reid (2009). We base our estimate for the prevention of a 22 percent decrease in earnings due to avoiding re-arrest and conviction on the work of Joseph (2001), which finds that juvenile arrest decreases adult earnings by about 22 percent. We estimate the average future earnings of our child cohorts very conservatively at about $20,000,	

Metric #	Name of Metric	Equation
	based on our current earnings estimates from Levin, Belfield, Muennig & Rouse (2007). **References:** Joseph, M. (2001). The effect of arrests on the earnings of young men: Evidence from the National Youth Survey. Chicago, IL: Harris Graduate School of Public Policy, University of Chicago. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Webster-Stratton, C., Rinaldi, J. & Reid, J. (2009). Long-term outcomes of Incredible Years Parenting Programs: Predictors of adolescent adjustment. Seattle, WA: University of Washington. Retrieved from http://www.incredibleyears.com/library/items/long-term-outcomes-of-iy-parenting-pgrm_7-7-09.pdf	
44	Reduced arrest: Reduced arrest for mothers participating in the Nurse-Family Partnership or another high-quality home visiting programs	Present discounted value of the following calculation: [(XX participating mothers) * (33 percent of mothers would typically be arrested) * (60 percent reduction in arrest solely because of this program) * ($20,000 average earnings for a low-income population) * (10 percent decrease in earnings prevented due to avoided arrest)]
	Explanation: The number of participating mothers is based on the actual number reported by our grantee. The 33 percent estimate for the percentage of mothers who would be arrested and the 60 percent estimated decrease in arrest due to the impact of home visiting are based on the Nurse-Family Partnership research literature (Olds et al., 1997). We estimate the average future earnings of those who attend our grantee's program at about $20,000, based on earnings estimates from Levin, Belfield, Muennig & Rouse (2007), roughly split between those with a high school degree and those without. We base our estimate of a 10 percent increase in earnings due to avoiding arrest on research indicating that incarceration reduces future earnings for adults by about 10 percent (Western, Kling & Weiman, 2001). **References:** Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Olds, D., Eckenrode, J., Henderson, C., Kitzman, H., Powers, J., Cole, R., Sidora, K., Morris, P., Pettitt, L. & Luckey, D. (1997). Long-term effects of home visitation on maternal life course and child abuse and neglect. Journal of the American Medical Association, 278(8), 637-643. Western, B., Kling, J. & Weiman, D. (2001). The labor market consequences of incarceration	

Metric #	Name of Metric	Equation
	(Working Paper No. 450). Princeton, NJ: Princeton University, Industrial Relations Section.	
45	Reduced arrest: Decreased delinquency for children of mothers participating in the Nurse-Family Partnership or another high-quality home visiting programs	Present discounted value of the following calculation: [(XX participating children) * (35 percent of children would typically be arrested as juveniles) * (40 percent reduction in arrest solely because of this program) * ($20,000 average earnings for a low-income population) * (22 percent decrease in earnings prevented due to avoided arrest)]
	Explanation: The number of participating children is based on the actual number reported by our grantee. The 35 percent estimate for the percentage of children who would be arrested as teenagers and the 40 percent estimated decrease in arrest due to the impact of home visiting are based on the Nurse-Family Partnership research literature (Olds et al., 1997). We estimate the average future earnings of our child cohorts very conservatively at about $20,000, based on our current earnings estimates from Levin, Belfield, Muennig & Rouse (2007). We base our estimate for the prevention of a 22 percent decrease in earnings due to avoiding re-arrest and conviction on the work of Joseph (2001), which finds that juvenile arrest decreases adult earnings by about 22 percent. **References:** Joseph, M. (2001). The effect of arrests on the earnings of young men: Evidence from the National Youth Survey. Chicago, IL: Harris Graduate School of Public Policy, University of Chicago. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Olds, D., Eckenrode, J., Henderson, C., Kitzman, H., Powers, J., Cole, R., Sidora, K., Morris, P., Pettitt, L. & Luckey, D. (1997). Long-term effects of home visitation on maternal life course and child abuse and neglect. Journal of the American Medical Association, 278(8), 637-643.	
46	Dental care: impact on earnings, adults	Present discounted value of the following calculation: [(XX adults receive corrective dental work) * (40 percent of adults receive dental care solely because of the program) * ($20,000 average earnings for a low-income population) * (1 percent increase in earnings due to dental work)]

Metric #	Name of Metric	Equation
	Explanation: The number of adults who receive corrective dental work is based on the actual number reported by our grantee. We base our estimate for the percentage of adults who would otherwise be unable to find dental care on research that indicates approximately 40 percent of low-income children have not seen a dentist within the last year (New York State Department of Health, 2012). We extrapolate these findings to adults. We estimate a 1 percent increase in earnings due to dental care based on research that for children, every year of preventative oral health care increases future earnings by approximately 1 percent per individual who would have been susceptible to dental disease (Glied & Neidell, 2008). We estimate the average future earnings of those who receive dental care at about $20,000, based on earnings estimates from Levin, Belfield, Muennig & Rouse (2007), roughly split between those with a high school degree and those without. **References:** Glied, S. & Neidell, M. (2008). The economic value of teeth. Cambridge, MA: National Bureau of Economic Research. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. New York State Department of Health. (2012). The NYS DOH 2012 Oral Health Surveillance Project. Albany, NY: Author.	
47	Dental care: impact on earnings, children	Present discounted value of the following calculation: [(XX children receive preventive dental care) * (40 percent of children susceptible to dental disease) * (40 percent of children receive care solely because of the program) * ($20,000 average earnings for a low-income population) * (1 percent increase in earnings due to dental work)]
	Explanation: The number of children who receive preventative dental work is based on the actual number reported by our grantee. Our 40 percent estimate for the percentage of low-income children who are susceptible to dental disease is based on research findings (GAO, 2000; Glied & Neidell, 2008). We base our estimate for the percentage of children who would otherwise be unable to find dental care on research that indicates approximately 40 percent of low-income children have not seen a dentist within the last year (New York State Department of Health, 2012).	

Metric #	Name of Metric	Equation
	We estimate the average future earnings of our child cohorts very conservatively at about $20,000, based on our current earnings estimates from Levin, Belfield, Muennig & Rouse (2007). We estimate a 1 percent increase in earnings due to dental care based on research that for children, every year of preventative oral health care increases future earnings by approximately 1 percent per individual who would have been susceptible to dental disease (Glied & Neidell, 2008). References: Glied, S. & Neidell, M. (2008). The economic value of teeth. Cambridge, MA: National Bureau of Economic Research. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. New York State Department of Health. (2012). The NYS DOH 2012 Oral Health Surveillance Project. Albany, NY: Author. U.S. General Accounting Office. (2000). Oral health: Dental disease is a chronic problem among low-income populations. Report to Congressional Requestors. Washington, DC : Author.	
48	Mental health: Mood disorder treatment, impact on earnings, female children	Present discounted value of the following calculation: [(XX participating female children with mood disorder) * (XX percent of children get treatment solely because of the program) * (60 percent of children respond to treatment) * ($20,000 average earnings for a low-income population) * (15 percent decrease in earnings prevented as a result of the treatment)]
	Explanation: The number of female children with a mood disorder is based on the actual number reported by our grantee. The percentage of children who get treatment solely because of the program is estimated by Robin Hood staff. We base the 60 percent therapeutic responder estimate on a wide reading of the research literature, including Berndt et al. (2000). We estimate the average future earnings of those who attend our grantee's program at about $20,000, based on earnings estimates from Levin, Belfield, Muennig & Rouse (2007), roughly split between those with a high school degree and those without. We base our estimate for a 15 percent impact of mood disorder on earnings on Berndt et al. (2000), who indicate that teenaged girls who suffer from depression will earn about 15 percent less over	

Metric #	Name of Metric	Equation
	their lifetime than their nondepressed peers, but that if they are provided with effective treatment the earnings decrease will likely not accrue. Because children presenting with mood disorder are usually female, we apply this metric to 90 percent of an average cohort if the gender split of children enrolled in our grantee's program is not known. **References:** Berndt, E., Koran, L., Finkelstein, S., Gelenberg, A., Kornstein, S., Miller, I., Thase, M., Trapp, G. & Keller, M. (2000). Lost human capital from early-onset chronic depression. American Journal of Psychiatry, 157, 940-947. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University.	
49	Mental health: Post-traumatic stress disorder (P.T.S.D.)/depression treatment, impact on earnings, adults	(XX participants) * (XX percent have P.T.S.D. or depression) * (XX percent of participants get treatment solely because of the program) * (60 percent of participants improve with treatment) * ($20,000 average earnings for a low-income population) * (20 percent decrease in earnings prevented as a result of treatment)
	Explanation: The number of participants is based on the actual number reported by our grantee. The percentage of participants with P.T.S.D. or depression is based on the actual percentage reported by our grantee. We base the 60 percent therapeutic responder estimate on a wide reading of the research literature, including Berndt et al. (2000). We estimate the average future earnings of those who attend our grantee's program at about $20,000, based on earnings estimates from Levin, Belfield, Muennig & Rouse (2007), roughly split between those with a high school degree and those without. The estimated 20 percent increase in earnings as a result of P.T.S.D. treatment is based on the work of Berndt et al. (2000) and Kessler (2000), which shows that P.T.S.D. and depression both reduce days worked per month by about 3.6 days, or about 43 days per year, representing about 17 percent of the work year. We round up to 20 percent. This is a very conservative estimate of lost wages because it does not consider the more structural aspects of lost opportunity and unstable employment. Moreover, P.T.S.D. typically lasts three years for those who get treatment (Kessler, 2000). We do not extend this cost over the lifetime but conservatively apply the cost only to the current year. **References:**	

Metric #	Name of Metric	Equation
	Berndt, E., Koran, L., Finkelstein, S., Gelenberg, A., Kornstein, S., Miller, I., Thase, M., Trapp, G. & Keller, M. (2000). Lost human capital from early-onset chronic depression. The American Journal of Psychiatry, 157, 940-947. Kessler, R. C. (2000). Posttraumatic Stress Disorder: The burden to the individual and to society. Journal of Clinical Psychiatry, 61(5). Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University.	
50	Parents more likely to work due to child care	(XX participating families) * (6 percent more employed families solely due to child care) * ($20,000 average earnings for a low-income population)
	Explanation: The number of families is based on the actual number reported by our grantee. We base our 6 percent estimate for the increase in families that work due to the provision of subsidized early care and education on the findings of Matthews (2006), who reports that families in poverty receiving subsidies for child care are between 12 to 15 percent more likely to work. In New York City 46 percent of families in poverty are employed (New York City Commission for Economic Opportunity, 2006). An increase of 12 percent over the typical 46 percent rate means that 6 percent more families in a typical grantee cohort would be employed due to free, full-day, high-quality preschool. We assume here that all of these families are able to work solely due to the program. We estimate the average future earnings of those who attend our grantee's program at about $20,000, based on earnings estimates from Levin, Belfield, Muennig & Rouse (2007), roughly split between those with a high school degree and those without. We apply these earnings to the percentage of newly employed parents just for the preschool year. **References:** Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Matthews, H. (2006). Child care assistance helps families work: A review of the effects of subsidy receipt on employment. Washington, DC: Center for Law and Social Policy. New York City Commission for Economic Opportunity. (2006). Increasing opportunity and reducing poverty in New York City. New York, NY: Report to the Office of the Mayor.	

Non-Earnings, Legal Metrics

Metric #	Name of Metric	Equation
51	Legal: Advanced directives	(XX individuals receive advanced directive legal services) * (5 percent of individuals achieve the outcome solely because of this program) * [(15 percent of individuals receive full representation) * (95 percent of full representation cases have a successful outcome) + (85 percent of individuals receive advice and counsel only) * (34 percent of advice and counsel cases have a successful outcome)] * ($70,200 average value of advanced directive legal services)
	Explanation: The number of individuals who receive legal services involving advanced directives is reported by the grantee. We estimate that 5 percent of individuals achieve the outcome solely because of the program based on reports to Robin Hood from its grantee. Although the legal preparation for the care of children after a parent's death can be of paramount importance, the vast majority of advanced directive clients will never require the use of the directive. The percentage of individuals who receive full representation and the percentage of full representation cases that have a successful outcome are based on actual data reported by the grantee. The percentage of individuals who receive advice and counsel only is based on actual data reported by the grantee. We estimate that 34 percent of individuals who receive advice and counsel legal services will have a successful outcome based of the work of Smith, Thayer & Garwold (2012). We estimate that the value of providing legal assistance to parents with H.I.V./AIDS to prepare advanced directives to be about $70,200. Typically, the advanced directives arrange for guardianship of children. We base our estimate of the value of carefully considered guardianships on estimates in the literature for the value of adoption on the well-being of foster care children. Hansen (2006) finds that adoption of foster care children produces many benefits to the children, including higher rates of high school graduation, lower juvenile delinquency and lower rates of mental illness, with benefits fading as the age at adoption rises, when compared with foster care children who are not adopted. Below, we fill in the numbers to capture these positive impacts. *Decrease in special education placement* The $41,000 estimated benefit of adoption on children's quality of life is based on the	

Metric #	Name of Metric	Equation
	decreased probability of placement in special education. We estimate that 50 percent fewer adopted children require special education placement (van Ijzendoorn, Juffer & Klein Poelhuis, 2005, as cited in Hansen, 2006). For children who avoid special education placement, we estimate that quality of life improves by 0.35 QALYs. This estimate is based on the QALY value for moderate neurological disability, 0.60 QALY (rising to 0.95 QALY after treatment from 0.60 QALY before treatment = 0.35 QALY) (Cost Effectiveness Analysis Registry, n.d.). Although there are very few instances of total remediation of delay, intervention can improve the educational and social prospects for children such that they may join the educational mainstream in school, which is a very important outcome. We estimate, based on common estimates in the field, that about half the children would have required special education placement without this intervention. We apply the benefit to only those children young enough to benefit. Robin Hood assigns a value of $50,000 per QALY. Because the decrease in special education placements can be found at high school graduation, we take these benefits, which are typically estimated for just one year, to be calculated at present value across the lifetime. Present discounted value of: ((0.50 children in foster care require special services) * (0.66 of the adopted children are young enough to benefit) * (0.50 children will not require special services due to adoption) * (0.35 QALY impact of adoption) * ($50,000 per QALY)) = $2,888. Assumptions in the present discounted value calculation include the following: that of the children young enough to benefit, half were adopted at four years old and half at eight years old; that the full benefit applies for the younger group while only half the benefit applies for the older group; that benefits begin upon intervention; the discount rate is 5 percent—the present discounted value is calculated as (($2,888 * 0.50 children adopted at 4 years old) + ($2,888 * 0.50 children adopted at 8 years old * 0.50 of benefit applied for the older group)) = $42,137 *Increased high school graduation* Hansen (2006) reports that adoption improves the high school graduation rate by about 23 percent, accounting for important covariates. We estimate that 75 percent of the children would be in regular education classes with an average baseline high school graduation rate of about 50 percent, while 25 percent would be enrolled in special education with an average baseline 12 percent graduation rate. Earnings impact Our $6,500 estimate of the impact of high school graduation on earnings is based on Levin, Belfield, Muennig & Rouse (2007). Health impact The 1.80 QALY estimate for the impact of high school graduation on better health is based on	

Metric #	Name of Metric	Equation
	the work of Muennig (Muennig, Franks & Gold, 2005; Levin, Belfield, Muennig & Rouse, 2007). Robin Hood assigns a value of $50,000 per QALY. The overall benefit of adoption on high school graduation is $15,716 , calculated as follows: Earnings calculation Present discounted value of ((0.75 students in regular education) * (0.50 baseline high school graduation rate) * (0.23 increase in high school graduation rate) * ($6,500 earnings increase)) + ((0.25 students in special education) * (0.12 baseline high school graduation rate) * (0.23 increase in high school graduation rate) * ($6,500 earnings increase)) = $605. At present value, assuming one-third in each of the three age groupings, that earning benefits begin at age 20, with real growth estimated at 3 percent and discounted at 5 percent, the total benefit at present value is calculated as follows: (($605 * 0.33 children adopted at 4 years old) + ($605 * 0.33 children adopted at 8 years old * 0.50 of benefit applied for this group) + ($605 * 0.33 children adopted at 16 years old * 0.25 of benefit applied for this group)) = $7,332 Health calculation ((0.75 students in regular education) * (0.50 baseline high school graduation rate) * (0.23 increase in high school graduation rate) * (1.80 QALY) * ($50,000 per QALY)) + ((0.25 students in special education) * (0.12 baseline high school graduation rate) * (0.23 increase in high school graduation rate) * (1.80 QALY) * ($50,000 per QALY)) = $8,384 in estimated health benefits arising from high school graduation, applied to all graduates due to adoption $7,332 earnings benefit + 8,384 health benefit = $15,716 , total estimated earnings and health benefits arising from improved high school graduation rates due to adoption *Decreased Juvenile arrest* Another effect of adoption is an average decrease in juvenile arrest rates of about 50 percent (Hansen, 2006). Research indicates a 9 percent estimated baseline rate of juvenile delinquency, based on findings of research on urban, low-income teenagers (Ludwig, Duncan & Hirschfeld, 1999; Lochner, 2005). Our 22 percent estimated decrease in earnings prevented due to avoiding re-arrest and conviction is based on Joseph (2001), who finds that juvenile arrest decreases adult earnings by about 22 percent. We estimate the average future earnings of our child cohorts very conservatively at about $20,000, based on our current earnings estimates from Levin, Belfield, Muennig & Rouse (2007). The overall benefit of decreased juvenile delinquency is $2,395 , calculated as follows: Present discounted value of ((0.09 baseline juvenile delinquency rate) * (0.50 avoid juvenile delinquency due to adoption) * ($20,000 estimated future earnings) * (0.22 estimated earnings increase due to avoided juvenile delinquency) = $198. At present	

Metric #	Name of Metric	Equation
	value, assuming one-third in each of the three age groupings, that earning benefits begin at age 20, and with real growth estimated at 3 percent and discounted at 5 percent, the total benefit at present value is calculated as follows: (($198 * 0.33 children adopted at 4 years old) + ($198 * 0.33 children adopted at 8 years old * 0.50 of benefit applied for this group) + ($198 * 0.33 children adopted at 16 years old * 0.25 of benefit applied for this group)) = $2,395 *Physical Health* Hanson (2006) reports that adoption leads to improvements in children's physical health, with about 25 percent fewer childhood episodes of emergency room visits or hospitalizations than are experienced by children in long-term foster care. This finding pertains only to younger children. We assume that each child would visit the hospital once. The 0.07 QALY estimate for the value of avoiding hospitalization is derived by subtracting the QALY for hospitalization for general diagnoses, 0.93, from full health, 1.0 (Cost Effectiveness Analysis Registry, n.d.). Robin Hood assigns a value of $50,000 per QALY. The $576 estimated benefit for improved health is calculated as follows: ((0.66 younger groups of children) * (0.25 fewer medical traumas) * (0.07 QALY due to fewer medical traumas) * ($50,000 per QALY)) = $576 in health benefits due to adoption *Mental Health* Hansen (2006) informs us that adopted children are 26 percent less likely to be in the clinical range on measures of mental health than their long-term foster care counterparts. We know that about 33 percent of children in foster care have significant mental health issues (Child Welfare Watch, 2005). We estimate the value of avoiding mental illness at 0.33 QALY, by averaging the QALY values for the avoidance of depression, estimated at 0.30 QALY (especially Frank, McGuire, Normand & Goldman, 1999; Schoenbaum, Sherbourne & Wells, 2005), and avoiding relapse of schizophrenia, estimated at 0.36 QALY (Davies et al., 2008). Although we typically apply mental health benefits over one year only, in this case, because these outcomes were found at age 30, we apply a lifetime benefit. The overall benefit of a decrease in serious mental health problems is estimated at about $17,186, calculated as follows: Present discounted value of ((0.33 foster care children with serious mental health problems) * (0.26 avoid serious mental health problems due to adoption) * (0.33 QALY improvement) * ($50,000 per QALY) = $1,416. At present value—assuming that the average age of the children is 10 years old, that benefits begin at intervention and last

Metric #	Name of Metric	Equation
	until age 65 and that a discount of 5 percent is applied--the total benefit is calculated as follows: (($1,416 * 0.33 children adopted at 4 years old) + ($1,416 * 0.33 children adopted at 8 years old * 0.50 of benefit applied for this group) + ($1,416 * 0.33 children adopted at 16 years old * 0.25 of benefit applied for this group)) = $17,186 *The total overall average benefit of adoption* The total overall average benefit of adoption is estimated to be about $70,200, adding the above benefits together and decreasing by 10 percent to account for possible double-counting, as follows: (($42,137 + $15,716 + $2,395 + $576 + $17,186) * (0.90)) = $70,209 rounded to $70,200. **References:** Child Welfare Watch. (2005, Summer). The innovation issue: New initiatives in New York child welfare. New York, NY: Center for an Urban Future, The New School. Retrieved from http://www.newschool.edu/milano/nycaffairs/documents/CWW-vol11.pdf?_ga=1.63282543.1934249279.1400504631 Cost Effectiveness Analysis Registry. (n.d.). Retrieved from https://research.tufts-nemc.org/cear4/SearchingtheCEARegistry/SearchtheCEARegistry.aspx Davies, A., Vardeva, K., Loze, J., L'Italien, G., Sennfalt, K. & van Baardewijk, M. (2008). Cost-effectiveness of atypical antipsychotics of the management of schizophrenia in the UK. Current Medical Research and Opinion, 24(11), 3275-3285. Frank, R., McGuire, T., Normand, S. & Goldman, H. (1999). The value of mental health care at the system level: The case of treating depression. Health Affairs, 18(5), 71-88. Hansen, M. E. (2006). The value of adoption (Department of Economics Working Paper Series No. 2006-15). Washington, DC: American University. Joseph, M. (2001). The effect of arrests on the earnings of young men: Evidence from the National Youth Survey. Chicago, IL: Harris Graduate School of Public Policy, University of Chicago. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Lochner, L. (2005). Individual perceptions of the criminal justice system (Working Paper No. 9474). Cambridge, MA: National Bureau of Economic Research. Ludwig, J., Duncan, G. & Hirschfeld, P. (1999). Urban poverty and juvenile crime: Evidence from a randomized housing-mobility experiment. Washington, DC: U.S. Department of Housing and Urban Development.	

Metric #	Name of Metric	Equation
	Muennig, P., Franks, P. & Gold, M. (2005). The cost effectiveness of health insurance. American Journal of Preventive Medicine, 28(1), 59-64. Schoenbaum, M., Sherbourne, C. & Wells, K. (2005). Gender patterns in cost effectiveness of quality improvement for depression: Results of a randomized, controlled trial. Journal of Affective Disorders, 87, 319-325. Smith, K., Thayer, K. & Garwold, K. (2012). Final report on the Survey of Clients: Provided with advice or brief services by Pennsylvania Legal Aid Programs funded under the Access to Justice Act. Harrisburg, PA: The Resource for Great Programs, Inc. Van Ijzendoorn, M., Juffer, F. & Klein Poelhuis, C. (2005). Adoption and cognitive development: A meta-analytic comparison of adopted and nonadopted children's IQ and school performance. Psychological Bulletin, 131(2), 301-316.	
52	Legal: Cash value of legal settlements	(XX individuals receive legal services and gain cash settlements) * (XX percent of individuals obtain the outcome get assistance solely because of this program) * ($XX paid in cash settlements per person)
	Explanation: The number of individuals who receive legal services and gain cash settlements is reported by the grantee. The percentage of individuals who receive services solely because of this program is estimated by Robin Hood staff. The average per person value of cash settlements comes from data reported to Robin Hood by grantees.	
53	Legal: Consumer law	(XX individuals receive legal services involving issues of consumer law) * (XX percent of individuals achieve the outcome solely because of this program) * [(15 percent of individuals receive full representation) * (95 percent of full representation cases have a successful outcome) + (85 percent of individuals receive advice and counsel only) * (34 percent of advice and counsel cases have a successful outcome)] * ($700 average value of consumer legal services)
	Explanation: The number of individuals who receive legal services involving issues of consumer law is reported by the grantee. The percentage of individuals who achieve the outcome solely because of this program is	

Metric #	Name of Metric	Equation
	estimated by Robin Hood staff. The percentage of individuals who receive full representation and the percentage of full representation cases that have a successful outcome are based on actual data reported by the grantee. The percentage of individuals who receive advice and counsel only is based on actual data reported by the grantee. We estimate that 34 percent of individuals who receive advice and counsel legal services will have a successful outcome based of the work of Smith, Thayer & Garwold (2012). The $700 overall estimate for the average value of legal support for consumer debt is based on the following estimates for the value of debt reduction: Reports to Robin Hood from its grantees indicate that financial counselors reduce debt of their clients through negotiation by about $500 and bankruptcy proceedings reduce debt by about $4,000. About 94 percent of clients negotiate reductions in debt to affordable levels. Only 6 percent of clients require bankruptcy proceedings. Applying these proportions, the overall weighted average benefit is about $700 (($500 * 0.94) + ($4,000 * 0.06) = $700)). **References:** Smith, K., Thayer, K. & Garwold, K. (2012). Final report on the Survey of Clients: Provided with advice or brief services by Pennsylvania Legal Aid Programs funded under the Access to Justice Act. Harrisburg, PA: The Resource for Great Programs, Inc.	
54	Legal: Entitlements law	(XX individuals receive legal services to obtain or maintain entitlements) * (XX percent of individuals achieve the outcome solely because of this program) * [(15 percent of individuals receive full representation) * (95 percent of full representation cases have a successful outcome) + (85 percent of individuals receive advice and counsel only) * (34 percent of advice and counsel cases have a successful outcome)} * ($5,000 average value of entitlements legal services)
	Explanation: The number of individuals who receive legal services to obtain or maintain entitlements is	

Metric #	Name of Metric	Equation
	reported by the grantee. The percentage of individuals who achieve the outcome solely because of this program is estimated by Robin Hood staff. The percentage of individuals who receive services solely because of this program is estimated by Robin Hood staff. The percentage of individuals who receive full representation and the percentage of full representation cases that have a successful outcome are based on actual data reported by the grantee. The percentage of individuals who receive advice and counsel only is based on actual data reported by the grantee. We estimate that 34 percent of individuals who receive advice and counsel legal services will have a successful outcome based of the work of Smith, Thayer & Garwold (2012). The $5,000 estimate for the average value of legal services is calculated as the average benefits won by legal services. Legal services help clients win access to food stamps, Supplemental Security Insurance and Social Security Disability (S.S.I./S.S.D.), public assistance and Medicaid. Below, we document the value to enrollees of these benefits and the weights we use to calculate an average value across the different benefits. Food stamps: current average yearly benefits of $3,300 for a household or $1,800 for an individual, weighted at 60 percent for individuals and 40 percent for families based on reports from Single Stop USA. S.S.I./S.S.D.: $25,200—benefits average approximately $8,400 a year (U.S. Social Security Administration, 2012). The benefit is assumed to last three years ($8,400 * 3 years of benefits = $25,200), based on the three-year S.S.I./S.S.D. re-enrollment period. Public assistance: $4,000 a year (average reported by Single Stop USA). Medicaid: 0.16 QALY * $50,000 per QALY = $8,000 estimated benefit in improved quality of life. We estimate that the value of a year of medical care increases the health status of poor patients by 0.07 QALY (Muennig, Glied & Simon, 2005; Muennig, 2005). A new enrollee to government-provided health insurance (Medicaid or Medicare) is expected to re-enroll in subsequent years, based on data for New York City that indicate that about 73 percent of first-time Medicaid enrollees re-enroll the following year (Gary Jenkins, Assistant Commissioner of the New York City Medical Insurance and Community Services Administration, personal communication, February 2009). We assume that interventions that enroll poor individuals in government health insurance last for three years (based on the	

Metric #	Name of Metric	Equation
	finding that half the initial cohort is no longer enrolled after three years). Taking all this into account, we assign a value of 0.16 QALY to enrollment in government-provided health insurance [(0.07 + (0.07 * 0.73) + (0.07 * 0.73^2)) = 0.16]. Robin Hood assigns a value of $50,000 per QALY. The basic benefit is calculated at $8,000 (0.16 QALY * $50,000 per QALY = $8,000). Using the proportion of Single Stop clients who enroll across the various entitlements programs, we weight the overall average to reflect the average benefit amount over a typical cohort of clients. Single Stop USA reports that 57 percent of its clients enroll in food stamps, 3 percent in S.S.I./S.S.D., 10 percent in public assistance, and 30 percent in Medicaid. Applying these proportions, the overall weighted average benefit is about $5,000 (($2,600 food stamp average benefit * 0.57) + ($25,200 S.S.I./S.S.D. average benefit * 0.03) + ($4,000 public assistance average benefit * 0.10) + ($8,000 average Medicaid benefit * 0.30) = $5,000 overall average entitlements benefit). **References:** Muennig, P. (2005). The cost effectiveness of health insurance. American Journal of Preventive Medicine, 28(1), 59-64. Muennig, P., Glied, S. & Simon, J. (2005). Estimation of the health benefits produced by Robin Hood Foundation grant recipients. Report to Robin Hood. New York, NY: Robin Hood. Smith, K., Thayer, K. & Garwold, K. (2012). Final report on the Survey of Clients: Provided with advice or brief services by Pennsylvania Legal Aid Programs funded under the Access to Justice Act. Harrisburg, PA: The Resource for Great Programs, Inc. U.S. Department of Agriculture. (2012a). Supplemental Nutrition Assistance Program: Average monthly benefit per person. Washington, DC: U.S. Department of Agriculture, Food and Nutrition Services. Retrieved from http://www.fns.usda.gov/pd/snapmain.htm U.S. Department of Agriculture. (2012b). Supplemental Nutrition Assistance Program: Average monthly benefit per household. Washington, DC: U.S. Department of Agriculture, Food and Nutrition Services. Retrieved from http://www.fns.usda.gov/pd/snapmain.htm U.S. Social Security Administration. (2012). State assistance programs for SSI recipients, January 2011: New York. Washington, DC: Author. Retrieved from http://www.ssa.gov/policy/docs/progdesc/ssi_st_asst/2011/ny.html	
55	Legal: Family law (excluding orders of protection)	(XX individuals receive legal services involving issues of family law) * (XX percent of individuals achieve the outcome solely because of this program) * [(15 percent of individuals receive full representation) * (95 percent of full representation cases have a successful outcome) + (85 percent of individuals receive advice and counsel only) * (34 percent of advice and counsel cases have a successful outcome)] * ($5,600 average value of family law

Metric #	Name of Metric	Equation
		services excluding orders of protection)
	Explanation: The number of individuals who receive legal services involving issues of family law is reported by the grantee. The percentage of individuals who achieve the outcome solely because of this program is estimated by Robin Hood staff. The percentage of individuals who receive full representation and the percentage of full representation cases that have a successful outcome are based on actual data reported by the grantee. The percentage of individuals who receive advice and counsel only is based on actual data reported by the grantee. We estimate that 34 percent of individuals who receive advice and counsel legal services will have a successful outcome based of the work of Smith, Thayer & Garwold (2012). The $5,600 overall estimate for the value of legal support for issues of family law excluding orders of protection is calculated as a weighted average of the estimated value of each of the following case types: contested matrimonial cases, child support cases, custody and visitation and foster care adoptions. The weight used for each case type reflects the proportion of all family-law cases accounted for by the specific case type, as reported to Robin Hood by grantees. Contested matrimonial cases Our grantees report that approximately 22 percent of their caseload is accounted for by contested matrimonial cases. Contested matrimonial cases typically include rulings on child support and health insurance issues. We estimate that acquisition of health insurance as mandated by a court order improves the well-being of an individual by 0.07 QALY (based on Muennig, Franks & Gold, 2005 and Muennig, Glied & Simon, 2005). We estimate, based on grantee data, that 10 percent of our grantee's clients will acquire health insurance by court order. We obtain this 10 percent figure as follows: 38 percent of married women nationally are covered by their spouse's health insurance (Health Law Advocates, 2002); we estimate that the figure is half that high for poor women; because grantees often deal with Medicaid-eligible families, we cut the rate in half again. Robin Hood assigns a value of $50,000 per QALY. Child support We estimate that the average amount of child support received by low-income parents is about	

Metric #	Name of Metric	Equation
	$3,200 and that about two-thirds of parents who receive court-ordered child support will actually receive it (Cancian & Meyer, 2005). Approximately 47 percent of family-law cases involve disputes over child support. Also, contested matrimonial cases can involve disputes over child support. Custody and visitation Our grantees report that custody cases account for about 16 percent of their caseload. Disputes over visitation account for another 10 percent of caseloads. We incorporate these case types into our metrics because court-ordered custody and visitation arrangements are intended to improve the parenting context of the child. We estimate the poverty-fighting value of legal intervention based on estimates of the impact of improved parenting and, specifically, reductions in child abuse. Improved parenting We estimate that reductions in domestic violence due to improved parenting increase health-related quality of life by 0.02 QALY (Muennig, 2005). Reduced child abuse Researchers tell us that improved parenting leads to less child abuse. Research suggests that the average lifetime prevalence of child abuse and neglect among poor families is about 12 percent (Aos, Lieb, Mayfield, Miller & Pennucci, 2004). We assume that court-ordered custody and visitation arrangements reduce child abuse by 50 percent, as loosely based on research that indicates a 50 percent drop in child abuse among parents who place their children in high-quality preschool (Reynolds, Temple & Ou, 2010). We estimate the value of avoided child abuse at $24,000 based on research findings on the cost of a "case" of childhood abuse on the abused child's future quality of life and individual health care costs, including mental health (Aos, Lieb, Mayfield, Miller & Pennucci, 2004). This estimate is already calculated across the lifetime at net present value. Note that we apply this estimated benefit to a reduction in future abuse, although we may not have information on whether a "case" of abuse has already occurred for which future remediation is not possible. Foster care adoption Based on Hansen (2006), we estimate the lifetime benefit of adoption to be $70,171. Our grantees report that foster care adoptions account for about 5 percent of their legal caseload. Hansen (2006) reports that the benefits of legal adoption include: decreased special education placements, reduced juvenile delinquency, increased rates of high school graduation and improvements in children's physical and mental health. Hansen (2006) also reports that the	

Metric #	Name of Metric	Equation
	benefits of adoption vary by children's age at adoption. For children adopted before kindergarten the full benefit is assumed, whereas for children adopted between about four and eight years old only half the benefit accrues. We estimate that for children older than nine years old at adoption, only a quarter of the benefit would apply. Because we typically do not know the ages of the children our grantees serve, we assume that one-third of the children fall into each age grouping: preschool or younger, between preschool and eight years old and nine years old or older. We estimate the benefit as follows: *Decrease in special education placement* The $42,137 estimated benefit of adoption on children's quality of life is based on the decreased probability of placement in special education. We estimate that 50 percent fewer adopted children require special education placement (van Ijzendoorn, Juffer & Klein Poelhuis, 2005, as cited in Hansen, 2006). For children who avoid special education placement, we estimate that quality of life improves by 0.35 QALYs. This estimate is based on the QALY value for moderate neurological disability, 0.60 QALY (rising to 0.95 QALY after treatment from 0.60 QALY before treatment = 0.35 QALY) (Cost Effectiveness Analysis Registry, n.d.). Although there are very few instances of total remediation of delay, intervention can improve the educational and social prospects for children such that they may join the educational mainstream in school, which is a very important outcome. We estimate, based on common estimates in the field, that about half the children would have required special education placement without this intervention. We apply the benefit to only those children young enough to benefit. Robin Hood assigns a value of $50,000 per QALY. Because the decrease in special education placements can be found at high school graduation, we take these benefits, which are typically estimated for just one year, to be calculated at present value across the lifetime. Present discounted value of: ((0.50 children in foster care require special services) * (0.66 of the adopted children are young enough to benefit) * (0.50 children will not require special services due to adoption) * (0.35 QALY impact of adoption) * ($50,000 per QALY)) = $2,888. Assuming that of the children young enough to benefit, half were adopted at four years old and half at eight years old, that the full benefit applies for the younger group while only half the benefit applies for the older group, that benefits begin upon intervention and that the discount rate is 5 percent, the present discounted value is calculated as (($2,888 * 0.50 children adopted at 4 years old) + ($2,888 * 0.50 children adopted at 8 years old * 0.50 of benefit applied for the older group)) = $42,137 *Increased high school graduation* Hansen (2006) reports that adoption improves the high school graduation rate by about 23	

Metric #	Name of Metric	Equation
	percent, accounting for important covariates. We estimate that 75 percent of the children would be in regular education classes with an average baseline high school graduation rate of about 50 percent, while 25 percent would be enrolled in special education with an average baseline 12 percent graduation rate. Earnings impact Our $6,500 estimate of the impact of high school graduation on earnings is based on Levin, Belfield, Muennig & Rouse (2007). Health impact The 1.80 QALY estimate for the impact of high school graduation on better health is based on the work of Muennig (Muennig, Franks & Gold, 2005; Levin, Belfield, Muennig & Rouse, 2007). Robin Hood assigns a value of $50,000 per QALY. The overall benefit of adoption on high school graduation is $15,674 , calculated as follows: Earnings calculation Present discounted value of ((0.75 students in regular education) * (0.50 baseline high school graduation rate) * (0.23 increase in high school graduation rate) * ($6,500 earnings increase)) + ((0.25 students in special education) * (0.12 baseline high school graduation rate) * (0.23 increase in high school graduation rate) * ($6,500 earnings increase)) = $605 . At present value, assuming one-third in each of the three age groupings, that earning benefits begin at age 20, with real growth estimated at 3 percent and discounted at 5 percent, the total benefit at present value is calculated as follows: (($605 * 0.33 children adopted at 4 years old) + ($605 * 0.33 children adopted at 8 years old * 0.50 of benefit applied for this group) + ($605 * 0.33 children adopted at 16 years old * 0.25 of benefit applied for this group)) = $7,332 Health calculation ((0.75 students in regular education) * (0.50 baseline high school graduation rate) * (0.23 increase in high school graduation rate) * (1.80 QALY) * ($50,000 per QALY)) + ((0.25 students in special education) * (0.12 baseline high school graduation rate) * (0.23 increase in high school graduation rate) * (1.80 QALY) * ($50,000 per QALY)) = $8,384 in estimated health benefits arising from high school graduation, applied to all graduates due to adoption $7,332 earnings benefit + 8,384 health benefit = $15,716 , in total estimated earnings and health benefits arising from improved high school graduation rates due to adoption *Decreased juvenile arrest* Another effect of adoption is an average decrease in juvenile arrest rates of about 50 percent (Hansen, 2006). Research indicates a 9 percent estimated baseline rate of juvenile delinquency,	

Metric #	Name of Metric	Equation
	based on findings of research on urban, low-income teenagers (Ludwig, Duncan & Hirschfeld, 1999; Lochner, 2005). Our 22 percent estimated increase in earnings due to avoiding re-arrest and conviction is based on Joseph (2001), who finds that juvenile arrest decreases adult earnings by about 22 percent. We estimate the average future earnings of our child cohorts very conservatively at about $20,000, based on our current earnings estimates from Levin, Belfield, Muennig & Rouse (2007). The overall benefit of decreased juvenile delinquency is $2,395 , calculated as follows: Present discounted value of ((0.09 baseline juvenile delinquency rate) * (0.50 avoid juvenile delinquency due to adoption) * ($20,000 estimated future earnings) * (0.22 estimated earnings increase due to avoided juvenile delinquency) = $198. At present value, assuming one-third in each of the three age groupings, that earning benefits begin at age 20, and with real growth estimated at 3 percent and discounted at 5 percent, the total benefit at present value is calculated as follows: (($198 * 0.33 children adopted at 4 years old) + ($198 * 0.33 children adopted at 8 years old * 0.50 of benefit applied for this group) + ($198 * 0.33 children adopted at 16 years old * 0.25 of benefit applied for this group)) = $2,395 *Physical health* Hanson (2006) reports that adoption leads to improvements in children's physical health, with about 25 percent fewer childhood episodes of emergency room visits or hospitalizations than are experienced by children in long-term foster care. This finding pertains only to younger children. We assume that each child would visit the hospital once. The 0.07 QALY estimate for the value of avoiding hospitalization is derived by subtracting the QALY for hospitalization for general diagnoses, 0.93, from full health, 1.0 (Cost Effectiveness Analysis Registry, n.d.). Robin Hood assigns a value of $50,000 per QALY. The $576 estimated benefit for improved health is calculated as follows: ((0.66 younger groups of children) * (0.25 fewer medical traumas) * (0.07 QALY due to fewer medical traumas) * ($50,000 per QALY)) = $576 in health benefits due to adoption *Mental health* Hansen (2006) informs us that adopted children are 26 percent less likely to be in the clinical range on measures of mental health than their long-term foster care counterparts. We know that about 33 percent of children in foster care have significant mental health issues (Child Welfare Watch, 2005). We estimate the value of avoiding mental illness at 0.33 QALY, by averaging the QALY values for	

Metric #	Name of Metric	Equation
	the avoidance of depression, estimated at 0.30 QALY (especially Frank, McGuire, Normand & Goldman, 1999; Schoenbaum, Sherbourne & Wells, 2005), and avoiding relapse of schizophrenia, estimated at 0.36 QALY (Davies et al., 2008). Although we typically apply mental health benefits over one year only, in this case, because these outcomes were found at age 30, we apply a lifetime benefit. The overall benefit of a decrease in serious mental health problems is estimated as follows: Present discounted value of ((0.33 foster care children with serious mental health problems) * (0.26 avoid serious mental health problems due to adoption) * (0.33 QALY improvement) * ($50,000 per QALY) = $1,416 . At present value—assuming that the average age of the children is 10 years old, that benefits begin at intervention and last until age 65 and that a discount of 5 percent is applied--the total benefit is calculated as follows: (($1,416 * 0.33 children adopted at 4 years old) + ($1,416 * 0.33 children adopted at 8 years old * 0.50 of benefit applied for this group) + ($1,416 * 0.33 children adopted at 16 years old * 0.25 of benefit applied for this group)) = $17,186 . *The total overall average benefit of adoption* The total overall average benefit of adoption is estimated to be about $70,200, adding the above benefits together and decreasing by 10 percent to account for possible double-counting, as follows: (($42,137 + $15,716 + $2,395 + $576 + $17,186) * (0.90)) = $70,209. Overall Benefits The total overall benefit is calculated as follows: Contested matrimonial cases are valued at $2,250 = (($50,000 per QALY * 0.07 health insurance QALY * 0.10 percent women receive benefit) + ($3,200 child support amount received * 0.90 will receive an order for child support * 0.66 will ever see any support) = $2,250 benefit of contested matrimonial cases). Child support cases are valued at $2,100 = (($3,200 child support amount received * 0.66 will ever see any support) = $2,100 benefit of child support cases) Custody and visitation cases are valued at $2,440 = (($50,000 per QALY * 0.02 QALY for reduced violence) + ($24,000 decreased child abuse benefit * 0.12 baseline child abuse rate in poverty population * 0.50 drop in child abuse) = $2,440 benefit of custody and visitation)	

Metric #	Name of Metric	Equation
	Foster care adoption cases are valued at $70,209, a research-based estimate. The total overall benefit is the weighted average of the above benefits, at the probabilities reported by Robin Hood grantees: contested matrimonial cases are 22 percent of the typical caseload, child support cases are 47 percent, custody and visitation cases are about 26 percent and adoptions are about 5 percent of the typical caseload. Thus, the total overall benefit is calculated at $5,626, rounded to $5,600 (($2,250 * 0.22) + ($2,100 * 0.47) + ($2,440 * 0.26) + ($70,209 * 0.05) = $5,626) References: Aos, S., Lieb, R., Mayfield, J., Miller, M. & Pennucci, A. (2004). Benefits and costs of prevention and early intervention programs for youth. Olympia, WA: Washington State Institute for Public Policy. Cancian, M. & Meyer, D. R. (2005). Child support and the economy (National Poverty Center Working Paper Series No. 05-17). Madison, WI: University of Wisconsin-Madison. Child Welfare Watch. (2005, Summer). The innovation issue: New initiatives in New York child welfare. New York, NY: Center for an Urban Future, The New School. Cost Effectiveness Analysis Registry. (n.d.). Retrieved from https://research.tufts-nemc.org/cear4/SearchingtheCEARegistry/SearchtheCEARegistry.aspx Davies, A., Vardeva, K., Loze, J., L'Italien, G., Sennfalt, K. & van Baardewijk, M. (2008). Cost-effectiveness of atypical antipsychotics of the management of schizophrenia in the UK. Current Medical Research and Opinion, 24(11), 3275-3285. Frank, R., McGuire, T., Normand, S. & Goldman, H. (1999). The value of mental health care at the system level: The case of treating depression. Health Affairs, 18(5), 71-88. Hansen, M. (2006). The value of adoption (American University Department of Economics Working Paper No. 2006-15). Washington, DC: American University. Health Law Advocates. (2002). Health insurance protections for women after divorce and separation: A multi-state survey. Boston, MA. Retrieved from http://www.healthlawadvocates.org/tools/publications/files/0002.pdf Joseph, M. (2001). The effect of arrests on the earnings of young men: Evidence from the National Youth Survey. Chicago, IL: Harris Graduate School of Public Policy, University of Chicago. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University.

Metric #	Name of Metric	Equation
	Lochner, L. (2005). Individual perceptions of the criminal justice system (Working Paper No. 9474). Cambridge, MA: National Bureau of Economic Research. Ludwig, J., Duncan, G. & Hirschfeld, P. (1999). Urban poverty and juvenile crime: Evidence from a randomized housing-mobility experiment. Washington, DC: U.S. Department of Housing and Urban Development. McFarlane, J., Malecha, A., Watson, K., Gist, J., Batten, E., Hall, I. & Smith, S. (2005). Intimate partner sexual assault against women: Frequency, health consequences, and treatment outcomes. Obstetrics and Gynecology, 105(1), 99-108. Muennig, P., Franks, P. & Gold, M. (2005). The cost effectiveness of health insurance. American Journal of Preventive Medicine, 28(1), 59-64. Muennig, P., Glied, S. & Simon, J. (2005). Estimation of the health benefits produced by Robin Hood Foundation grant recipients. Report to Robin Hood. New York, NY: Robin Hood. Reynolds, A. J., Temple, J. A. & Ou, S. (2010). Impacts and implications of the Child-Parent Center preschool program. In A. J. Reynolds, A. J. Rolnick, M. M. Englund & J. A. Temple (Eds.), Childhood Programs and Practices in the First Decade of Life: A Human Capital Integration (pp. 168-187). New York, NY: Cambridge University Press. Schoenbaum, M., Sherbourne, C. & Wells, K. (2005). Gender patterns in cost effectiveness of quality improvement for depression: Results of a randomized, controlled trial. Journal of Affective Disorders, 87, 319-325. Smith, K., Thayer, K. & Garwold, K. (2012). Final report on the Survey of Clients: Provided with advice or brief services by Pennsylvania Legal Aid Programs funded under the Access to Justice Act. Harrisburg, PA: The Resource for Great Programs, Inc. Van Ijzendoorn, M., Juffer, F. & Klein Poelhuis, C. (2005). Adoption and cognitive development: A meta-analytic comparison of adopted and nonadopted children's IQ and school performance. Psychological Bulletin, 131(2), 301-316. Willson, P., McFarlane, J., Lemmey, D. & Malecha, A. (2001). Referring abused women: Does police assistance decrease abuse? Clinical Nursing Research, 10(1), 69-81.	
56	Legal: Family law (including orders of protection)	(XX individuals receive family law services) * (XX percent of individuals achieve the outcome solely because of this program) * [(15 percent of individuals receive full representation) * (95 percent of full representation cases have a successful outcome) + (85 percent of individuals receive advice and counsel only) * (34 percent of advice and counsel cases have a successful outcome)] * ($6,400 average value of family law benefits including orders of

Metric #	Name of Metric	Equation
		protection)
	Explanation: The number of individuals who receive legal services involving issues of family law is reported by the grantee. The percentage of individuals who achieve the outcome solely because of this program is estimated by Robin Hood staff. The percentage of individuals who receive full representation and the percentage of full representation cases that have a successful outcome are based on actual data reported by the grantee. The percentage of individuals who receive advice and counsel only is based on actual data reported by the grantee. We estimate that 34 percent of individuals who receive advice and counsel legal services will have a successful outcome based of the work of Smith, Thayer & Garwold (2012). The $6,400 overall estimate for the average value of legal support for issues of family law is based on the combined estimates for the value of contested matrimonial cases, child support cases, custody and visitation, foster care adoptions and orders of protection where required, weighted by the proportion of each type of case typically found by our grantees. Contested matrimonial cases Our grantees report that approximately 22 percent of their caseload is accounted for by contested matrimonial cases. Contested matrimonial cases typically include rulings on child support and health insurance issues. We estimate that acquisition of health insurance as mandated by a court order improves the well-being of an individual by 0.07 QALY (based on Muennig, Franks & Gold, 2005 and Muennig, Glied & Simon, 2005). We estimate, based on grantee data, that 10 percent of our grantee's clients will acquire health insurance by court order. We obtain this 10 percent figure as follows: 38 percent of married women nationally are covered by their spouse's health insurance (Health Law Advocates, 2002); we estimate that the figure is half that high for poor women; because grantees often deal with Medicaid-eligible families, we cut the rate in half again. Robin Hood assigns a value of $50,000 per QALY. Child support We estimate that the average amount of child support received by low-income parents is about $3,200 and that about two-thirds of parents who receive court-ordered child support will	

Metric #	Name of Metric	Equation
	actually receive it (Cancian & Meyer, 2005). Approximately 47 percent of family-law cases involve disputes over child support. Also, contested matrimonial cases can involve disputes over child support. Custody and visitation Our grantees report that custody cases account for about 16 percent of their caseload. Disputes over visitation account for another 10 percent of caseloads. We incorporate these case types into our metrics because court-ordered custody and visitation arrangements are intended to improve the parenting context of the child. We estimate the poverty-fighting value of legal intervention based on estimates of the impact of improved parenting and, specifically, reductions in child abuse. Improved parenting We estimate that reductions in domestic violence due to improved parenting increase health status (well-being) by 0.02 QALY (Muennig, 2005) Reduced child abuse Researchers tell us that improved parenting leads to less child abuse. Research suggests that the average lifetime prevalence of child abuse and neglect among poor families is about 12 percent (Aos, Lieb, Mayfield, Miller & Pennucci, 2004). We assume that court-ordered custody and visitation arrangements reduce child abuse by 50 percent, as loosely based on research that indicates a 50 percent drop in child abuse among parents who place their children in high-quality preschool (Reynolds, Temple & Ou, 2010). We estimate the value of avoided child abuse at $24,000 based on research findings on the cost of a "case" of childhood abuse on the abused child's future quality of life and individual health care costs, including mental health (Aos, Lieb, Mayfield, Miller & Pennucci, 2004). This estimate is already calculated across the lifetime at net present value. Note that we apply this estimated benefit to a reduction in future abuse, although we may not have information on whether a "case" of abuse has already occurred for which future remediation is not possible. Foster care adoption Based on Hansen (2006), we estimate the lifetime benefit of adoption to be $70,200. Our grantees report that foster care adoptions account for about 5 percent of their legal caseload. Hansen (2006) reports that the benefits of legal adoption include: decreased special education placements, reduced juvenile delinquency, increased rates of high school graduation and improvements in children's physical and mental health. Hansen (2006) also reports that the	

Metric #	Name of Metric	Equation
	benefits of adoption vary by children's age at adoption. For children adopted before kindergarten the full benefit is assumed, whereas for children adopted between about four and eight years old only half the benefit accrues. We estimate that for children older than nine years old at adoption, only a quarter of the benefit would apply. Because we typically do not know the ages of the children our grantees serve, we assume that one-third of the children fall into each age grouping: preschool or younger, between preschool and eight years old and ne years old or older. We estimate the benefit as follows: *Decrease in special education placement* The $42,137 estimated benefit of adoption on children's quality of life is based on the decreased probability of placement in special education. We estimate that 50 percent fewer adopted children require special education placement (van Ijzendoorn, Juffer & Klein Poelhuis, 2005, as cited in Hansen, 2006). For children who avoid special education placement, we estimate that quality of life improves by 0.35 QALYs. This estimate is based on the QALY value for moderate neurological disability, 0.60 QALY (rising to 0.95 QALY after treatment from 0.60 QALY before treatment = 0.35 QALY) (Cost Effectiveness Analysis Registry, n.d.). Although there are very few instances of total remediation of delay, intervention can improve the educational and social prospects for children such that they may join the educational mainstream in school, which is a very important outcome. We estimate, based on common estimates in the field, that about half the children would have required special education placement without this intervention. We apply the benefit to only those children young enough to benefit. Robin Hood assigns a value of $50,000 per QALY. Because the decrease in special education placements can be found at high school graduation, we take these benefits, which are typically estimated for just one year, to be calculated at present value across the lifetime. Present discounted value of: ((0.50 children in foster care require special services) * (0.66 of the adopted children are young enough to benefit) * (0.50 children will not require special services due to adoption) * (0.35 QALY impact of adoption) * ($50,000 per QALY)) = $2,888. Assuming that of the children young enough to benefit, half were adopted at four years old and half at eight years old, that the full benefit applies for the younger group while only half the benefit applies for the older group, that benefits begin upon intervention, and that the discount rate is 5 percent, the present discounted value is calculated as (($2,888 * 0.50 children adopted at 4 years old) + ($2,888 * 0.50 children adopted at 8 years old * 0.50 of benefit applied for the older group)) = $42,137	

Metric #	Name of Metric	Equation
	Increased high school graduation Hansen (2006) reports that adoption improves the high school graduation rate by about 23 percent, accounting for important covariates. We estimate that 75 percent of the children would be in regular education classes with an average baseline high school graduation rate of about 50 percent, while 25 percent would be enrolled in special education with an average baseline 12 percent graduation rate. Earnings impact Our $6,500 estimate of the impact of high school graduation on earnings is based on Levin, Belfield, Muennig & Rouse (2007). Health impact The 1.80 QALY estimate for the impact of high school graduation on better health is based on the work of Muennig (Muennig, Franks & Gold, 2005; Levin, Belfield, Muennig & Rouse, 2007). Robin Hood assigns a value of $50,000 per QALY. The overall benefit of adoption on high school graduation is $15,200, calculated as follows: Earnings calculation Present discounted value of ((0.75 students in regular education) * (0.50 baseline high school graduation rate) * (0.23 increase in high school graduation rate) * ($6,500 earnings increase)) + ((0.25 students in special education) * (0.12 baseline high school graduation rate) * (0.23 increase in high school graduation rate) * ($6,500 earnings increase)) = $605. At present value, assuming one-third in each of the three age groupings, that earning benefits begin at age 20, with real growth estimated at 3 percent and discounted at 5 percent, the total benefit at present value is calculated as follows: (($605 * 0.33 children adopted at 4 years old) + ($605 * 0.33 children adopted at 8 years old * 0.50 of benefit applied for this group) + ($605 * 0.33 children adopted at 16 years old * 0.25 of benefit applied for this group)) = $7,332 Health calculation ((0.75 students in regular education) * (0.50 baseline high school graduation rate) * (0.23 increase in high school graduation rate) * (1.80 QALY) * ($50,000 per QALY)) + ((0.25 students in special education) * (0.12 baseline high school graduation rate) * (0.23 increase in high school graduation rate) * (1.80 QALY) * ($50,000 per QALY)) = $8,384 in estimated health benefits arising from high school graduation, applied to all graduates due to adoption $7,332 earnings benefit + 8,384 health benefit = $15,716 , rounded to $15,200 total estimated earnings and health benefits arising from improved high school graduation rates due to adoption *Decreased juvenile arrest* Another effect of adoption is an average decrease in juvenile arrest rates of about 50 percent	

Metric #	Name of Metric	Equation
	(Hansen, 2006). Research indicates a 9 percent estimated baseline rate of juvenile delinquency, based on findings of research on urban, low-income teenagers (Ludwig, Duncan & Hirschfeld, 1999; Lochner, 2005). Our 22 percent estimated increase in earnings due to avoiding re-arrest and conviction is based on Joseph (2001), who finds that juvenile arrest decreases adult earnings by about 22 percent. We estimate the average future earnings of our child cohorts very conservatively at about $20,000, based on our current earnings estimates from Levin, Belfield, Muennig & Rouse (2007). The overall benefit of decreased juvenile delinquency is calculated as follows: Present discounted value of ((0.09 baseline juvenile delinquency rate) * (0.50 avoid juvenile delinquency due to adoption) * ($20,000 estimated future earnings) * (0.22 estimated earnings increase due to avoided juvenile delinquency) = $198. At present value, assuming one-third in each of the three age groupings, that earning benefits begin at age 20, and with real growth estimated at 3 percent and discounted at 5 percent, the total benefit at present value is calculated as follows: (($198 * 0.33 children adopted at 4 years old) + ($198 * 0.33 children adopted at 8 years old * 0.50 of benefit applied for this group) + ($198 * 0.33 children adopted at 16 years old * 0.25 of benefit applied for this group)) = $2,395 *Physical health* Hanson (2006) reports that adoption leads to improvements in children's physical health, with about 25 percent fewer childhood episodes of emergency room visits or hospitalizations than are experienced by children in long term foster care. This finding pertains only to younger children. We assume that each child would visit the hospital once. The 0.07 QALY estimate for the value of avoiding hospitalization is derived by subtracting the QALY for hospitalization for general diagnoses, 0.93, from full health, 1.0 (Cost Effectiveness Analysis Registry, n.d.). Robin Hood assigns a value of $50,000 per QALY. The $576 estimated benefit for improved health is calculated as follows: ((0.66 younger groups of children) * (0.25 fewer medical traumas) * (0.07 QALY due to fewer medical traumas) * ($50,000 per QALY)) = $576 in health benefits due to adoption *Mental health* Hansen (2006) informs us that adopted children are 26 percent less likely to be in the clinical range on measures of mental health than their long-term foster care counterparts. We know that about 33 percent of children in foster care have significant mental health issues (Child	

Metric #	Name of Metric	Equation
	Welfare Watch, 2005). We estimate the value of avoiding mental illness at 0.33 QALY, by averaging the QALY values for the avoidance of depression, estimated at 0.30 QALY (especially Frank, McGuire, Normand & Goldman, 1999; Schoenbaum, Sherbourne & Wells, 2005), and avoiding relapse of schizophrenia, estimated at 0.36 QALY (Davies et al., 2008). Although we typically apply mental health benefits over one year only, in this case, because these outcomes were found at age 30, we apply a lifetime benefit. The overall benefit of a decrease in serious mental health problems is estimated as follows: Present discounted value of ((0.33 foster care children with serious mental health problems) * (0.26 avoid serious mental health problems due to adoption) * (0.33 QALY improvement) * ($50,000 per QALY) = $1,416. At present value—assuming that the average age of the children is 10 years old, that benefits begin at intervention and last until age 65 and that a discount of 5 percent is applied--the total benefit is calculated as follows: (($1,416 * 0.33 children adopted at 4 years old) + ($1,416 * 0.33 children adopted at 8 years old * 0.50 of benefit applied for this group) + ($1,416 * 0.33 children adopted at 16 years old * 0.25 of benefit applied for this group)) = $17,186 . *The total overall average benefit of adoption* The total overall average benefit of adoption is estimated to be about $70,200, adding the above benefits together and decreasing by 10 percent to account for possible double-counting, as follows: (($42,137 + $15,716 + $2,395 + $576 + $17,186) * (0.90)) = $70,209 . Orders of Protection The $24,000 estimate for the value of decreased child abuse, based on the work of Aos, Lieb, Mayfield, Miller & Pennucci (2004), is applied as the benefit of an order of protection. However, we assume that only 65 percent of abused women would have been abused again, without the order (McFarlane et al., 2005; Willson, McFarlane, Lemmey & Malecha, 2001), and then we apply the benefit to 50 percent of women who receive an order of protection, because research indicates that these orders reduce subsequent violence between 50 to 70 percent (McFarlane et al., 2005). Robin Hood grantees report that about 10 percent of their clients require legal support to attain an order of protection. Overall Benefits The total overall benefit is calculated as follows:	

Metric #	Name of Metric	Equation
	Contested matrimonial cases are valued at $2,250 =(($50,000 per QALY * 0.07 health insurance QALY * 0.10 percent women receive benefit) + ($3,200 child support amount received * 0.90 will receive an order for child support * 0.66 will ever see any support) = $2,250 benefit of contested matrimonial cases). Child support cases are valued at $2,100 =(($3,200 child support amount received * 0.66 will ever see any support) = $2,100 benefit of child support cases) Custody and visitation cases are valued at $2,440 =(($50,000 per QALY * 0.02 QALY for reduced violence) + ($24,000 decreased child abuse benefit * 0.12 baseline child abuse rate in poverty population * 0.50 improvement rate) = $2,440 benefit of custody and visitation) Foster care adoption cases are valued at $70,209, a research-based estimate. Orders of protection cases are valued at $7,800 =(($24,000 benefit of decreased abuse * 0.65 individuals would be re-abused * 0.50 reduction in abuse due to the judge's order) = $7,800 benefit of reduced abuse due to order of protection) The total overall benefit is the weighted average of the above benefits, at the probabilities reported by Robin Hood grantees: contested matrimonial cases are 22 percent of the typical caseload, child support cases are 47 percent, custody and visitation cases are about 26 percent and adoptions are about 5 percent of the typical caseload. Orders of protection are an additional benefit to about 10 percent of all cases, across types. The total overall benefit is calculated at $6,380, rounded to $6,400 (($2,250 * 0.22) + ($2,100 * 0.47) + ($2,440 * 0.26) + ($70,209 * 0.05) = $5,533 ; plus $7,800 * 0.10 = $6,380) References: Aos, S., Lieb, R., Mayfield, J., Miller, M. & Pennucci, A. (2004). Benefits and costs of prevention and early intervention programs for youth. Olympia, WA: Washington State Institute for Public Policy. Cancian, M. & Meyer, D. R. (2005). Child support and the economy (National Poverty Center Working Paper Series No. 05-17). Madison, WI: University of Wisconsin-Madison. Child Welfare Watch. (2005, Summer). The innovation issue: New initiatives in New York child welfare. New York, NY: Center for an Urban Future, The New School. Cost Effectiveness Analysis Registry. (n.d.). Retrieved from https://research.tufts-nemc.org/cear4/SearchingtheCEARegistry/SearchtheCEARegistry.aspx

Metric #	Name of Metric	Equation
	Davies, A., Vardeva, K., Loze, J., L'Italien, G., Sennfalt, K. & van Baardewijk, M. (2008). Cost-effectiveness of atypical antipsychotics of the management of schizophrenia in the UK. Current Medical Research and Opinion, 24(11), 3275-3285. Frank, R., McGuire, T., Normand, S. & Goldman, H. (1999). The value of mental health care at the system level: The case of treating depression. Health Affairs, 18(5), 71-88. Hansen, M. (2006). The value of adoption (American University Department of Economics Working Paper No. 2006-15). Washington, DC: American University. Health Law Advocates. (2002). Health insurance protections for women after divorce and separation: A multi-state survey. Boston, MA. http://www.healthlawadvocates.org/tools/publications/files/0002.pdf Joseph, M. (2001). The effect of arrests on the earnings of young men: Evidence from the National Youth Survey. Chicago, IL: Harris Graduate School of Public Policy, University of Chicago. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Lochner, L. (2005). Individual perceptions of the criminal justice system (Working Paper No. 9474). Cambridge, MA: National Bureau of Economic Research. Ludwig, J., Duncan, G. & Hirschfeld, P. (1999). Urban poverty and juvenile crime: Evidence from a randomized housing-mobility experiment. Washington, DC: U.S. Department of Housing and Urban Development. McFarlane, J., Malecha, A., Watson, K., Gist, J., Batten, E., Hall, I. & Smith, S. (2005). Intimate partner sexual assault against women: Frequency, health consequences, and treatment outcomes. Obstetrics and Gynecology, 105(1), 99-108. Muennig, P., Franks, P. & Gold, M. (2005). The cost effectiveness of health insurance. American Journal of Preventive Medicine, 28(1), 59-64. Muennig, P., Glied, S. & Simon, J. (2005). Estimation of the health benefits produced by Robin Hood Foundation grant recipients. Report to Robin Hood. New York, NY: Robin Hood. Reynolds, A. J., Temple, J. A. & Ou, S. (2010). Impacts and implications of the Child-Parent Center preschool program. In A. J. Reynolds, A. J. Rolnick, M. M. Englund & J. A. Temple (Eds.), Childhood Programs and Practices in the First Decade of Life: A Human Capital Integration (pp. 168-187). New York, NY: Cambridge University Press. Schoenbaum, M., Sherbourne, C. & Wells, K. (2005). Gender patterns in cost effectiveness of quality improvement for depression: Results of a randomized, controlled trial. Journal of Affective Disorders, 87, 319-325. Smith, K., Thayer, K. & Garwold, K. (2012). Final report on the Survey of Clients: Provided with	

Metric #	Name of Metric	Equation
	advice or brief services by Pennsylvania Legal Aid Programs funded under the Access to Justice Act. Harrisburg, PA: The Resource for Great Programs, Inc. Van Ijzendoorn, M., Juffer, F. & Klein Poelhuis, C. (2005). Adoption and cognitive development: A meta-analytic comparison of adopted and nonadopted children's IQ and school performance. Psychological Bulletin, 131(2), 301-316. Willson, P., McFarlane, J., Lemmey, D. & Malecha, A. (2001). Referring abused women: Does police assistance decrease abuse? Clinical Nursing Research, 10(1), 69-81.	
57	Legal: Housing law	(XX families receive legal services involving issues of housing law) * (XX percent of families achieve the outcome solely because of this program) * [(85 percent of families receive full representation) * (95 percent of full representation cases have a successful outcome) + (15 percent of families receive advice and counsel only) * (34 percent of advice and counsel cases have a successful outcome)] * ($12,200 value of housing law services)
	Explanation: The number of families (one adult plus a child for half the families) who receive legal services involving issues of housing law is reported by the grantee. The percentage of families who achieve the outcome solely because of this program is estimated by Robin Hood staff. The percentage of families who receive full representation and the percentage of full representation cases that have a successful outcome are based on actual data reported by the grantee. The percentage of families who receive advice and counsel only is based on actual data reported by the grantee. We estimate that 34 percent of families who receive advice and counsel legal services will have a successful outcome based of the work of Smith, Thayer & Garwold (2012). The $12,200 estimate for the average value of legal support in the area of housing law is based on the benefits of homelessness prevention, including the avoidance of higher probabilities of chronic physical illness and mental health problems. In addition, the avoidance of higher probabilities of foster care placement is included for children whose families avoid homelessness. We calculate the benefit as follows: Chronic illness We estimate a 0.10 QALY value for the avoidance of chronic illness based on the average	

Metric #	Name of Metric	Equation
	difference in QALY between those with totally controlled versus not well controlled asthma (Briggs, Wallace, Clark & Bateman, 2006). We additionally extrapolate the benefit to adults. Asthma is the most prevalent chronic illness afflicting poor children, so it provides an appropriate yet conservative guess for the cost of chronic illness—conservative because homeless children are twice as likely to suffer from at least one chronic illness. We estimate a 7 percentage point increase in the probability of chronic illness for homeless individuals based on findings from the National Center for Family Homelessness (1999) and the Family Housing Fund (1999) that, controlling for important covariates, approximately 16 percent of poor children in poverty who are homeless suffer chronic illness, whereas only 9 percent of poor children who are not homeless suffer chronic illness. Robin Hood assigns a value of $50,000 per QALY. The benefit is estimated at $245, as follows: (0.10 QALY * 0.07 decreased probability of chronic illness * $50,000 per QALY = $350). Mental illness We estimate the value of avoiding mental illness at 0.33 QALY, by averaging the QALY values for the avoidance of depression, estimated at 0.30 QALY (especially Frank, McGuire, Normand & Goldman, 1999; Schoenbaum, Sherbourne & Wells, 2005), and avoiding relapse of schizophrenia, estimated at 0.36 QALY (Davies et al., 2008). Homeless children are about three times more likely to suffer from depression than other poor children (47 percent versus 18 percent), a 29 percentage point difference (National Center for Family Homelessness, 1999; Family Housing Fund, 1999). Robin Hood assigns a value of $50,000 per QALY. The benefit is estimated at $4,785, as follows: (0.33 QALY * 0.29 decreased probability of depression * $50,000 per QALY = $4,785). Foster care We estimate a 20 percentage point increase in the probability of foster care placement for children in homelessness based on research indicating that approximately 22 percent of children in homeless families are placed in foster care compared with only 3 percent of poor but housed children, accounting for important covariates (National Center for Family Homelessness, 1999; Family Housing Fund, 1999). For children in "marginal" family situations (situations for which case managers would disagree on whether foster care placement is warranted), research indicates that foster care placement has a devastating impact, with the adult earnings of the children about $5,000 less and juvenile delinquency about 35 percent more likely than for children not so placed (Doyle, 2007). Robin Hood staff estimates that 50 percent of the children served by our grantees and accompanying their caretakers into homelessness would be deemed marginal cases.	

Metric #	Name of Metric	Equation
	Avoidance of juvenile delinquency improves the future earnings of urban, at-risk teenagers by about 22 percent (Joseph, 2001) due to the avoidance of an earnings decrease associated with incarceration. We estimate the average future earnings of the children at about $20,000 based on Levin, Belfield, Muennig & Rouse (2007), and a baseline rate of delinquency at about 12 percent (Aos, Lieb, Mayfield, Miller & Pennucci, 2004; Ludwig, Duncan & Hirschfeld, 1999). For purposes of the calculations below, we assume that the children under discussion are 10 years old on average, that earnings boosts begin at age 20, that inflation-adjusted wages rise at 3 percent and that the discount rate is 5 percent. We calculate the benefit of decreased foster care placements on earnings outcomes at approximately $44,440 (($5,000 earnings decrease avoided due to avoided foster care) + (($20,000 average estimated future earnings) * (0.22 decreased earnings prevented due to avoided delinquency) * (12 percent of those in foster care are typically delinquent – 9 percent counterfactual delinquency rate)) = $5,132, which at present discounted value is about $106,000). However, although our estimate of the benefit of avoided foster care placement is a lifetime benefit, the risk of homelessness, and therefore foster care placement, is a continuing risk for children in poverty. To account for this, we reduce our estimate of the benefit, based on research findings that families in poverty have a yearly 10 percent risk of homelessness (Burt, 2001). Because homelessness creates a 20 percentage point increase in the probability of foster care, we estimate that for each year of childhood there exists a 2 percent increased probability of foster care placement for these children. At an average age of 10 years, and eight years until they turn 18 (at which time they are legally adults), we estimate a 16 percent total continuing probability of foster care placement (8 years * 2%). Furthermore, we discount our $106,000 benefit by 16 percent to account for this continuing risk, and reach a final value of $89,000. We apply the probability for increased foster care placement of 20 percent, and a 50 percent probability that the families our grantee serves would be marginal cases. (($89,000 total discounted lifetime benefit of avoided foster care) * (0.20 higher probability of foster care placement avoided due to avoided homelessness) * (0.50 marginal cases)) = $8,900. *Overall benefits* The total overall benefit is calculated as follows: (($350 improved chronic health for one adult + $4,785 improved mental health for one adult) + ($350 improved chronic health for one child + $4,785 improved mental health for one child) + ($8,900 benefit of avoided foster care) * (0.50 since we estimate one child for half of families)) = $12,153, rounded	

Metric #	Name of Metric	Equation
	to $12,200. **References:** Aos, S., Lieb, R., Mayfield, J., Miller, M. & Pennucci, A. (2004). Benefits and costs of prevention and early intervention programs for youth. Olympia, WA: Washington State Institute for Public Policy. Briggs, A., Wallace, M., Clark, T. & Bateman, E. (2006). Cost-effectiveness of asthma control: an economic appraisal of the GOAL study. Allergy, 61, 531-536. Burt, M. (2001). What Will It Take to End Homelessness? Washington, DC: The Urban Institute. Cost Effectiveness Analysis Registry. (n.d.). Retrieved from https://research.tufts-nemc.org/cear4/SearchingtheCEARegistry/SearchtheCEARegistry.aspx Davies, A., Vardeva, K., Loze, J., L'Italien, G., Sennfalt, K. & van Baardewijk, M. (2008). Cost-effectiveness of atypical antipsychotics of the management of schizophrenia in the UK. Current Medical Research and Opinion, 24(11), 3275-3285. Doyle, J. (2007, March). Child Protection and child outcomes: Measuring the effects of foster care. Cambridge, MA: Massachusetts Institute of Technology, Sloan School of Management and National Bureau of Economic Research. Family Housing Fund. (1999). Homelessness and its effects on children. Minneapolis, MN: Author. Frank, R., McGuire, T., Normand, S. & Goldman, H. (1999). The value of mental health care at the system level: The case of treating depression. Health Affairs, 18(5), 71-88. Joseph, M. (2001). The effect of arrests on the earnings of young men: Evidence from the National Youth Survey. Chicago, IL: Harris Graduate School of Public Policy. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Ludwig, J., Duncan, G. & Hirschfeld, P. (1999). Urban poverty and juvenile crime: Evidence from a randomized housing-mobility experiment. Washington, DC: U.S. Department of Housing and Urban Development. Martinez, T. E. & Burt, M. (2006). Impact of permanent supportive housing on the use of acute care health services by homeless adults. Psychiatric Services: A Journal of the American Psychiatric Association, 57(7), 992-999. McConnell, S. & Ohls, J. (2000). Food stamps in rural America: Special issues and common themes. Princeton, NJ: Mathematica Policy Research, Inc. Muennig, P., Glied, S. & Simon, J. (2005). Estimation of the health benefits produced by Robin Hood Foundation grant recipients. Report to Robin Hood. New York, NY: Robin Hood.	

Metric #	Name of Metric	Equation
	National Center for Family Homelessness. (1999). Homeless children: America's new outcasts. Newton Centre, MA: Author. Schoenbaum, M., Sherbourne, C. & Wells, K. (2005). Gender patterns in cost effectiveness of quality improvement for depression: Results of a randomized, controlled trial. Journal of Affective Disorders, 87, 319-325. Smith, K., Thayer, K. & Garwold, K. (2012). Final report on the Survey of Clients: Provided with advice or brief services by Pennsylvania Legal Aid Programs funded under the Access to Justice Act. Harrisburg, PA: The Resource for Great Programs, Inc.	
58	Legal: Immigration law	Present discounted value of the following equation: [(XX individuals receive immigration legal services) * (XX percent of individuals achieve the outcome solely because of this program) * [(85 percent of individuals receive full representation) * (95 percent of full representation cases have a successful outcome)] + [(15 percent of individuals receive advice and counsel only) * (34 percent of advice and counsel cases have a successful outcome)] * ($1,500 average annual increase in earnings as a result of having legal immigration status)]
	Explanation: The number of individuals who receive immigration legal services is reported by the grantee. The percentage of individuals who achieve the outcome solely because of this program is estimated by Robin Hood staff. The percentage of individuals who receive full representation and the percentage of full representation cases that have a successful outcome are based on actual data reported by the grantee. The percentage of individuals who receive advice and counsel only is based on actual data reported by the grantee. We estimate that 34 percent of individuals who receive advice and counsel legal services will have a successful outcome based of the work of Smith, Thayer & Garwold (2012). We estimate that attainment of legal status (alone) boosts earnings by $1,500 a year (Hall, Greenman & Farkas, 2010; Kossoudji & Cobb-Clark, 2002; Rivera-Batiz, 1999). We assume that the earnings boost lasts for 10 years based, in part, on the average age of the immigrant clients. Our calculations assume that inflation-adjusted wages rise at 3 percent and that the discount rate is 5 percent. **References:** Hall, M., Greenman, E. & Farkas, G. (2010). Legal status and wage disparities for Mexican	

Metric #	Name of Metric	Equation
	immigrants. Social Forces, 89(2), 491-512. Kossoudji, S. & Cobb-Clark, D. (2002). Coming out of the shadows: Learning about legal status and wages from the legalized population. Journal of Labor Economics, 20(3), 598-628. Rivera-Batiz, F. (1999). Undocumented workers in the labor market: An analysis of the earnings of legal and illegal Mexican immigrants in the United States. Journal of Population Economics, 12, 91-116. Smith, K., Thayer, K. & Garwold, K. (2012). Final report on the Survey of Clients: Provided with advice or brief services by Pennsylvania Legal Aid Programs funded under the Access to Justice Act. Harrisburg, PA: The Resource for Great Programs, Inc.	
59	Legal: Medicaid/Medicare law	(XX individuals receive legal services involving eligibility for Medicaid and Medicare) * (XX percent of individuals achieve the outcome solely because of this program) * [(15 percent of individuals receive full representation) * (95 percent of full representation cases have a successful outcome) + (85 percent of individuals receive advice and counsel only) * (34 percent of advice and counsel cases have a successful outcome)] * ($8,000 average value of Medicaid/Medicare law services)
	Explanation: The number of individuals who receive legal services involving issues Medicaid/Medicare is reported by the grantee. The percentage of individuals who achieve the outcome solely because of this program is estimated by Robin Hood staff. The percentage of individuals who receive full representation and the percentage of full representation cases that have a successful outcome are based on actual data reported by the grantee. The percentage of individuals who receive advice and counsel only is based on actual data reported by the grantee. We estimate that 34 percent of individuals who receive advice and counsel legal services will have a successful outcome based of the work of Smith, Thayer & Garwold (2012). The $8,000 estimate of the benefit of legal support for the attainment of Medicare or Medicaid entitlements is based on the following method: We estimate that the value of a year of medical care increases the health status of poor patients by 0.07 QALY (Muennig, Glied & Simon, 2005; Muennig, 2005). A new enrollee to government-provided health insurance (Medicaid or Medicare) is expected to re-enroll in	

Metric #	Name of Metric	Equation
	subsequent years, based on data for New York City that indicates that about 73 percent of first-time Medicaid enrollees re-enroll the following year (Gary Jenkins, Assistant Commissioner of the New York City Medical Insurance and Community Services Administration, personal communication, February 2009). We assume that interventions that enroll poor individuals in government health insurance last for three years (based on the finding that half the initial cohort is no longer enrolled after three years). Taking all this into account, we assign a value of 0.16 QALY to enrollment in government-provided health insurance [(0.07 + (0.07 * 0.73) + (0.07 * 0.73^2)) = 0.16]. Robin Hood assigns a value of $50,000 per QALY. The basic benefit is calculated at $8,000 (0.16 QALY * $50,000 per QALY = $8,000). **References:** Muennig, P. (2005). The cost effectiveness of health insurance. American Journal of Preventive Medicine, 28(1), 59-64. Muennig, P., Glied, S. & Simon, J. (2005). Estimation of the health benefits produced by Robin Hood Foundation grant recipients. Report to Robin Hood. New York, NY: Robin Hood. Smith, K., Thayer, K. & Garwold, K. (2012). Final report on the Survey of Clients: Provided with advice or brief services by Pennsylvania Legal Aid Programs funded under the Access to Justice Act. Harrisburg, PA: The Resource for Great Programs, Inc.	
60	Legal: Order of protection	(XX individuals obtain an order of protection) * (XX percent of individuals achieve the outcome solely because of this program) * [(85 percent of individuals receive full representation) * (95 percent of full representation cases have a successful outcome) + (15 percent of individuals receive advice and counsel only) * (34 percent of advice and counsel cases have a successful outcome)] * (65 percent of individuals would continue to be abused without the order of protection) * (50 percent of individuals will no longer be abused because of the order of protection) * ($24,000 average value of an order of protection)
	Explanation: The number of individuals receiving orders of protection is reported by grantee. The percentage of individuals who achieve the outcome solely because of this program is estimated by Robin Hood staff. The percentage of individuals who receive full representation and the percentage of full representation cases that have a successful outcome are based on actual data reported by the grantee. The percentage of individuals who receive advice and counsel only is based on actual data	

Metric #	Name of Metric	Equation
	reported by the grantee. We estimate that 34 percent of individuals who receive advice and counsel legal services will have a successful outcome based of the work of Smith, Thayer & Garwold (2012). The 65 percent estimate for the baseline probability of re-abuse is based on the finding that 65 percent of women abused for the first time will be re-abused, although the percentage is much higher when a pattern of abuse is established (McFarlane et al., 2005; Willson, McFarlane, Lemmey & Malecha, 2001). We note that orders of protection are estimated to reduce acts of violence by between 50 and 70 percent (McFarlane et al., 2005). Our $24,000 estimate for the value of avoiding abuse, applied here as the benefit of an order of protection, is based on research that estimates the cost of a "case" of childhood abuse on the abused child's future quality of life and individual health care costs, including mental health, and decreased earnings (Aos, Lieb, Mayfield, Miller & Pennucci, 2004). This estimate, $23,900, which we round to $24,000, is already calculated across the lifetime at net present value. Note that we extrapolate this finding from children to adults and that we apply this estimated benefit to a reduction in future abuse, although a "case" of abuse may already have occurred for which future remediation is not possible. References: Aos, S., Lieb, R., Mayfield, J., Miller, M. & Pennucci, A. (2004). Benefits and costs of prevention and early intervention programs for youth. Olympia, WA: Washington State Institute for Public Policy. McFarlane, J., Malecha, A., Watson, K., Gist, J., Batten, E., Hall, I. & Smith, S. (2005). Intimate partner sexual assault against women: Frequency, health consequences, and treatment outcomes. Obstetrics and Gynecology, 105(1), 99-108. Smith, K., Thayer, K. & Garwold, K. (2012). Final report on the Survey of Clients: Provided with advice or brief services by Pennsylvania Legal Aid Programs funded under the Access to Justice Act. Harrisburg, PA: The Resource for Great Programs, Inc. Willson, P., McFarlane, J., Lemmey, D. & Malecha, A. (2001). Referring abused women: Does police assistance decrease abuse? Clinical Nursing Research, 10(1), 69-81.	

Non-Earnings, Government Transfers

Metric #	Name of Metric	Equation
61	Entitlement benefits: Food stamps (for benefits whose receipt by participants is confirmed rather than estimated)	(XX new recipients) * (50 percent of recipients get benefits solely because of this program) * ($XX average value of food stamps per individual)
	Explanation: The number of new recipients is based on the actual number reported by our grantee. The 50 percent estimate in food stamps solely because of the program is supported by census reports specific to New York City that among families in poverty, about 50 percent receive food stamps (U.S. Census Bureau, 2010). The average value of food stamps per individual in the formula comes from data reported by our grantee. **References:** U.S. Census Bureau. (2010). 2010 American Community Survey 1-Year estimates. Table B22003 receipt of food stamps/SNAP in the past 12 months by poverty status in the past 12 months for households.	
62	Entitlements benefits: Average	(XX new recipients) * (XX percent of recipients get benefits solely because of this program) * ($4,750 average combined value of entitlements per individual)
	Explanation: The number of new recipients is based on the actual number reported by our grantee. The percentage of recipients who get benefits solely because of the program is estimated by Robin Hood staff. We base the $4,750 estimate for the average value of entitlements that are claimed on data reported by Single Stop sites run by Single Stop U.S.A. in New York City, as follows: • Food stamps: provided to about 57 percent of Single Stop clients, for a current average yearly benefit of $3,300 for a household or $1,800 for an individual. We weight the averages at 60 percent for individuals and 40 for percent families based on reports from Single Stop USA. • Supplemental Security Insurance and Social Security Disability (S.S.I./S.S.D.): 3 percent of clients are assisted in applying for S.S.I./S.S.D. Of those that apply for S.S.I./S.S.D,	

Metric #	Name of Metric	Equation
	only 75 percent will receive the benefit. On average, they receive a total of $25,200 over an enrollment period of three years ($8,400 a year) (U.S. Social Security Administration, 2012). S.S.I. and S.S.D. are federal payments to disabled workers. • Public assistance: provided to about 10 percent of clients, averaging $4,000 a year • Medicaid: we estimate that the value of a year of medical care increases the health status of poor patients by 0.07 QALY (Muennig, Glied & Simon, 2005; Muennig, 2005). A new enrollee to government-provided health insurance (Medicaid or Medicare) is expected to re-enroll in subsequent years, based on data for New York City that indicates that about 73 percent of first-time Medicaid enrollees re-enroll the following year (Gary Jenkins, Assistant Commissioner of the New York City Medical Insurance and Community Services Administration, personal communication, February 2009). We assume that interventions that enroll poor individuals in government health insurance last for three years (based on the finding that half the initial cohort is no longer enrolled after three years). Taking all this into account, we assign a value of 0.16 QALY to enrollment in government-provided health insurance [(0.07 + (0.07 * 0.73) + (0.07 * 0.73^2)) = 0.16]. Robin Hood assigns a value of $50,000 per QALY. The basic benefit is calculated at $8,000 (0.16 QALY * $50,000 per QALY = $8,000). The average combined value of entitlements is $4,735, rounded to $4,750 (($3,300 family average value of food stamps * 0.40 + $1,800 individual average value of food stamps * 0.60) * 0.57) + ($25,200 average value of S.S.I./S.S.D. * 0.03 * 0.75) + ($4,000 average value of public assistance * 0.10) + ((0.16 QALY value of Medicaid * $50,000 per 1 QALY) * 0.30)) References: Food stamp averages are from http://www.fns.usda.gov/pd/snapmain.htm Muennig, P. (2005). The cost effectiveness of health insurance. American Journal of Preventive Medicine, 28(1), 59-64. Muennig, P., Glied, S. & Simon, J. (2005). Estimation of the health benefits produced by Robin Hood Foundation grant recipients. Report to Robin Hood. New York, NH: Robin Hood. U.S. Social Security Administration. (2012). State assistance programs for SSI recipients, January 2011: New York. Washington, DC: Author. Retrieved from http://www.ssa.gov/policy/docs/progdesc/ssi_st_asst/2011/ny.html	
63	Entitlements benefits: Food stamps, average single person	(XX new recipients) * (50 percent of recipients get benefits solely because of this program) * ($1,800 value of food stamps per individual)

Metric #	Name of Metric	Equation
	Explanation: The number of new recipients is based on the actual number reported by our grantee. The 50 percent estimate for enrollment in food stamps solely because of the program is supported by census reports specific to New York City that among families in poverty, about 50 percent receive food stamps (U.S. Census Bureau, 2010). Food stamp benefits currently average $3,300 a year for a household and $1,800 a year for an individual. **References:** Food stamp averages are from http://www.fns.usda.gov/pd/snapmain.htm U.S. Census Bureau. (2010). 2010 American Community Survey 1-Year estimates. Table B22003 Receipt of food stamps/SNAP in the past 12 months by poverty status in the past 12 months for households.	
64	Entitlements benefits: Food stamps, average family	(XX new families) * (50 percent of families get benefits solely because of this program) * ($3,300 value of food stamps per family)
	Explanation: The number of new families is based on the actual number reported by our grantee. The 50 percent estimate for enrollment in food stamps solely because of the program is supported by census reports specific to New York City that among families in poverty, about 50 percent receive food stamps (U.S. Census Bureau, 2010). Food stamp benefits currently average $3,300 a year for a household and $1,800 a year for an individual. **References:** Food stamp averages are from http://www.fns.usda.gov/pd/snapmain.htm U.S. Census Bureau. (2010). 2010 American Community Survey 1-Year estimates. Table B22003 Receipt of food stamps/SNAP in the past 12 months by poverty status in the past 12 months for households.	
65	Entitlements benefits: Medicaid (three-year metric)	(XX new recipients) * (25 percent of recipients get benefits solely because of this program) * (0.16 QALY increase) * ($50,000 per QALY)

Metric #	Name of Metric	Equation
	Explanation: The number of new recipients is based on the actual number reported by our grantee. The 25 percent estimate for enrollment in Medicaid solely because of the program is supported by census reports specific to New York City that among families in poverty, about 25 percent are not enrolled in subsidized health insurance (U.S. Census Bureau, 2010). We estimate that the value of a year of medical care increases the health status of poor patients by 0.07 QALY (Muennig, Glied & Simon, 2005; Muennig, 2005). A new enrollee to government-provided health insurance (Medicaid or Medicare) is expected to re-enroll in subsequent years, based on data for New York City that indicates that about 73 percent of first-time Medicaid enrollees re-enroll the following year (Gary Jenkins, Assistant Commissioner of the N.Y.C. Medical Insurance and Community Services Administration, personal communication, February 2009). We assume that interventions that enroll poor individuals in government health insurance last for three years (based on the finding that half the initial cohort is no longer enrolled after three years). Taking all this into account, we assign a value of 0.16 QALY to enrollment in government-provided health insurance [(0.07 + (0.07 * 0.73) + (0.07 * 0.73^2)) = 0.16]. Robin Hood assigns a value of $50,000 per QALY. The basic benefit is calculated at $8,000 (0.16 QALY * $50,000 per QALY = $8,000). **References:** Muennig, P. (2005). The cost effectiveness of health insurance. American Journal of Preventive Medicine, 28(1), 59-64. Muennig, P., Glied, S. & Simon, J. (2005). Estimation of the health benefits produced by Robin Hood Foundation grant recipients. Report to Robin Hood. New York, NY: Robin Hood. U.S. Census Bureau. (2010). 2010 American Community Survey 1-Year estimates. Table B27016 Health insurance coverage status and type by ratio of income to poverty level in the past 12 months by age.	
66	Entitlements benefits: Other cash benefits including Women, Infants, and Children; unemployment insurance; low-income heating assistance program; and one-time food stamps (for benefits whose receipt by participants is confirmed rather than	(XX new recipients) * (XX percent of recipients get benefits solely because of this program) * ($ average value of cash benefit other than Temporary Assistance for Needy Families cash assistance)

Metric #	Name of Metric	Equation
	estimated)	
	Explanation: The number of new recipients is based on the actual number reported by our grantee. The percentage of recipients who get benefits solely because of the program is estimated by Robin Hood staff. The average cash benefit is computed from data reported to Robin Hood by our grantee.	
67	Entitlements benefits: Public assistance, average	(XX new recipients) * (XX percent of recipients get benefits solely because of this program) * ($4,000 average value of public assistance per individual)
	Explanation: The number of new recipients is based on the actual number reported by our grantee. The percentage of recipients who get benefits solely because of the program is estimated by Robin Hood staff. We base the $4,000 estimate on data submitted to Robin Hood by Single Stop U.S.A.	
68	Entitlements benefits: Public assistance (for benefits whose receipt by participants is confirmed rather than estimated)	(XX new recipients) * (XX of recipients get benefits solely because of this program) * ($ average value of cash benefits per individual)
	Explanation: The number of new recipients is based on the actual number reported by our grantee. The percentage of recipients who get benefits solely because of the program is estimated by Robin Hood staff. The average cash benefit is computed from data reported to Robin Hood by our grantee.	
69	Entitlements benefits: Federal disability payments (Supplemental Security Insurance and Social Security Disability [S.S.I./S.S.D.]) (three-	(XX new recipients) * (XX percent of recipients get benefits solely because of this program) * ($25,200 value of S.S.I/S.S.D. over 3 years)

Metric #	Name of Metric	Equation
	year metric) (for benefits whose receipt by participants is confirmed rather than estimated)	
	Explanation: The number of new recipients is based on the actual number reported by our grantee. The percentage of recipients who get benefits solely because of the program is estimated by Robin Hood staff. We base the $25,200 estimate for S.S.I. /S.S.D. benefits on the average amount received over the enrollment period of three years ($8,400 a year) (U.S. Social Security Administration, 2012). S.S.I. and S.S.D. are federal payments to disabled workers. **References:** U.S. Social Security Administration. (2012). State assistance programs for SSI recipients, January 2011: New York. Washington, DC: Author. Retrieved from http://www.ssa.gov/policy/docs/progdesc/ssi_st_asst/2011/ny.html	
70	Entitlements benefits: Federal disability payments (Supplemental Security Insurance and Social Security Disability [S.S.I./S.S.D.) pending applications (three-year metric)	(XX new S.S.I./S.S.D. applicants) * (90 percent of applicants will be accepted) * (XX percent of accepted applicants get benefits solely because of this program) * ($25,200 value of S.S.I/S.S.D. over 3 years)
	Explanation: The number of new applicants is based on the actual number reported by our grantee. We base the 90 percent estimate for the percentage of S.S.I. /S.S.D. applications by its clients that the federal government accepts on data submitted to Robin Hood by Single Stop U.S.A. The percentage of applicants who get benefits solely because of the program is estimated by Robin Hood staff. We base the $25,200 estimate for S.S.I. /S.S.D. benefits on the average amount received over the enrollment period of three years ($8,400 a year) (U.S. Social Security Administration, 2012). S.S.I. and S.S.D. are federal payments to disabled workers.	

Metric #	Name of Metric	Equation
	References: U.S. Social Security Administration. (2012). State assistance programs for SSI recipients, January 2011: New York. Washington, DC: Author. Retrieved from http://www.ssa.gov/policy/docs/progdesc/ssi_st_asst/2011/ny.html	
71	Housing: One-bedroom apartment	(XX individuals placed in one-bedroom apartments) * (90 percent remain housed for a year) * (XX percent of these renters obtain their apartment solely because of this program) * [($14,916/year total value of one-bedroom housing) – ($2,700 average contribution from renters)]
	Explanation: The number of individuals placed in one-bedroom apartments is based on the actual number reported by our grantee. The 90 percent estimate for average housing duration is based on the work of Burt (2001) and Burt & Pearson (2005), who find that 10 percent of people in poverty will fall into homeless in a given year. The percentage of renters who obtain their apartments solely because of the program is estimated by Robin Hood staff. Our estimate for the benefit of subsidized housing units to a person or family who would otherwise not be homeless is based on the amount of money saved on rent for that renter, minus any actual rental costs that are typically incurred. The $14,916 rental value of a one-bedroom apartment is based on the 2012 U.S. Department of Housing and Urban Development report of fair market rent prices for New York City, at the 40th percentile of the range of rent prices. We base the $2,700 estimate for the average contribution of renters to their subsidized rent on field reports that the average earnings of people who are eligible for subsidized housing is about $9,000. Generally, renters of subsidized housing are required to pay about 30 percent of their earnings toward rent. ($2,700 = $9,000 * 0.30) **References:** Burt, M. (2001). What will it take to end homelessness? Washington, DC: The Urban Institute. Burt, M. & Pearson, C. (2005). Strategies for preventing homelessness. Washington, DC: The Urban Institute. U.S. Department of Housing and Urban Development. (2012). Fiscal year 2012 fair market rent prices for New York City.	
72	Housing: Two-bedroom	(XX individuals placed in two-bedroom apartments) * (90 percent remain housed for a year) * (XX percent of these renters obtain their

Metric #	Name of Metric	Equation
	apartment	apartment solely because of this program) * [($17,688/year total value of two-bedroom housing) – ($2,700 average contribution from renters)]
	Explanation: The number of individuals placed in two-bedroom apartments is based on the actual number reported by our grantee. The 90 percent estimate for average housing duration is based on the work of Burt (2001) and Burt & Pearson (2005), who find that 10 percent of people in poverty will fall into homeless in a given year. The percentage of renters who obtain their apartments solely because of the program is estimated by Robin Hood staff. Our estimate for the benefit of subsidized housing units to a person or family who would otherwise not be homeless is based on the amount of money saved on rent for that renter, minus any actual rental costs that are typically incurred. The $17,688 rental value of a two-bedroom apartment is based on the 2012 U.S. Department of Housing and Urban Development report of fair market rent prices for New York City, at the 40th percentile of the range of rent prices. We base the $2,700 estimate for the average contribution of renters to their subsidized rent on field reports that the average earnings of people who are eligible for subsidized housing is about $9,000. Generally, renters of subsidized housing are required to pay about 30 percent of their earnings toward rent. ($2,700 = $9,000 * 0.30) **References:** Burt, M. (2001). What will it take to end homelessness? Washington, DC: The Urban Institute. Burt, M. & Pearson, C. (2005). Strategies for preventing homelessness. Washington, DC: The Urban Institute. U.S. Department of Housing and Urban Development. (2012). Fiscal year 2012 fair market rent prices for New York City.	
73	Housing: Three-bedroom apartment	(XX individuals placed in three-bedroom apartments) * (90 percent remain housed for a year) * (XX percent of these renters obtain their apartment solely because of this program) * [($22,740/year total value of three-bedroom housing) – ($2,700 average contribution from renters)]
	Explanation: The number of individuals placed in three-bedroom apartments is based on the actual number	

Metric #	Name of Metric	Equation
	reported by our grantee. The 90 percent estimate for average housing duration is based on the work of Burt (2001) and Burt & Pearson (2005), who find that 10 percent of people in poverty will fall into homeless in a given year. The percentage of renters who obtain their apartments solely because of the program is estimated by Robin Hood staff. Our estimate for the benefit of subsidized housing units to a person or family who would otherwise not be homeless is based on the amount of money saved on rent for that renter, minus any actual rental costs that are typically incurred. The $22,740 rental value of a three-bedroom apartment is based on the 2012 U.S. Department of Housing and Urban Development report of fair market rent prices for New York City, at the 40th percentile of the range of rent prices. We base the $2,700 estimate for the average contribution of renters to their subsidized rent on field reports that the average earnings of people who are eligible for subsidized housing is about $9,000. Generally, renters of subsidized housing are required to pay about 30 percent of their earnings toward rent. ($2,700 = $9,000 * 0.30) **References:** Burt, M. (2001). What will it take to end homelessness? Washington, DC: The Urban Institute. Burt, M. & Pearson, C. (2005). Strategies for preventing homelessness. Washington, DC: The Urban Institute. U.S. Department of Housing and Urban Development. (2012). Fiscal year 2012 fair market rent prices for New York City.	
74	Housing: Four-bedroom apartment	(XX individuals placed in four-bedroom apartments) * (90 percent remain housed for a year) * (XX percent of these renters obtain their apartment solely because of this program) * [($25,488/year total value of four-bedroom housing) – ($2,700 average contribution from renters)]
	Explanation: The number of individuals placed in four-bedroom apartments is based on the actual number reported by our grantee. The 90 percent estimate for average housing duration is based on the work of Burt (2001) and Burt & Pearson (2005), who find that 10 percent of people in poverty will fall into homeless in a given year.	

Metric #	Name of Metric	Equation
	The percentage of renters who obtain their apartments solely because of the program is estimated by Robin Hood staff. Our estimate for the benefit of subsidized housing units to a person or family who would otherwise not be homeless is based on the amount of money saved on rent for that renter, minus any actual rental costs that are typically incurred. The $25,488 rental value of a four-bedroom apartment is based on the 2012 U.S. Department of Housing and Urban Development report of fair market rent prices for New York City, at the 40th percentile of the range of rent prices. We base the $2,700 estimate for the average contribution of renters to their subsidized rent on field reports that the average earnings of people who are eligible for subsidized housing is about $9,000. Generally, renters of subsidized housing are required to pay about 30 percent of their earnings toward rent. $2,700 = $9,000 * 0.30. **References:** Burt, M. (2001). What will it take to end homelessness? Washington, DC: The Urban Institute. Burt, M. & Pearson, C. (2005). Strategies for preventing homelessness. Washington, DC: The Urban Institute. U.S. Department of Housing and Urban Development. (2012). Fiscal year 2012 fair market rent prices for New York City.	
75	Housing: Crisis apartment (for victims of domestic violence)	(XX families placed in crisis housing) * (XX percent of these renters obtain their apartment solely because of this program) * (3 months average crisis housing stay) * ($1,191/month total value of an efficiency apartment)
	Explanation: The number of individuals placed in crisis housing is based on the actual number reported by our grantee. The percentage of renters who obtain their apartments solely because of the program is estimated by Robin Hood staff. We base the three-month average estimate for the length of stay in crisis housing on reports to Robin Hood from its grantees. The $1,191 monthly rental value of an efficiency apartment ($14,292 yearly value) is based on the 2012 U.S. Department of Housing and Urban Development report of fair market rent prices for New York City, at the 40th percentile of the range of rent prices. **References:** U.S. Department of Housing and Urban Development. (2012). Fiscal year 2012 fair market rent	

Metric #	Name of Metric	Equation
	prices for New York City.	
76	Housing: Efficiency apartment	(XX individuals placed in efficiency apartments) * (90 percent remain housed for a year) * (XX percent of these renters obtain their apartment solely because of this program) * [($14,292/year total value of efficiency housing) – ($2,700 average contribution from renters)]
	Explanation: The number of individuals placed in efficiency apartments is based on the actual number reported by our grantee. The 90 percent estimate for average housing duration is based on the work of Burt (2001) and Burt & Pearson (2005), who find that 10 percent of people in poverty will fall into homeless in a given year. The percentage of renters who obtain their apartments solely because of the program is estimated by Robin Hood staff. Our estimate for the benefit of subsidized housing units to a person or family who would otherwise not be homeless is based on the amount of money saved on rent for that renter, minus any actual rental costs that are typically incurred. The $14,292 yearly rental value of an efficiency apartment is based on the 2012 U.S. Department of Housing and Urban Development report of fair market rent prices for New York City, at the 40th percentile of the range of rent prices. We base the $2,700 estimate for the average contribution of renters to their subsidized rent on field reports that the average earnings of people who are eligible for subsidized housing is about $9,000. Generally, renters of subsidized housing are required to pay about 30 percent of their earnings toward rent. ($2,700 = $9,000 * 0.30) **References:** Burt, M. (2001). What will it take to end homelessness? Washington, DC: The Urban Institute. Burt, M. & Pearson, C. (2005). Strategies for preventing homelessness. Washington, DC: The Urban Institute. U.S. Department of Housing and Urban Development. (2012). Fiscal year 2012 fair market rent prices for New York City.	
77	Housing: Transitional apartment	(XX individuals placed in transitional apartments) * (XX percent of these renters obtain their apartment solely because of this program) * (5 months average transitional housing stay) * ($1,474/month total value of two-bedroom housing)

Metric #	Name of Metric	Equation
	Explanation: The number of individuals placed in transitional apartments is based on the actual number reported by our grantee. The percentage of renters who obtain their apartments solely because of the program is estimated by Robin Hood staff. We base the five-month average estimate for the length of stay in transitional apartments on reports to Robin Hood from its grantees. We base the $1,474 monthly rental value of a two-bedroom transitional apartment on the yearly $17,688 rental value of a two-bedroom apartment reported for New York City in U.S. Department of Housing and Urban Development's fair market rent report which reports the 40th percentile of the range of rent prices. The $1,474 monthly rental value of a two-bedroom apartment ($17,688 yearly value) is based on the 2011 Department of Housing and Urban Development report of fair market rent prices for New York City, at the 40th percentile of the range of rent prices. **References:** U.S. Department of Housing and Urban Development. (2011). Fiscal year 2011 fair market rent prices for New York City.	
78	Tax filing: Average new filer refund	(XX tax filers) * (25 percent of tax filers are new and file solely because of this program) * ($1,000 average tax refund for new filers)
	Explanation: The number of tax filers is based on the actual number reported by our grantee. We base the 25 percent estimate for the percentage of tax filers who are new tax filers on grantee reports. We base the $1,000 estimate for the average tax refund for new filers on reports to Robin Hood from grantees.	
79	Tax filing: Average sporadic filer refund	(XX tax filers) * (25 percent of filers are sporadic filers) * (50 percent of sporadic filers file solely because of this program) * ($1,000 average tax refund)
	Explanation: The number of tax filers is based on the actual number reported by our grantee. We base the 25 percent estimate for the percentage of sporadic tax filers on reports to Robin Hood by its grantees. We base the 50 percent counterfactual rate on Robin Hood staff's guess of the probability that	

Metric #	Name of Metric	Equation
	sporadic filers would have filed this year without our grantee. We base the $1,000 estimate for the average value of the tax return of sporadic filers from reports to Robin Hood from its grantees.	
80	Tax filing: Prior year returns	(XX tax filers) * (1 percent of filers are able to file past returns) * (XX percent of filers file solely because of this program) * ($1,000 average tax refund)
	Explanation: The number of tax filers is based on the actual number reported by our grantee. We base the 1 percent estimate for the number of tax filers who file previous year's tax returns on reports to Robin Hood by its grantees. We base the $1,000 estimate for the average tax refund from reports to Robin Hood from its grantees.	

Non-Earnings, Other

Metric #	Name of Metric	Equation
81	Child care fees saved	(XX children enrolled) * (70 percent avoid child care fees solely because of this program) * ($20,000 average earnings for a low-income population) * (5 percent average reimbursement for early childhood education tuition)
	Explanation: The number of children enrolled is based on the actual number reported by our grantee. The 70 percent estimate for the percentage of families in poverty who would not find subsidized slots for their preschooler is based on Kolben & Holcomb (2009), who report that there are only enough subsidized preschool slots for about 30 percent of young children whose families qualify. We estimate the average earnings of the parents with children attending our grantee's program at about $20,000, based on earnings estimates from Levin, Belfield, Muennig & Rouse (2007), roughly split between those with a high school degree and those without. Our 5 percent estimate for the tuition reimbursement amount is based on findings that families that do not receive a subsidized slot must pay between 1 and 10 percent of their gross income for child care (Kolben & Holcomb, 2009). **References:** Kolben, N. & Holcomb, B. (2009). 2008 CCI primer: Key facts about early care and education in New York City. New York, NY: Child Care, Inc. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University.	
82	Tax filing: Tax prep fee saved	(XX tax filers) * (XX percent of filers avoid tax-prep fees solely because of this program) * ($125 average savings on tax preparation fees)
	Explanation: The number of tax filers is based on the actual number reported by our grantee. The percentage of filers who avoid tax-prep fees solely because of the program is estimated by Robin Hood staff. The $125 average savings on tax preparation fees is based on data submitted to Robin Hood by our grantee.	
83	Financial counseling: Average benefit of intensive counseling	(XX participants receive intensive individual financial counseling) * (XX percent get assistance solely because of this program) * ($2,700 average financial counseling benefit)

Metric #	Name of Metric	Equation
	Explanation: The number of participants who receive intensive individual financial counseling is based on the actual number reported by our grantee. The percentage of individuals who get assistance solely because of the program is estimated by Robin Hood staff. The $2,700 average benefit from financial counseling is based on our estimate of the main benefits of financial counseling by weighted average access for a typical cohort of counselees who need a more intensive dose of counseling, and includes guided bankruptcy benefits of $4,000 for 6 percent of counselees and $2,600 average debt reduction benefits for 94 percent of counselees.	
84	Financial counseling: Bankruptcy	(XX participants file for bankruptcy) * (XX percent of participants file for bankruptcy solely because of this program) * ($4,000 average savings from filing bankruptcy)
	Explanation: The number of participants who file for bankruptcy is based on the actual number reported by our grantee. The percentage of participants who file for bankruptcy solely because of the program is estimated by Robin Hood staff. The estimated $4,000 average savings from filing bankruptcy is based on reports submitted to Robin Hood by Single Stop U.S.A. indicating that poor people coming to Single Stop for financial assistance typically owe and can pay back about $4,000. We apply that amount to reflect the value of bankruptcy.	
85	Financial counseling: Credit card debt reduction, savings on interest	(XX participants) * (XX percent get assistance solely because of this program) * (33 percent of participants reduce credit card debt) * ($1,500 average reduction in debt) * (30 percent interest saved by debt reduction)
	Explanation: The number of participants is based on the actual number reported by our grantee. The percentage of individuals who get assistance solely because of the program is estimated by Robin Hood staff. The 33 percent estimate for the percentage of financial counseling clients who reduce credit card debit is reported to Robin Hood by its grantees. The $1,500 average reduction in credit card debt is based on data submitted to Robin Hood by our grantee. The 30 percent figure for the interest rate that will no longer need to be paid on debt is estimated by Robin Hood staff.	

Metric #	Name of Metric	Equation
86	Financial counseling: Improvement in budgeting skills, leading to increase in savings	(XX participants) * (XX percent get assistance solely because of this program) * (55 percent of participants learn to draw up and follow budget plan) * ($20,000 average earnings for a low-income population) * (3 percent increase in savings from following budget plan) * (1 percent interest rate on savings)
	Explanation: The number of participants is based on the actual number reported by our grantee. The percentage of participants who get assistance solely because of the program is estimated by Robin Hood staff. The 55 percent estimate for the percentage of financial counseling participants who are able to follow a new budget plan is based on field data reported to Robin Hood by our grantees. We estimate the average earnings of the individuals attending our grantee's program at about $20,000, based on earnings estimates from Levin, Belfield, Muennig & Rouse (2007), roughly split between those with a high school degree and those without. We estimate the 3 percent savings results from following a budget and through lower incidental spending. The 1 percent figure for the interest rate that will be earned on savings is estimated by Robin Hood and grantee staff. **References:** Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University.	
87	Financial counseling: New savings account, basic interest on new savings	(XX participants) * (XX percent get assistance solely because of this program) * (20 percent of participants create savings accounts) * ($1,000 average new savings) * (1 percent interest rate on savings)
	Explanation: The number of participants is based on the actual number reported by our grantee. The percentage of participants who get assistance solely because of the program is estimated by Robin Hood staff. The 20 percent estimate for the percentage of financial counseling participants who are able to create new savings accounts is based on reports to Robin Hood by our grantees. The $1,000 average savings across a cohort of financial counseling participants is based on data submitted to Robin Hood by our grantee. The 1 percent figure for the interest rate that will be earned on savings is estimated by Robin Hood and grantee staff.	

Metric #	Name of Metric	Equation
88	Financial counseling: New savings account, interest saved by not using a credit card	(XX participants) * (XX percent get assistance solely because of this program) * (75 percent of participants will benefit from using savings accounts rather than credit card accounts) * ($1,000 average new savings) * (30 percent interest rate saved by not using credit card)
	Explanation: The number of participants is based on the actual number reported by our grantee. The percentage of participants who get assistance solely because of the program is estimated by Robin Hood staff. The estimated 75 percent of financial counseling participants who would use their new savings account instead of high-interest credit cards within the year is based on estimates reported to Robin Hood from its grantee. Also, we know from the findings of Barr (2009) that even a small amount of savings will reduce the use of high-interest credit cards and loans for people in poverty. The $1,000 average savings across a cohort of financial counseling participants is based on data submitted to Robin Hood by our grantee. The average 30 percent interest rate for high-interest credit cards is estimated by Robin Hood and grantee staff. **References:** Barr, M. (2009). Financial services, saving, and borrowing among low- and moderate-income households: Evidence from the Detroit Area Household Financial Services Survey. In R. M. Blank & M. S. Barr (Eds.), Insufficient funds: Savings, assets, credit. New York, NY: Russell Sage Foundation.	
89	Financial counseling: New savings account, interest saved by not using a loan shark	(XX participants) * (XX percent get assistance solely because of this program) * (10 percent of participants will benefit from using savings rather than loan sharks) * ($1,000 average new savings) * (100 percent interest rate saved by not using loan shark)
	Explanation: The number of participants is based on the actual number reported by our grantee. The percentage of participants who get assistance solely because of the program is estimated by Robin Hood staff. The estimated 10 percent of financial counseling participants who would use their new savings account instead of high-interest loans is based on the findings of Barr (2009). The $1,000 average savings across a cohort of financial counseling participants is based on data submitted to Robin Hood by our grantee. The average 100 percent interest rate for high-interest loans is estimated by Robin Hood and grantee	

Metric #	Name of Metric	Equation
	staff. References: Barr, M. (2009). Financial services, saving, and borrowing among low- and moderate-income households: Evidence from the Detroit Area Household Financial Services Survey. In R. M. Blank & M. S. Barr (Eds.), Insufficient funds: Savings, assets, credit. New York, NY: Russell Sage Foundation.	
90	Financial counseling: Using new or existing bank accounts, money saved by not using money orders and check cashing	(XX newly banked participants) * (XX percent get assistance solely because of this program) * (75 percent of participants reduce use of money orders or check cashing) * (75 percent of fees are saved) * ($250 average amount previously spent on money orders/check cashing)
	Explanation: The number of newly banked participants is based on the actual number reported by our grantee. The percentage of participants who get assistance solely because of the program is estimated by Robin Hood staff. The 75 percent decrease in the percentage of financial counseling participants who would use money orders or check cashing is based on reports to Robin Hood from its grantee. The 75 percent decrease in actual fees for the use of money orders and check cashing is based on our grantee's estimate that of those clients who would reduce their use, they would in practice continue to use money orders or check cashing about 25 percent of the time. Our $250 estimate for the value of having a bank account is based on the Fannie Mae Foundation (2001), which reports that being banked allows individuals to avoid check-cashing fees and money orders that cost poor individuals on average $250 annually. References: Fannie Mae Foundation. (2001). Financial services in distressed communities: Issues and answers. In Financial services in distressed communities: Framing the issue, finding solutions. Washington, DC: U.S. Department of Housing and Urban Development.	
91	Financial counseling: Reduction in risk of economic shock due to improved financial outcomes; Child benefit	(XX children in families receiving individual financial counseling) * (XX percent of individuals reduce their risk of economic shock solely because of this program) * ($14,000 average benefit of risk reduction due to financial counseling for children)
	Explanation: The number of children receiving financial counseling services is reported by grantee.	

Metric #	Name of Metric	Equation
	The percentage of individuals who receive services helpful enough to substantially reduce their risk of imminent economic shock solely because of this program is estimated by Robin Hood staff. The $14,000 estimate for the average value of the reduction in the probability of economic shock is based on the benefits of homelessness prevention, including the avoidance of higher probabilities of chronic physical illness and mental health problems. In addition, the avoidance of higher probabilities of foster care placement is included for children whose families avoid homelessness. We calculate the benefit as follows: Chronic illness We estimate a 0.10 QALY value for the avoidance of chronic illness based on the average difference in QALY between those with totally controlled versus not well controlled asthma (Briggs, Wallace, Clark & Bateman, 2006). Asthma is the most prevalent chronic illness afflicting poor children and so provides an appropriate yet conservative guess for the cost of chronic illness – conservative since homeless children are twice as likely to suffer from at least one chronic illness. We estimate a 7 percentage point increase in the probability of chronic illness for homeless individuals based on findings from the National Center for Family Homelessness (1999) and the Family Housing Fund (1999) that, controlling for important covariates, approximately 16 percent of poor children in poverty who are homeless suffer chronic illness, whereas only 9 percent of poor children who are not homeless suffer chronic illness. Robin Hood assigns a value of $50,000 per QALY. The benefit is estimated at $245, as follows: (0.10 QALY * 0.07 decreased probability of chronic illness * $50,000 per QALY = $350). Mental illness We estimate the value of avoiding mental illness at 0.33 QALY, by averaging the QALY values for the avoidance of depression, estimated at 0.30 QALY (especially Frank, McGuire, Normand & Goldman, 1999; Schoenbaum, Sherbourne & Wells, 2005), and avoiding relapse of schizophrenia, estimated at 0.36 QALY (Davies et al., 2008). Homeless children are about three times more likely to suffer from depression than other poor children (47 percent versus 18 percent), a 29 percentage point difference (National Center for Family Homelessness, 1999; Family Housing Fund, 1999). Robin Hood assigns a value of $50,000 per QALY. The benefit is estimated at $4,785, as follows: (0.33 QALY * 0.29 decreased probability of depression * $50,000 per QALY = $4,785). Foster care	

Metric #	Name of Metric	Equation
	We estimate a 20 percentage point increase in the probability of foster care placement for children in homelessness based on research indicating that approximately 22 percent of children in homeless families are placed in foster care compared with only 3 percent of poor but housed children, accounting for important covariates (National Center for Family Homelessness, 1999; Family Housing Fund, 1999). For children in marginal family situations (situations for which case managers would disagree on whether foster care placement is warranted), research indicates that foster care placement has a devastating impact, with the adult earnings of the children about $5,000 less and juvenile delinquency about 35 percent more likely than for children not so placed (Doyle, 2007). Robin Hood staff estimates that 50 percent of the children served by our grantees and accompanying their caretakers into homelessness would be deemed marginal cases. Avoidance of juvenile delinquency improves the future earnings of urban, at-risk teenagers by about 22 percent (Joseph, 2001) due to the avoidance of an earnings decrease associated with incarceration. We estimate the average future earnings of the children at about $20,000 based on Levin, Belfield, Muennig & Rouse (2007), and a baseline rate of delinquency at about 12 percent (Aos, Lieb, Mayfield, Miller & Pennucci, 2004; Ludwig, Duncan & Hirschfeld, 1999). For purposes of the calculations below, we assume that the children under discussion are 10 years old on average, that earnings boosts begin at age 20, that inflation-adjusted wages rise at 3 percent and that the discount rate is 5 percent. We calculate the benefit of decreased foster care placements on earnings outcomes at approximately $44,440 ($5,000 earnings decrease avoided due to avoided foster care) + (($20,000 average estimated future earnings) * (0.22 decreased earnings prevented due to avoided delinquency) * (12 percent of those in foster care are typically delinquent – 9 percent counterfactual delinquency rate)) = $5,132), which at present discounted value is about $106,000. However, although our estimate of the benefit of avoided foster care placement is a lifetime benefit, the risk of homelessness, and therefore foster care placement, is a continuing risk for children in poverty. To account for this, we reduce our estimate of the benefit, based on research findings that families in poverty have a yearly 10 percent risk of homelessness (Burt, 2001). Because homelessness creates a 20 percentage point increase in the probability of foster care, we estimate that for each year of childhood there exists a 2 percent increased probability of foster care placement for these children. At an average age of 10 years, and eight years until they turn 18 (at which time they are legally adults), we estimate a 16 percent total continuing probability of foster care placement (8 years * 2%). Furthermore, we discount our $106,000 benefit by 16 percent to account for this continuing risk, and reach a final value of $89,000. We apply the probability for increased foster care placement of 20 percent, and a 50 percent probability that the families our grantee serves would be marginal cases. ($89,000 total discounted lifetime benefit of avoided foster care * 0.20 higher probability of foster care placement avoided due to avoided homelessness * 0.50 marginal cases = $8,900).	

Metric #	Name of Metric	Equation

Overall benefits for one child

The total overall benefit to avoiding homelessness for the children of the families our grantees serve is calculated as follows: ($350 improved chronic health for one child + $4,785 improved mental health for one child + $8,900 benefit of avoided foster care accounting for continued risk = $14,035, rounded to $14,000).

References:

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Schoenbaum, M., Sherbourne, C. & Wells, K. (2005). Gender patterns in cost effectiveness of quality

Metric #	Name of Metric	Equation
	improvement for depression: Results of a randomized, controlled trial. Journal of Affective Disorders, 87, 319-325.	
92	Financial counseling: Reduction in risk of economic shock due to improved financial outcomes; Adult benefit	(XX participants receive individual financial counseling) * (XX percent get assistance likely to reduce risk of economic shock solely because of this program) * ($5,000 average benefit of risk reduction due to financial counseling)
	The number of individuals receiving financial counseling services is reported by grantee. The percentage of individuals who receive services helpful enough to substantially reduce their risk of imminent economic shock solely because of this program is estimated by Robin Hood staff. The $5,000 estimate for the average value of the reduction in the probability of economic shock is based on the benefits of homelessness prevention, including the avoidance of higher probabilities of chronic physical illness and mental health problems. In addition, the avoidance of higher probabilities of foster care placement is included for children whose families avoid homelessness. We calculate the benefit as follows: Chronic illness Our 0.10 QALY value estimate for the value of avoiding chronic illness is based on the average difference in QALY between those with totally controlled versus not well controlled asthma (Briggs, Wallace, Clark & Bateman, 2006). Because asthma is the most prevalent chronic illness afflicting poor children, it provides a conservative estimate for the cost of chronic illness in terms of quality of life—conservative because people in poverty often suffer from multiple chronic illnesses. We estimate a 7 percentage point increase in the probability of chronic illness for homeless individuals based on findings from the National Center for Family Homelessness (1999) and the Family Housing Fund (1999) that, controlling for important covariates, approximately 16 percent of poor children in poverty who are homeless suffer chronic illness, whereas only 9 percent of poor children who are not homeless suffer chronic illness. Robin Hood assigns a value of $50,000 per QALY. The benefit is estimated at $350, as follows: (0.10 QALY * 0.07 decreased probability of chronic illness * $50,000 per QALY = $350). Mental illness We estimate the value of avoiding mental illness at 0.33 QALY, by averaging the QALY values for the avoidance of depression, estimated at 0.30 QALY (especially Frank, McGuire, Normand & Goldman, 1999; Schoenbaum, Sherbourne & Wells, 2005), and avoiding relapse of schizophrenia, estimated at 0.36 QALY (Davies et al., 2008). Homeless children are about three times more likely to suffer from depression than other poor children (47 percent versus 18 percent), a 29 percentage point difference (National Center for Family Homelessness, 1999; Family Housing Fund, 1999). Robin Hood assigns a value of $50,000 per QALY. The	

Metric #	Name of Metric	Equation
	benefit is estimated at $4,785, as follows: (0.33 QALY * 0.29 decreased probability of depression * $50,000 per QALY = $4,785). Although this metric is based on research on children, we apply it to adults as well. *Overall benefits for one adult* The total overall benefit is calculated as follows: ($350 improved chronic health for one adult + $4,785 improved mental health for one adult = $5,135, rounded down to $5,000) **References:** Briggs, A., Wallace, M., Clark, T. & Bateman, E. (2006). Cost-effectiveness of asthma control: An economic appraisal of the GOAL study. Allergy, 61, 531-536. Davies, A., Vardeva, K., Loze, J., L'Italien, G., Sennfalt, K. & van Baardewijk, M. (2008). Cost-effectiveness of atypical antipsychotics of the management of schizophrenia in the UK. Current Medical Research and Opinion, 24(11), 3275-3285. Family Housing Fund. (1999). Homelessness and its effects on children. Minneapolis, MN: Author. Frank, R., McGuire, T., Normand, S. & Goldman, H. (1999). The value of mental health care at the system level: The case of treating depression. Health Affairs, 18(5), 71-88. National Center for Family Homelessness. (1999). Homeless children: America's new outcasts. Newton Centre, MA: Author. Schoenbaum, M., Sherbourne, C. & Wells, K. (2005). Gender patterns in cost effectiveness of quality improvement for depression: Results of a randomized, controlled trial. Journal of Affective Disorders, 87, 319-325.	
93	Housing: Reduction in risk of homelessness; Child benefit	(XX children in families receiving services) * (XX percent of individuals reduce their risk of homelessness solely because of this program) * ($14,000 average benefit of risk reduction for children)
	Explanation: The number of children receiving services is reported by grantee. The percentage of individuals who receive services helpful enough to substantially reduce their risk of imminent homelessness solely because of this program is estimated by Robin Hood staff. The $14,000 estimate for the average value of the reduction in the probability of homelessness is based on the benefits of homelessness prevention, including the avoidance of higher probabilities of chronic physical illness and mental health problems. In addition, the avoidance of higher probabilities of foster	

Metric #	Name of Metric	Equation
	care placement is included for children whose families avoid homelessness. We calculate the benefit as follows: Chronic illness We estimate a 0.10 QALY value for the avoidance of chronic illness based on the average difference in QALY between those with totally controlled versus not well controlled asthma (Briggs, Wallace, Clark & Bateman, 2006). Asthma is the most prevalent chronic illness afflicting poor children and so provides an appropriate yet conservative guess for the cost of chronic illness – conservative since homeless children are twice as likely to suffer from at least one chronic illness. We estimate a 7 percentage point increase in the probability of chronic illness for homeless individuals based on findings from the National Center for Family Homelessness (1999) and the Family Housing Fund (1999) that, controlling for important covariates, approximately 16 percent of poor children in poverty who are homeless suffer chronic illness, whereas only 9 percent of poor children who are not homeless suffer chronic illness. Robin Hood assigns a value of $50,000 per QALY. The benefit is estimated at $245, as follows: (0.10 QALY * 0.07 decreased probability of chronic illness * $50,000 per QALY = $350). Mental illness We estimate the value of avoiding mental illness at 0.33 QALY, by averaging the QALY values for the avoidance of depression, estimated at 0.30 QALY (especially Frank, McGuire, Normand & Goldman, 1999; Schoenbaum, Sherbourne & Wells, 2005), and avoiding relapse of schizophrenia, estimated at 0.36 QALY (Davies et al., 2008). Homeless children are about three times more likely to suffer from depression than other poor children (47 percent versus 18 percent), a 29 percentage point difference (National Center for Family Homelessness, 1999; Family Housing Fund, 1999). Robin Hood assigns a value of $50,000 per QALY. The benefit is estimated at $4,785, as follows: (0.33 QALY * 0.29 decreased probability of depression * $50,000 per QALY = $4,785). Foster care We estimate a 20 percentage point increase in the probability of foster care placement for children in homelessness based on research indicating that approximately 22 percent of children in homeless families are placed in foster care compared with only 3 percent of poor but housed children, accounting for important covariates (National Center for Family Homelessness, 1999; Family Housing Fund, 1999). For children in "marginal" family situations (situations for which case managers would disagree on whether foster care placement is warranted), research indicates that foster care placement has a	

Metric #	Name of Metric	Equation
	devastating impact, with the adult earnings of the children about $5,000 less and juvenile delinquency about 35 percent more likely than for children not so placed (Doyle, 2007). Robin Hood staff estimates that 50 percent of the children served by our grantees and accompanying their caretakers into homelessness would be deemed marginal cases. Avoidance of juvenile delinquency improves the future earnings of urban, at-risk teenagers by about 22 percent (Joseph, 2001) due to the avoidance of an earnings decrease associated with incarceration. We estimate the average future earnings of the children at about $20,000 based on Levin, Belfield, Muennig & Rouse (2007), and a baseline rate of delinquency at about 12 percent (Aos, Lieb, Mayfield, Miller & Pennucci, 2004; Ludwig, Duncan & Hirschfeld, 1999). For purposes of the calculations below, we assume that the children under discussion are 10 years old on average, that earnings boosts begin at age 20, that inflation-adjusted wages rise at 3 percent and that the discount rate is 5 percent. We calculate the benefit of decreased foster care placements on earnings outcomes at approximately $44,440 ($5,000 earnings decrease avoided due to avoided foster care + (($20,000 average estimated future earnings) * (0.22 decreased earnings prevented due to avoided delinquency) * (12 percent of those in foster care are typically delinquent – 9 percent counterfactual delinquency rate)) = $5,132, which at present discounted value is about $106,000). However, although our estimate of the benefit of avoided foster care placement is a lifetime benefit, the risk of homelessness, and therefore foster care placement, is a continuing risk for children in poverty. To account for this, we reduce our estimate of the benefit, based on research findings that families in poverty have a yearly 10 percent risk of homelessness (Burt, 2001). Because homelessness creates a 20 percentage point increase in the probability of foster care, we estimate that for each year of childhood there exists a 2 percent increased probability of foster care placement for these children. At an average age of 10 years, and eight years until they turn 18 (at which time they are legally adults), we estimate a 16 percent total continuing probability of foster care placement (8 years * 2%). Furthermore, we discount our $106,000 benefit by 16 percent to account for this continuing risk, and reach a final value of $89,000. We apply the probability for increased foster care placement of 20 percent, and a 50 percent probability that the families our grantee serves would be marginal cases. ($89,000 total discounted lifetime benefit of avoided foster care * 0.20 higher probability of foster care placement avoided due to avoided homelessness * 0.50 marginal cases = $8,900). *Overall benefits for one child* The total overall benefit to avoiding homelessness for the children of the families our grantees serve is calculated as follows: ($350 improved chronic health for one child + $4,785 improved mental health for one child + $8,900 benefit of avoided foster care accounting for continued risk = $14,035, rounded to	

Metric #	Name of Metric	Equation
	$14,000). References: Aos, S., Lieb, R., Mayfield, J., Miller, M. & Pennucci, A. (2004). Benefits and costs of prevention and early intervention programs for youth. Olympia, WA: Washington State Institute for Public Policy. Briggs, A., Wallace, M., Clark, T. & Bateman, E. (2006). Cost-effectiveness of asthma control: An economic appraisal of the GOAL study. Allergy, 61, 531-536. Burt, M. (2001). What will it take to end homelessness? Washington, DC: The Urban Institute. Davies, A., Vardeva, K., Loze, J., L'Italien, G., Sennfalt, K. & van Baardewijk, M. (2008). Cost-effectiveness of atypical antipsychotics of the management of schizophrenia in the UK. Current Medical Research and Opinion, 24(11), 3275-3285. Doyle, J. (2007, March). Child protection and child outcomes: Measuring the effects of foster care. Cambridge, MA: Massachusetts Institute of Technology, Sloan School of Management and National Bureau of Economic Research. Family Housing Fund. (1999). Homelessness and its effects on children. Minneapolis, MN: Author. Frank, R., McGuire, T., Normand, S. & Goldman, H. (1999). The value of mental health care at the system level: The case of treating depression. Health Affairs, 18(5), 71-88. Joseph, M. (2001). The effect of arrests on the earnings of young men: Evidence from the National Youth Survey. Chicago, IL: Harris Graduate School of Public Policy. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Ludwig, J., Duncan, G. & Hirschfeld, P. (1999). Urban poverty and juvenile crime: Evidence from a randomized housing-mobility experiment. Washington, DC: U.S. Department of Housing and Urban Development. National Center for Family Homelessness. (1999). Homeless children: America's new outcasts. Newton Centre, MA: Author. Schoenbaum, M., Sherbourne, C. & Wells, K. (2005). Gender patterns in cost effectiveness of quality improvement for depression: Results of a randomized, controlled trial. Journal of Affective Disorders, 87, 319-325.	
94	Housing: Reduction in risk of homelessness; Adult benefit	(XX participants receive services) * (XX percent get assistance likely to reduce risk of homelessness solely because of this program) * ($5,000 average

Metric #	Name of Metric	Equation
		benefit of risk reduction)
		The number of individuals receiving services is reported by grantee. The percentage of individuals who receive services helpful enough to substantially reduce their risk of imminent homelessness solely because of this program is estimated by Robin Hood staff. The $5,000 estimate for the average value of the reduction in the probability of homelessness for adults is based on the benefits of homelessness prevention, including the avoidance of higher probabilities of chronic physical illness and mental health problems. We calculate the benefit as follows: Chronic illness Our 0.10 QALY value estimate for the value of avoiding chronic illness is based on the average difference in QALY between those with totally controlled versus not well controlled asthma (Briggs, Wallace, Clark & Bateman, 2006). Because asthma is the most prevalent chronic illness afflicting poor children, it provides a conservative estimate for the cost of chronic illness in terms of quality of life—conservative because people in poverty often suffer from multiple chronic illnesses. We estimate a 7 percentage point increase in the probability of chronic illness for homeless individuals based on findings from the National Center for Family Homelessness (1999) and the Family Housing Fund (1999) that, controlling for important covariates, approximately 16 percent of poor children in poverty who are homeless suffer chronic illness, whereas only 9 percent of poor children who are not homeless suffer chronic illness. We extrapolate these findings to adults. Robin Hood assigns a value of $50,000 per QALY. The benefit is estimated at $350, as follows: (0.10 QALY * 0.07 decreased probability of chronic illness * $50,000 per QALY = $350). Mental illness We estimate the value of avoiding mental illness at 0.33 QALY, by averaging the QALY values for the avoidance of depression, estimated at 0.30 QALY (especially Frank, McGuire, Normand & Goldman, 1999; Schoenbaum, Sherbourne & Wells, 2005), and avoiding relapse of schizophrenia, estimated at 0.36 QALY (Davies et al., 2008). Homeless children are about three times more likely to suffer from depression than other poor children (47 percent versus 18 percent), a 29 percentage point difference (National Center for Family Homelessness, 1999; Family Housing Fund, 1999). Robin Hood assigns a value of $50,000 per QALY. The benefit is estimated at $4,785, as follows: (0.33 QALY * 0.29 decreased probability of depression * $50,000 per QALY = $4,785). Although this metric is based on research on children, we apply it to adults as well. *Overall benefits for one adult* The total overall benefit is calculated as follows: (($350 improved chronic health for one adult) + ($4,785 improved mental health for one adult)) = $5,135, rounded down to $5,000

Metric #	Name of Metric	Equation
	References: Briggs, A., Wallace, M., Clark, T. & Bateman, E. (2006). Cost-effectiveness of asthma control: An economic appraisal of the GOAL study. Allergy, 61, 531-536. Davies, A., Vardeva, K., Loze, J., L'Italien, G., Sennfalt, K. & van Baardewijk, M. (2008). Cost-effectiveness of atypical antipsychotics of the management of schizophrenia in the UK. Current Medical Research and Opinion, 24(11), 3275-3285. Family Housing Fund. (1999). Homelessness and its effects on children. Minneapolis, MN: Author. Frank, R., McGuire, T., Normand, S. & Goldman, H. (1999). The value of mental health care at the system level: The case of treating depression. Health Affairs, 18(5), 71-88. National Center for Family Homelessness. (1999). Homeless children: America's new outcasts. Newton Centre, MA: Author. Schoenbaum, M., Sherbourne, C. & Wells, K. (2005). Gender patterns in cost effectiveness of quality improvement for depression: Results of a randomized, controlled trial. Journal of Affective Disorders, 87, 319-325.	
95	Food: Cost savings	(XX meals served) * (XX percent receive meal solely because of this program) * ($5 average value per meal)
	Explanation: The number of meals served is based on the actual number reported by our grantee. The percentage of participants who receive a meal solely because of the program is estimated by Robin Hood staff. The $5 estimated value of a meal is based on the U.S. Department of Agriculture estimate for the average cost of food for low-income consumers, and is increased to reflect the cost of living in New York City using the method found in the Self-Sufficiency Standard for the City of New York 2004 (Pearce, 2004). Because a meal provided by our grantee is likely an important main daily meal to a person in poverty, we allow that meal to represent half the cost of food for the day. The Center for Nutrition Policy and Promotion (2008) provides separate averages for seniors, adults, teenagers and children under 12 years old. However, our grantees cannot typically report on age or gender groups separately, and there is just as much variance in the cost of a meal by age as there is by gender. So, our specific method to estimate the cost of a meal is to average the family of two monthly low-cost plans across the main two reported age groups. Next, we increase that average by 36 percent to represent the increased cost of living in New York City, and divide that amount by 30 to get to a daily cost, then by two to get an individual cost, then by two again to get the cost of a "main meal" that might typically be one of two meals a poor person has in a day. To smooth out spikes in the cost of food, we average the cost of the current year with the previous year. For a listing of food costs over many years, see	

Metric #	Name of Metric	Equation
	http://www.cnpp.usda.gov/usdafoodplanscostoffood.htm . References: Center for Nutrition Policy and Promotion. (2008). Official USDA food plans: Costs of food at home at four levels, U.S. average, January 2008. Alexandria, VA: Center for Nutrition Policy and Promotion, U.S. Department of Agriculture. Retrieved from http://www.cnpp.usda.gov/Publications/FoodPlans/2008/CostofFoodJan08.pdf Pearce, D. (2004). The Self-Sufficiency Standard for the City of New York 2004. New York, NY: United Way of New York City.	
96	Goods and services: Clothing—average	(XX recipients) * (XX percent receive clothing solely because of this program) * ($14 average value of second-hand clothing)
	Explanation: The number of recipients is based on the actual number reported by our grantee. The percentage of participants who receive clothing solely because of the program is estimated by Robin Hood staff. The $14 average value of second-hand clothing is based on data from the Salvation Army's (2014) clothing value guide. References: Salvation Army. (2014). Donation value guide. Retrieved May 20, 2014, from http://satruck.org/donation-value-guide	
97	Goods and services: Clothing—laundry/washing	(XX loads of laundry) * (XX percent gain access to laundry solely because of this program) * ($2.75 average value per load)
	Explanation: The number of loads of laundry is based on the actual number reported by our grantee. The percentage of participants who gain access to laundry solely because of the program is estimated by Robin Hood staff. The $2.75 estimated value of having a set of clean clothes is based on the estimate of Robin Hood staff for the cost of a load of laundry at a Laundromat.	
98	Goods and services: Haircuts	(XX haircuts) * (XX percent receive a haircut solely because of this program) * ($5 average value of a haircut)

Metric #	Name of Metric	Equation
	Explanation: The number of haircuts is based on the actual number reported by our grantee. The percentage of participants who receive a haircut solely because of the program is estimated by Robin Hood staff. The estimated $5 value of a haircut in a low-income market is based on the estimate of Robin Hood staff.	
99	Goods and services: Mailboxes	(XX individuals who receive a mailbox) * (XX percent get a mailbox solely because of this program) * ($18 average value of a mailbox)
	Explanation: The number of individuals who receive a mailbox is based on the actual number reported by our grantee. The percentage of participants who get a mailbox solely because of the program is estimated by Robin Hood staff. The $18 yearly value of a mailbox is based on the cost of the least expensive post office box at the U.S. Postal Service.	
100	Goods and services: Showers	(XX showers) * (XX percent get a shower solely because of this program) * ($10 value of a shower)
	Explanation: The number of showers is based on the actual number reported by our grantee. The percentage of individuals who get a shower solely because of the program is estimated by Robin Hood staff. The $10 estimated value of a shower is based on the cost incurred by a client for bathing supplies and water. We calculate the average value of bathing supplies (soap, toothbrush, toothpaste, etc.) from the cost per set of items needed for a shower as reported by our grantee P.O.T.S. ($2.15) multiplied for 100 percent retail markup ($4.30). The cost of water to consumers can be estimated at 1 cent per gallon (United Water, 2005). The typical shower uses between 7 and 10 gallons per minute and lasts an average of 15 to 20 minutes (Washington Suburban Sanitary Commission, 2011). Averaging the number of gallons used and shower length, the typical shower uses about 150 gallons of water (8.5 * 17.5) and costs $1.50. Towels are estimated to be available at retail for $5.00 and we estimate one per person. References: United Water. (2005). United Water New York Annual Report of Water Quality. Harrington Park, NJ, Author. Washington Suburban Sanitary Commission. (2011). Water usage. Retrieved May 20, 2014, from	

Metric #	Name of Metric	Equation
	http://www.wsscwater.com/home/jsp/content/water-usagechart.faces	
101	Goods and services: Voicemail	(XX individuals with voicemail) * (XX percent get voicemail solely because of this program) * ($60 average value of voicemail)
	Explanation: The number of individuals with voicemail is based on the actual number reported by our grantee. The percentage of individuals who get voicemail solely because of the program is estimated by Robin Hood staff. The estimated value of voicemail service is $5 a month, or $60 a year.	
102	Microfinance: Interest saved from not using credit card	(XX of individuals who receive a loan) * (XX percent get assistance solely because of this program) * (XX percent of participants have access to a credit card) * [(30 percent average interest rate for credit cards) - (15 percent actual interest rate on loan)] * ($ average value of a loan)
	Explanation: The number of individuals who receive a loan is based on the actual number reported by our grantee. The percentage of individuals who get assistance solely because of the program is estimated by Robin Hood staff. The percentage of participants who have access to a credit card is based on data from our grantee. We estimate an average 15 percent savings on interest due to the receipt of a microfinance loan by subtracting the 15 percent interest our grantees typically charge on business loans to low-income borrowers from the interest charged by high-interest credit cards, which is approximately 30 percent. The average value of a loan is based on the actual number reported by our grantee.	
103	Microfinance: Interest saved from not using loan shark	(XX of individuals who receive a loan) * (XX percent get assistance solely because of this program) * (XX percent of individuals would seek money from a loan shark) * [(100 percent average interest rate for loan sharks) - (15 percent actual interest rate on loan)] * ($ average value of a loan)
	Explanation: The number of individuals who receive a loan is based on the actual number reported by our grantee. The percentage of participants who get assistance solely because of the program is estimated by Robin Hood staff. The percentage of individuals who would seek money from a loan shark is estimated by Robin Hood staff. We estimate an average 85 percent savings on interest due to the receipt of a microfinance loan by	

Metric #	Name of Metric	Equation
	subtracting the 15 percent interest our grantees typically charge on business loans to low-income borrowers from the interest charged by loan sharks, which is approximately 100 percent. The average value of a loan is based on the actual number reported by our grantee.	
104	Asthma: Related goods and services	(XX children with asthma) * (XX percent get services solely because of this program) * ($400 average value of goods and services)
	Explanation: The number of children with asthma is based on the actual number reported by our grantee. The percentage of participants who get services solely because of the program is estimated by Robin Hood staff. The $400 average value of goods and services is based on the estimated low-cost dollar value of items provided to families with enrolled children (see http://www.allergyasthmatech.com). Items may include an air purifier, allergy-free bedding, food storage containers, metered-dose inhalers, peak-flow meters and pest control services.	
105	Vision: Cost of glasses	(XX individuals with new glasses) * (XX percent get services solely because of this program) * ($150 average value of glasses)
	Explanation: The number of individuals with new glasses is based on the actual number reported by our grantee. The percentage of participants who get services solely because of the program is estimated by Robin Hood staff. The average value of glasses is estimated at $150 in a low-income market.	
106	Victim costs: Reduction as a result of fewer crimes	(XX participants) * (XX percent of participants receive assistance solely because of this program) * (50 percent of participants would recidivate and commit additional crimes) * (33 percent reduction in recidivism as a result of the program) * ($4,600 average benefit per avoided crime) * (31 average number of crimes per offender)
	Explanation: The number of participants is based on the actual number reported by our grantee. The percentage of participants who receive assistance solely because of the program is estimated by Robin Hood staff. Our estimate for a 50 percent recidivism rate is based on a wide reading of the research literature. Recidivism is challenging to measure, but rough estimates across many studies put the range between 50 and 80 percent (Frederick, 1999; Snyder & Sickmund, 2006; Bureau of Evaluation and Research, 2008).	

Metric #	Name of Metric	Equation
	Here, we apply the lower range. Our estimate that 33 percent of a typical cohort of youth served by Robin Hood's grantee will not return to criminal behavior is based on reports to Robin Hood from its grantee. The $4,600 estimate for the benefit of each avoided crime, and the estimate for 31 additional crimes that would be committed by a youthful offender over his or her lifetime, are based on the findings of Cohen & Piquero (2007), which report the average cost of crime for victims of crime and the number of crimes committed on average by offenders. References: Bureau of Evaluation and Research. (2008). Recidivism among youth formerly placed with OCFS. Albany, NY: Office of Child and Family Services. Cohen, M. & Piquero, A. (2007). New evidence on the monetary value of saving a high risk youth. Nashville, TN: Vanderbilt University, Owen Graduate School of Management. Frederick, B. (1999). Factors contributing to recidivism among youth placed with the New York State Division for Youth. Albany, NY: New York State Division of Criminal Justice Services, U.S. Office of Justice Systems Analysis. Snyder, H. N. & Sickmund, M. (2006). Juvenile offenders and victims: 2006 National Report. Washington, DC: U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention.	

Health Metrics

Metric #	Name of Metric	Equation
107	Education: Train teachers to manage classrooms, leading to improvements in quality of children's lives	(XX children in participating classrooms) * (XX percent of students get assistance solely because of the program) * (33 percent of students in classrooms respond to improved teaching methods) * (0.02 QALY increase for those who are helped) * ($50,000 dollar value per QALY)
	Explanation: The number of children in participating classrooms is based on the actual number reported by our grantee. The percentage of students who receive assistance solely because of the program is estimated by Robin Hood staff. Our 33 percent estimate for the percentage of students who would improve their behavior due to improved teaching methods is conservatively and very loosely based on Webster-Stratton's (2005) findings regarding the outcomes of strong parenting interventions. Teachers with few skills in classroom management and low rates of praise produce classrooms of children with high levels of aggression and rejection, and teachers who are trained to behave more appropriately with poorly behaved children make significant improvements in their classrooms (Webster-Stratton, 2005). Because it is likely that some of the children in these improved classrooms will not need the improvements in order to succeed, and some will not respond to the improvements, we apply the benefit to a percentage of students, based on a combination of student failure rates and the intensity of the teacher/classroom support. Our estimate for the 0.02 QALY impact on children's quality of life due to improved teaching methods for managing difficult behavior is originally from research reflecting improved quality of life due to less domestic violence (Muennig, Glied & Simon, 2005). Robin Hood places a value of $50,000 per QALY. **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. Webster-Stratton, C. (2005). The Incredible Years: A training series for the prevention and treatment of conduct problems in young children. In E. D. Hibbs & P. S. Jensen (Eds.), Psychosocial treatments for child and adolescent disorders (2nd ed.). Washington, DC: American Psychological Association.	
108	Early childhood: Early intervention	(XX children referred for early intervention) * (XX percent of students are referred to early intervention solely because of the program) * ($17,700 average lifetime benefits of an early intervention program)

Metric #	Name of Metric	Equation
	Explanation: Data on the number of children referred for early intervention are provided by the grantee. The percentage of children referred to early intervention solely because of the program is estimated by Robin Hood staff. The $17,700 estimate for the average benefit of early intervention (E.I.) is based on research findings of the benefits of early intervention for very young children who are at risk for, or are diagnosed with, a disability. The main areas of disability, and the frequencies with which they present themselves, are: pervasive developmental delay (P.D.D.), 25 percent; physical disability, 25 percent; conduct disorder (C.D.), 50 percent. The benefits are calculated as follows: Pervasive developmental delay We estimate that 15 percent of those treated for P.D.D. will display decreased symptoms. The figure is based on research that treatment decreases the number of children placed in special education programs by between 5 and 50 percent (Barnett, 1998; Campbell & Ramey, 1995; Campbell, Ramey, Pungello, Sparling & Miller-Johnson, 2002; Reynolds, Temple, Robertson & Mann, 2002; Reynolds, Temple & Ou, 2010; Schweinhart et al., 2005) We set our estimate at 15 percent, which is well within this range. For the 15 percent of individuals who respond favorably to treatment, we estimate that treatment of developmental delay improves their health status by 0.35 QALYs. This estimate is based on the QALY value for moderate neurological disability, 0.60 QALY (rising to 0.95 QALY after treatment from 0.60 QALY before treatment = 0.35 QALY) (Cost Effectiveness Analysis Registry, n.d.). Although there are very few instances of total remediation of delay, intervention can improve the educational and social prospects for children such that they may join the educational mainstream in school, which is a very important outcome. Robin Hood assigns a value of $50,000 per QALY. Because the effect of an early childhood program on special education placements can be found at high school graduation, we take these benefits, which are typically estimated for just one year, to be calculated at present value across the lifetime. We estimate that the average benefit of providing E.I. services to children with P.D.D. is $50,000 per child, calculated as follows: Present discounted value of: ((0.15 children will respond to treatment) * (0.35 QALY impact of E.I. services for those suffering P.D.D.) * ($50,000 per QALY) = $2,625 , which at present value is $50,000). The present value calculation assumes that E.I. services are provided to three-year-old children and that benefits begin upon intervention and end at age 65. The discount rate is 5 percent.	

Metric #	Name of Metric	Equation

Physical disability

Treatment of physical disability helps some children. For those it does help, we estimate that treatment increases health status by 0.45 QALYs. This estimate is based on the QALY value for moderate physical disability, 0.50 QALY (rising to 0.95 QALY after treatment from 0.50 QALY before treatment = 0.45 QALY) (Cost Effectiveness Analysis Registry, n.d.). We assume, as we did for neurological disabilities, that 15 percent of patients with physical disabilities respond favorably to treatment.

We estimate that the average benefit of providing E.I. services to children with physical disability is $3,375 per child, calculated as follows: ((0.15 children respond to treatment) * (0.45 QALY impact of E.I. services for those suffering physical disability) * ($50,000 per QALY) = $3,375).

Conduct disorder

The intervention for children diagnosed with C.D. is a program to improve the parenting skills of the children's parents. We estimate that two-thirds of the parents enrolled in our grantee's parenting program substantially improve their parenting skills (based on Webster-Stratton, 2005). Children of parents who improve have better overall quality of life and decreased probabilities of later juvenile delinquency.

Better quality of life

We estimate that improved parenting increases the future well-being of children by 0.02 QALYs. This estimate is based on the estimated impact on child well-being of reduced domestic violence (Muennig, 2005). Staff continues to search for better proxies for the impact of improved parenting.

Decreased juvenile delinquency

Research tells us that the juvenile delinquency rate among children from families in poverty is about 9 percent (Ludwig, Duncan & Hirschfeld, 1999). The rates for children with C.D. can be three or four times as high. However, about one-third of these children make significant behavioral improvements as their parents improve their parenting skills (Webster-Stratton, 2005). Therefore, we estimate that about 30 percent of children with C.D. would likely become delinquent (9 percent * 3 times the risk = 27 percent, which we round to 30 percent). One-third of these children will not become delinquent.

We note that juvenile arrest decreases adult earnings by about 22 percent (Joseph, 2001).

We estimate the average future earnings of the children attending our grantee's program to be about $20,000. The estimate is based on earnings estimates from

Metric #	Name of Metric	Equation
		Levin, Belfield, Muennig & Rouse (2007), roughly split between those with a high school degree and those without. The overall benefit of E.I. on C.D. is $8,666 , calculated as follows: (((0.02 QALY impact) *($50,000 per QALY * (0.66 parents will improve)) + (($20,000 future earnings * (0.22 avoidance of decrease due to avoided delinquency) * (0.30 children on way to delinquency) * (0.33 children with improved parents will avoid delinquency)) = $660 + ($436 at present value, assuming the children are 3 years old and that earning benefits begin at age 20, with real growth estimated at 3 percent and discounted at 5 percent, is $8,006) = $8,666). *Overall benefits* Proportional across all types of disability, benefits for children enrolled in E.I services are estimated at about $17,700, calculated as follows: (($50,000 average benefit for children with P.D.D. * 0.25) + ($3,375 average benefit for children with physical disability * 0.25) + ($8,666 average benefit for children with C.D. * 0.50) = $17,677, rounded to $17,700). **References:** Barnett, W. S. (1998). Long-term effects on cognitive development and academic achievement. In W. S. Barnett & S. S. Boocock (Eds.), Early care and education for children in poverty: Promises, programs, and long-term results. Albany, NY: State University of New York Press. Campbell, F. A. & Ramey, C. T. (1995). Cognitive and school outcomes for high-risk African-American students at middle adolescence: Positive effects of early intervention. American Educational Research Journal, 32(4), 743-772. Campbell, F. A., Ramey, C. T., Pungello, E. P., Sparling, J. J. & Miller-Johnson, S. (2002). Early childhood education: Young adult outcomes from the Abecedarian project. Applied Developmental Science, 6, 42-57. Cost Effectiveness Analysis Registry. (n.d.). Retrieved from https://research.tufts-nemc.org/cear4/SearchingtheCEARegistry/SearchtheCEARegistry.aspx Joseph, M. (2001). The effect of arrests on the earnings of young men: Evidence from the National Youth Survey. Chicago, IL: Harris Graduate School of Public Policy, University of Chicago. Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Ludwig, J., Duncan, G. & Hirschfeld, P. (1999). Urban poverty and juvenile crime: Evidence from

Metric #	Name of Metric	Equation
	a randomized housing-mobility experiment. Washington, DC: U.S. Department of Housing and Urban Development. Reynolds, A. J., Temple, J. A. & Ou, S. (2010). Impacts and implications of the Child-Parent Center preschool program. In A. J. Reynolds, A. J. Rolnick, M. M. Englund & J. A. Temple (Eds.), Childhood programs and practices in the first decade of life: A human capital integration (pp. 168-187). New York, NY: Cambridge University Press. Reynolds, A. J, Temple, J. A., Robertson, D. L. & Mann, E. A. (2002). Age 21 cost-benefit analysis of the Title I Chicago Child-Parent Centers. Educational Evaluation and Policy Analysis, 24(4), 267-303. Schweinhart, L., Monti, J., Xiang, Z., Barnett, W. S., Belfield, C. & Nores, M. (2005). Lifetime effects: The High/Scope Perry Preschool study through age 40 (Monographs of the High/Scope Educational Research Foundation No. 14). Ypsilanti, MI: High/Scope Press. Webster-Stratton, C. (2005). The Incredible Years: A training series for the prevention and treatment of conduct problems in young children. In E. D. Hibbs & P. S. Jensen (Eds.), Psychosocial treatments for child and adolescent disorders (2nd ed.). Washington, DC: American Psychological Association.	
109	Homeless prevention: Mental health	(XX recipients) * (25 percent would wind up homeless) * (50 percent of those who would otherwise wind up homeless will benefit solely due to the eviction-prevention program) * (90 percent of those who benefit from the program will stay housed for at least one year) * [(47 percent of homeless individuals suffer from depression) – (18 percent of general poor population suffers from depression)] * (0.33 QALY increase) * ($50,000 per QALY)
	Explanation: The number of recipients is based on the actual number reported by our grantee. The 25 percent figure for those who would wind up homeless is estimated by Robin Hood staff. The 50 percent figure of those who will benefit from an eviction-prevention program is estimated by Robin Hood staff. The 90 percent figure for average housing duration is based on the work of Burt (2001) and Burt & Pearson (2005), who find that 10 percent of people in poverty will fall into homeless in a given year. Our estimate for the percentage of homeless children who would be mentally ill is based on the findings of the National Center for Family Homelessness (1999) and the Family Housing Fund (1999), which report that while approximately 18 percent of children in poverty who are not	

Metric #	Name of Metric	Equation
	homeless suffer from some form of mood disorder, 47 percent of homeless children do—a 29 percentage point difference. We estimate the value of avoiding mental illness at 0.33 QALY, by averaging the QALY values for the avoidance of depression, estimated at 0.30 QALY (especially Frank, McGuire, Normand & Goldman, 1999; Schoenbaum, Sherbourne & Wells, 2005), and avoiding relapse of schizophrenia, estimated at 0.36 QALY (Davies et al., 2008). We additionally extrapolate the benefit to adults. Robin Hood places a value of $50,000 per QALY. **References:** Burt, M. (2001). What will it take to end homelessness? Washington, DC: The Urban Institute. Burt, M. & Pearson, C. (2005). Strategies for preventing homelessness. Washington, DC: The Urban Institute. Davies, A., Vardeva, K., Loze, J., L'Italien, G., Sennfalt, K. & van Baardewijk, M. (2008). Cost-effectiveness of atypical antipsychotics of the management of schizophrenia in the UK. Current Medical Research and Opinion, 24(11), 3275-3285. Family Housing Fund. (1999). Homelessness and its effects on children. Minneapolis, MN: Author. Frank, R., McGuire, T., Normand, S. & Goldman, H. (1999). The value of mental health care at the system level: The case of treating depression. Health Affairs, 18(5), 71-88. National Center for Family Homelessness. (1999). Homeless children: America's new outcasts. Newton Centre, MA: Author. Schoenbaum, M., Sherbourne, C. & Wells, K. (2005). Gender patterns in cost effectiveness of quality improvement for depression: Results of a randomized, controlled trial. Journal of Affective Disorders, 87, 319-325.	
110	Parenting education: Impact on quality of life of children	(XX parents enrolled) * (XX percent of parents get assistance solely because of the program) * (33 percent of parents improve parenting skills) * (0.02 QALY increase) * ($50,000 per QALY)
	Explanation: The number of parents enrolled is based on the actual number reported by our grantee. The percentage of parents who receive assistance solely because of the program is estimated	

Metric #	Name of Metric	Equation
	by Robin Hood staff. Our 33 percent estimate for the percentage of parents who would improve their parenting skills due to a strong parenting intervention is based on Webster-Stratton's (2005) findings. Our estimate for the 0.02 QALY impact on children's quality of life due to improved parenting is based on the estimate for improved family life due to less domestic violence (Muennig, Glied & Simon, 2005). Robin Hood places a value of $50,000 per QALY. **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. Webster-Stratton, C. (2005). The Incredible Years: A training series for the prevention and treatment of conduct problems in young children. In E. D. Hibbs & P. S. Jensen (Eds.), Psychosocial treatments for child and adolescent disorders (2nd ed.). Washington, DC: American Psychological Association.	
111	Job training: Basic life-skills training for developmentally delayed adults with no hope of job placement; impact on health-related quality of life	(XX participants enrolled) * (XX percent of participants get assistance solely because of the program) * (0.04 QALY increase) * ($50,000 per QALY)
	Explanation: The number of participants enrolled is based on the actual number reported by our grantee. The percentage of participants who receive assistance solely because of the program is estimated by Robin Hood staff. Our estimate for the 0.04 QALY impact of job training programs on developmentally delayed adults is based on the concept that employment services, along with other training and education supports, additionally improve the quality of life for many individuals who suffer from mental illness or other issues related to homelessness. When our grantee provides training in self-advocacy, education skills and daily adult living skills along with employment skills, and if there are very low expectations for some individuals to actually find and keep a job, we apply the mental health benefit (Muennig, Glied & Simon, 2005). Robin Hood places a value of $50,000 per QALY.	

Metric #	Name of Metric	Equation
	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.	
112	Attention deficit hyperactivity disorder (A.D.H.D.): Student health-related quality of life	(XX children treated) * (XX percent of children get assistance solely because of the program) * (XX percent of children respond to treatment) * (0.38 QALY increase) * ($50,000 per QALY)
	Explanation: The number of children treated is based on the actual number reported by our grantee. The percentage of children who get assistance solely because of the program is estimated by Robin Hood staff. The percentage of children who respond to treatment is based on the actual number reported by our grantee. Our 0.38 QALY estimate for the improvement in children's quality of life due to an A.D.H.D. intervention is based on a wide reading of the literature, but especially on Matza et al. (2005), who report that A.D.H.D. lowers QALY by about 0.50 in severe cases, and the QALY for a "tolerable" level of A.D.H.D. is about 0.88. We assume that our grantee's intervention or referral at least improves a child's QALY up to the "tolerable" level (0.88 - 0.50 = 0.38). Robin Hood places a value of $50,000 per QALY. **References:** Matza, L., Secnik, K., Rentz, A., Mannix, S., Sallee, F., Gilbert, D. & Revicki, D. (2005). Assessment of health state utilities for attention-deficit/hyperactivity disorder in children using parent proxy. Quality of Life Research, 14(3), 735-747.	
113	Attention deficit hyperactivity disorder (A.D.H.D.): Parental benefit from treatment of child	(XX parents whose children were treated for A.D.H.D.) * (XX percent of children get treatment solely because of the program) * (XX percent of children respond to treatment) * (0.26 QALY increase) * ($50,000 per QALY)
	Explanation: The number of parents whose children were treated for A.D.H.D. is based on the actual number reported by our grantee. The percentage of children who get treatment solely because of the program is estimated by	

Metric #	Name of Metric	Equation
	Robin Hood staff. The percentage of children who respond to treatment is based on the actual number reported by our grantee. Our 0.26 QALY estimate for the improvement in parents' quality of life due to an A.D.H.D. intervention for their children is based on Klassen, Miller & Fine (2004), who report that parents of children with symptoms of A.D.H.D. suffer from decreased quality of life measured at about 0.62 on average. We use the improvement in A.D.H.D. symptoms up to approximately 0.88, which is reported to be a "tolerable" A.D.H.D. level (Matza et al., 2005), and apply it to one parent per child (0.88 – 0.62 = 0.26). Robin Hood places a value of $50,000 per QALY. **References:** Klassen, A., Miller, A. & Fine, S. (2004). Health-related quality of life in children and adolescents who have a diagnosis of attention-deficit/hyperactivity disorder. Pediatrics, 114(5), e541-547. Matza, L., Secnik, K., Rentz, A., Mannix, S., Sallee, F., Gilbert, D. & Revicki, D. (2005). Assessment of health state utilities for attention-deficit/hyperactivity disorder in children using parent proxy. Quality of Life Research, 14(3), 735-747.	
114	Mental health: Basic mental health treatment	(XX participants receive basic mental health therapy) * (XX percent of participants get treatment solely because of the program) * (0.04 QALY increase) * ($50,000 per QALY)
	Explanation: The number of participants who receive basic mental health therapy is based on the actual number reported by our grantee. The percentage of participants who get treatment solely because of the program is estimated by Robin Hood staff. Our estimate for the 0.04 QALY impact of mental health support on quality of life is based on the work of Muennig, Glied & Simon (2005). This benefit is applied to the current year only due to the lack of research evidence indicating that benefits will be stable over the long term. Robin Hood places a value of $50,000 per QALY. **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.	
115	Early childhood: Pervasive development delay (P.D.D.), early intervention	Present discounted value of the following equation: [(XX children with P.D.D.) * (XX percent of children get treatment solely because of the program) * (15 percent of children respond to treatment) *

Metric #	Name of Metric	Equation
	(E.I.)	(0.35 QALY increase) * ($50,000 per QALY)]
	Explanation: The number of children with P.D.D. is based on the actual number reported by our grantee. The percentage of children who get treatment solely because of the program is estimated by Robin Hood staff. We apply the benefit to an estimated 15 percent of children who would respond to treatment based on findings that although Head Start services decrease the number of special education placements by approximately 5 percent (Barnett, 1998), decreases in special education placements are much greater for higher-quality early intervention programs, at approximately 50 percent (Lamy, 2012). We apply 15 percent as a conservative midpoint estimate. Our 0.35 estimate for the impact of E.I. on developmental delay is based on the 0.60 QALY for a moderate level of neurological disability (Cost Effectiveness Analysis Registry, n.d.) to represent the average QALY of children needing some type of E.I. service. If total remediation of developmental delay were possible, then it would be represented by a value of 0.35 QALY (0.95 QALY for close to perfect health - 0.60 QALY for the status of children with developmental delay = 0.35 QALY). Although there are very few instances of total remediation of delay, intervention can improve the educational and social prospects for children such that they may join the mainstream of their age cohort in school. Robin Hood places a value of $50,000 per QALY. Because the effects of an early childhood program can be found at high school graduation, we allow these quality of life benefits to be calculated at present value across the lifetime. **References:** Barnett, W. S. (1998). Long-term effects on cognitive development and academic achievement. In W. S. Barnett & S. S. Boocock (Eds.), Early care and education for children in poverty: Promises, programs, and long-term results. Albany, NY: State University of New York Press. Cost Effectiveness Analysis Registry. (n.d.). Retrieved from https://research.tufts-nemc.org/cear4/SearchingtheCEARegistry/SearchtheCEARegistry.aspx Lamy. C. (2012). Poverty is a knot and preschool is an untangler. In R. Pianta, W. S. Barnett, L. M. Justice & S. M. Sheridan (Eds.), Handbook of early childhood education. New York, NY: Guilford Publications.	
116	Mental health: Treatment of schizophrenia and other severe mental	(XX participants with a severe mental illness) * (XX percent of participants get treatment solely because of the program) * (0.13 QALY increase) * ($50,000 per QALY)

Metric #	Name of Metric	Equation
	illness	
	Explanation: The number of participants with a severe mental illness is based on the actual number reported by our grantee. The percentage of participants who get treatment solely because of the program is estimated by Robin Hood staff. Our estimate for the 0.13 QALY value of the relief of symptoms of severe mental illness is the average QALY value for the treatment of schizophrenia based on recent studies (Andrews, Issakidis, C., Sanderson, S., Corry, J. & Lapsley, 2004; Carr, Lewin & Meil, 2006). Please note that the QALY value already accounts for probabilities of treatment response. Robin Hood places a value of $50,000 per QALY. **References:** Andrews, G., Issakidis, C., Sanderson, S., Corry, J. & Lapsley, H. (2004). Utilising survey data to inform public policy: Comparison of the cost-effectiveness of treatment of ten mental disorders. British Journal of Psychiatry, (184), 526-533. Carr, V. J., Lewin, T. J. & Meil, A. L. (2006). What is the value of treating schizophrenia? Australian and New Zealand Journal of Psychiatry, 40, 963-971.	
117	Mental health: Post-traumatic stress disorder (P.T.S.D.)/depression treatment with best-practice therapy	(XX participants with P.T.S.D. or depression) * (XX percent of participants get treatment solely because of the program) * (0.15 QALY increase) * ($50,000 per QALY)
	Explanation: The number of participants with P.T.S.D. or depression is based on the actual number reported by our grantee. The percentage of participants who get treatment solely because of the program is estimated by Robin Hood staff. Our estimate for the 0.15 QALY value of relief of symptoms of P.T.S.D. or depression due to best practice therapeutic or pharmacological care is based on studies indicating that excellent care of either type improves health-related quality of life by about 0.15 over the baseline (Revicki et al., 2005; Rost, Pyne, Dickinson & LoSasso, 2005). Note that the QALY value already accounts for probabilities of treatment response. Robin Hood places a value of $50,000 per QALY.	

Metric #	Name of Metric	Equation
	References: Revicki, D., Siddique, J., Frank, L., Chung, J., Green, B., Krupnick, J., Prasad, M. & Miranda, J. (2005). Cost-effectiveness of evidence-based pharmacotherapy or cognitive behavioral therapy compared with community referral for major depression in predominantly low-income minority women. Archives of General Psychiatry, 62, 868-875. Rost, K., Pyne, J., Dickinson, L. M. & LoSasso, A. (2005). Cost-effectiveness of enhancing primary care depression management on an ongoing basis. Annals of Family Medicine, 3(1), 7-14.	
118	Mental health: Post-traumatic stress disorder (P.T.S.D.)/depression treatment with usual care	(XX participants with P.T.S.D. or depression) * (XX percent of participants get treatment solely because of the program) * (0.05 QALY increase) * ($50,000 per QALY)
	Explanation: The number of participants with P.T.S.D. or depression is based on the actual number reported by our grantee. The percentage of participants who get treatment solely because of the program is estimated by Robin Hood staff. Our estimate for the 0.05 QALY value of relief of symptoms of P.T.S.D. or depression through the usual care found in typical clinics is based primarily on the findings of Revicki et al. (2005) and Rost, Pyne, Dickinson & LoSasso (2005). Note that the QALY value already accounts for probabilities of treatment response. Robin Hood places a value of $50,000 per QALY. **References:** Revicki, D., Siddique, J., Frank, L., Chung, J., Green, B., Krupnick, J., Prasad, M. & Miranda, J. (2005). Cost-effectiveness of evidence-based pharmacotherapy or cognitive behavioral therapy compared with community referral for major depression in predominantly low-income minority women. Archives of General Psychiatry, 62, 868-875. Rost, K., Pyne, J., Dickinson, L. M. & LoSasso, A. (2005). Cost-effectiveness of enhancing primary care depression management on an ongoing basis. Annals of Family Medicine, 3(1), 7-14.	
119	Reduced hospitalizations: Mentally ill children	(XX children with a severe mental illness) * (XX percent of children get treatment solely because of the program) * (XX percent of children respond to treatment and avoid psychiatric hospitalization) * (0.36 QALY increase) * ($50,000 per QALY)

Metric #	Name of Metric	Equation
	Explanation: The number of children with a severe mental illness is based on the actual number reported by our grantee. The percentage of children who get treatment solely because of the program is estimated by Robin Hood staff. The percentage of children who respond to treatment is based on the actual number reported by our grantee. We estimate the value of avoiding hospitalization for mental illness at 0.36 QALY based on research estimating the value of avoiding relapse of schizophrenia (Davies et al., 2008). This QALY value may very well underestimate the benefit for these children. Robin Hood places a value of $50,000 per QALY. **References:** Davies, A., Vardeva, K., Loze, J., L'Italien, G., Sennfalt, K. & van Baardewijk, M. (2008). Cost-effectiveness of atypical antipsychotics of the management of schizophrenia in the UK. Current Medical Research and Opinion, 24(11), 3275-3285.	
120	Reduced hospitalizations: Mentally ill adults	[(XX participants hospitalized during the year)/(0.7 to represent a 30 percent decrease in hospitalizations) – (XX participants hospitalized during the year)] * (XX percent of participants get assistance solely because of the program) * (80 percent of participants hospitalized as a result of a mental illness) * (0.33 QALY increase) * ($50,000 per QALY)
	Explanation: The number of participants hospitalized during the year is based on the actual number reported by our grantee. Our estimate for a 30 percent decrease in hospitalizations for people receiving supportive housing is based on research indicating that the provision of supportive housing reduces the number of previously homeless people needing hospitalizations by about 30 to 40 percent (Culhane, Metreaux & Hadley, 2002; Martinez & Burt, 2006; Sadowski, Kee, VanderWeele & Buchanan, 2009). We apply the lower estimate. We estimate that 80 percent of those who are housed in supportive housing and who avoided hospitalization would have been hospitalized due to mental illness or substance abuse conditions based on research indicating that approximately 80 percent of homeless people have primary or secondary mental illness/substance abuse conditions (Salit, Kuhn, Hartz, Vu & Mosso, 1998). We estimate the 0.33 QALY value of avoiding hospitalization for mental illness/substance abuse	

Metric #	Name of Metric	Equation
	conditions at 0.33 QALY, by averaging the QALY values for the avoidance of depression, estimated at 0.30 QALY (especially Frank, McGuire, Normand & Goldman, 1999; Schoenbaum, Sherbourne & Wells, 2005), and avoiding relapse of schizophrenia, estimated at 0.36 QALY (Davies et al., 2008). Robin Hood places a value of $50,000 per QALY. References: Cost Effectiveness Analysis Registry. (n.d.). Retrieved from https://research.tufts-nemc.org/cear4/SearchingtheCEARegistry/SearchtheCEARegistry.aspx Culhane, D. P., Metreaux, S. & Hadley, T. (2002). The impact of supportive housing for homeless people with severe mental illness on the utilization of the public health, correcting, and emergency shelter systems: The New York-New York Initiative. Washington, DC: Fannie Mae Foundation. Davies, A., Vardeva, K., Loze, J., L'Italien, G., Sennfalt, K. & van Baardewijk, M. (2008). Cost-effectiveness of atypical antipsychotics of the management of schizophrenia in the UK. Current Medical Research and Opinion, 24(11), 3275-3285. Family Housing Fund. (1999). Homelessness and its effects on children. Minneapolis, MN: Author. Frank, R., McGuire, T., Normand, S. & Goldman, H. (1999). The value of mental health care at the system level: The case of treating depression. Health Affairs, 18(5), 71-88. Martinez, T. E. & Burt, M. (2006). Impact of permanent supportive housing on the use of acute care health services by homeless adults. Psychiatric Services: A Journal of the American Psychiatric Association, 57(7), 992-999. Sadowski, L., Kee, R., VanderWeele, T. & Buchanan, D. (2009). Effect of a housing and case management program on emergency department visits and hospitalizations among chronically ill homeless adults: A randomized trial. Journal of the American Medical Association, 301(17), 1771-1777. Salit, S., Kuhn, E., Hartz, A., Vu, J. & Mosso, A. (1998). Hospitalization costs associated with homelessness in New York City. New England Journal of Medicine, 338(24), 1734-1740. Schoenbaum, M., Sherbourne, C. & Wells, K. (2005). Gender patterns in cost effectiveness of quality improvement for depression: Results of a randomized, controlled trial. Journal of Affective Disorders, 87, 319-325.	
121	Domestic violence: Reduction of chronic health problems by reducing abuse	(XX participants) * (XX percent of participants get assistance solely because of the program) * (65 percent of participants would continue to be abused without the program) * [(50 percent of abused women are chronically ill) – (25 percent counterfactual rate

Metric #	Name of Metric	Equation
		of chronic illness among poor women)] * (50 percent reduction in chronic illness due to reduced abuse) * (0.10 QALY increase) * ($50,000 per QALY)
	Explanation: The number of participants is based on the actual number reported by our grantee. The percentage of participants who get assistance solely because of the program is estimated by Robin Hood staff. We conservatively estimate a 65 percent future abuse rate based on research findings that the typical re-assault rate for women suffering from interpersonal violence (I.P.V.) is approximately 65 percent, with much higher rates of re-assault once a pattern of abuse has been established (McFarlane et al., 2005; Willson, McFarlane, Lemmey & Malecha, 2001). We subtract a 25 percent baseline rate of chronic illness for women in poverty from a 50 percent rate for women experiencing I.P.V. based on research that indicates women experiencing I.P.V. suffer from chronic illnesses at double the rate of their similar peers (Campbell et al., 2002; Wise, Wampler, Clarkin & Romero, 2002). Our 50 percent estimate for the effect of our grantee's work is our best guess, based loosely on the findings that most interventions for children with post-traumatic stress disorder are approximately 50 percent effective (Cohen, Deblinger, Mannarino & Steer, 2004). Our 0.10 QALY value estimate for the value of avoiding chronic illness is based on the average difference in QALY between those with totally controlled versus not well controlled asthma (Briggs, Wallace, Clark & Bateman, 2006). Because asthma is the most prevalent chronic illness afflicting poor children, it provides a conservative estimate for the cost of chronic illness in terms of quality of life—conservative because people in poverty often suffer from multiple chronic illnesses. Robin Hood places a value of $50,000 per QALY. **References:** Briggs, A., Wallace, M., Clark, T. & Bateman, E. (2006). Cost-effectiveness of asthma control: An economic appraisal of the GOAL study. Allergy, 61, 531-536. Campbell, J., Jones, A., Dienemann, J., Kub, J., Schollenberger, J., O'Campo, P., Gielen, A. & Wynne, C. (2002). Intimate partner violence and physical health consequences. Archives of Internal Medicine, 162(10), 1157-1163. Cohen, J., Deblinger, E., Mannarino, A. & Steer, R. (2004). A multisite, randomized controlled trial for children with sexual abuse-related P.T.S.D. symptoms. Journal of the American Academy of Child and Adolescent Psychiatry, 43(4), 393-402. McFarlane, J., Malecha, A., Watson, K., Gist, J., Batten, E., Hall, I. & Smith, S. (2005). Intimate	

Metric #	Name of Metric	Equation
	partner sexual assault against women: Frequency, health consequences, and treatment outcomes. Obstetrics and Gynecology, 105(1), 99-108. Willson, P., McFarlane, J., Lemmey, D. & Malecha, A. (2001). Referring abused women: Does police assistance decrease abuse? Clinical Nursing Research, 10(1), 69-81. Wise, P., Wampler, N., Clarkin, W. & Romero, D. (2002). Chronic illness among poor children enrolled in the temporary assistance for needy families program. American Journal of Public Health, 92(9), 1458-1461.	
122	Improved well-being for children because of reduced abuse	(XX children in program) * (XX percent of children are likely to have been abused) * (XX percent of children get assistance solely because of the program) * (65 percent of children would continue to be abused without the program) * (50 percent of children avoid further abuse due to the program) * ($24,000 value of avoided abuse)
	Explanation: The number of children in the program is based on the actual number reported by our grantee. The percentage of children who are likely to have been abused is based on the actual number reported by our grantee. The percentage of children who get assistance solely because of the program is estimated by Robin Hood staff. We conservatively estimate a 65 percent future abuse rate for abused children based on research findings that the typical re-assault rate for women suffering from interpersonal violence is approximately 65 percent, with much higher rates of re-assault once a pattern of abuse has been established (McFarlane et al., 2005; Willson, McFarlane, Lemmey & Malecha, 2001). We extrapolate these findings for abused women to children in similar situations. Our 50 percent estimate for the effect of our grantee's work is our best guess, based loosely on the findings that most interventions for children with post-traumatic stress disorder are approximately 50 percent effective (Cohen, Deblinger, Mannarino & Steer, 2004). Our $24,000 estimate for the value of avoiding abuse is based on research that estimates the cost of a "case" of childhood abuse on the abused child's future quality of life and individual health care costs, including mental health, and decreased earnings (Aos, Lieb, Mayfield, Miller & Pennucci, 2004). This estimate, $23,900, which we round to $24,000, is already calculated across the lifetime at net present value. Note that we apply this estimated benefit to a reduction in future abuse, although a "case" of abuse may already have occurred for which future remediation is not possible. References:	

Metric #	Name of Metric	Equation
	Aos, S., Lieb, R., Mayfield, J., Miller, M. & Pennucci, A. (2004). Benefits and costs of prevention and early intervention programs for youth. Olympia, WA: Washington State Institute for Public Policy. Cohen, J., Deblinger, E., Mannarino, A. & Steer, R. (2004). A multisite, randomized controlled trial for children with sexual abuse-related P.T.S.D. symptoms. Journal of the American Academy of Child and Adolescent Psychiatry, 43(4), 393-402. McFarlane, J., Malecha, A., Watson, K., Gist, J., Batten, E., Hall, I. & Smith, S. (2005). Intimate partner sexual assault against women: Frequency, health consequences, and treatment outcomes. Obstetrics and Gynecology, 105(1), 99-108. Willson, P., McFarlane, J., Lemmey, D. & Malecha, A. (2001). Referring abused women: Does police assistance decrease abuse? Clinical Nursing Research, 10(1), 69-81.	
123	Domestic violence: Improved well-being for adults because of reduced abuse	(XX participants) * (XX percent of participants get assistance solely because of the program) * (65 percent of participants would continue to be abused without the program) * (50 percent of participants avoid further abuse due to the program) * ($24,000 value of avoided abuse)
	Explanation: The number of participants in the program is based on the actual number reported by our grantee. The percentage of participants who get assistance solely because of the program is estimated by Robin Hood staff. We conservatively estimate a 65 percent future abuse rate based on research findings that the typical re-assault rate for women suffering from interpersonal violence is approximately 65 percent, with much higher rates of re-assault once a pattern of abuse has been established (McFarlane et al., 2005; Willson, McFarlane, Lemmey & Malecha, 2001). Our 50 percent estimate for the effect of our grantee's work is our best guess, based loosely on the findings that most interventions for children with post-traumatic stress disorder are approximately 50 percent effective (Cohen, Deblinger, Mannarino & Steer, 2004). Our $24,000 estimate for the value of avoiding abuse is based on research that estimates the cost of a "case" of childhood abuse on the abused child's future quality of life and individual health care costs, including mental health, and decreased earnings (Aos, Lieb, Mayfield, Miller & Pennucci, 2004). This estimate, $23,900, which we round to $24,000, is already calculated across the lifetime at net present value. Note that we extrapolate this finding from children to adults and that we apply this estimated benefit to a reduction in future abuse, although a "case" of abuse may already have occurred for which future remediation is not possible.	

Metric #	Name of Metric	Equation
	References: Aos, S., Lieb, R., Mayfield, J., Miller, M. & Pennucci, A. (2004). Benefits and costs of prevention and early intervention programs for youth. Olympia, WA: Washington State Institute for Public Policy. Cohen, J., Deblinger, E., Mannarino, A. & Steer, R. (2004). A multisite, randomized controlled trial for children with sexual abuse-related P.T.S.D. symptoms. Journal of the American Academy of Child and Adolescent Psychiatry, 43(4), 393-402. McFarlane, J., Malecha, A., Watson, K., Gist, J., Batten, E., Hall, I. & Smith, S. (2005). Intimate partner sexual assault against women: Frequency, health consequences, and treatment outcomes. Obstetrics and Gynecology, 105(1), 99-108. Willson, P., McFarlane, J., Lemmey, D. & Malecha, A. (2001). Referring abused women: Does police assistance decrease abuse? Clinical Nursing Research, 10(1), 69-81.	
124	Domestic violence: Reduction in major injuries because of reduced abuse	(XX participants) * (XX percent of participants get assistance solely because of the program) * (65 percent of participants would continue to be abused without the program) * (12 percent of abused women would be injured badly enough to need medical care) * (25 percent of injured women would suffer major injuries) * (50 percent of participants avoid further abuse due to the program) * (0.25 QALY increase) * ($50,000 per QALY)
	Explanation: The number of participants in the program is based on the actual number reported by our grantee. The percentage of participants who get assistance solely because of the program is estimated by Robin Hood staff. We conservatively estimate a 65 percent future abuse rate based on research findings that the typical re-assault rate for women suffering from interpersonal violence (I.P.V.) is approximately 65 percent, with much higher rates of re-assault once a pattern of abuse has been established (McFarlane et al., 2005; Willson, McFarlane, Lemmey & Malecha, 2001). Our 12 percent estimate for the percentage of badly injured I.P.V. victims is based on research that finds that I.P.V. leads to injury for 42 percent of victims, only considering the most recent assault, and that of those, 28 percent are injured badly enough to get medical care (Tjaden & Thoennes, 2000). From this, we estimate that 12 percent of all victims are injured enough to need medical care (28% of 42% = 12%). Our 25 percent estimate for the percentage of injured victims who would suffer major injuries is based on Tjaden & Thoennes (2000), who find that while 75 percent of those who are injured	

Metric #	Name of Metric	Equation
	receive "minor" injuries characterized by bruising, scratches or welts, 25 percent receive more severe injuries. Our 50 percent estimate for the effect of our grantee's work is our best guess, based loosely on the findings that most interventions for children with post-traumatic stress disorder are approximately 50 percent effective (Cohen, Deblinger, Mannarino & Steer, 2004). We base the 0.25 QALY estimate for the value of avoiding major injury on the estimated QALY values for corresponding Maximum Abbreviated Injury Score (MAIS) scores equal to or greater than 2 (Cost Effectiveness Analysis Registry, n.d.), for an average around 0.75. Robin Hood places a value of $50,000 per QALY. **References:** Cohen, J., Deblinger, E., Mannarino, A. & Steer, R. (2004). A multisite, randomized controlled trial for children with sexual abuse-related P.T.S.D. symptoms. Journal of the American Academy of Child and Adolescent Psychiatry, 43(4), 393-402. Cost Effectiveness Analysis Registry. (n.d.). Retrieved from https://research.tufts-nemc.org/cear4/SearchingtheCEARegistry/SearchtheCEARegistry.aspx McFarlane, J., Malecha, A., Watson, K., Gist, J., Batten, E., Hall, I. & Smith, S. (2005). Intimate partner sexual assault against women: Frequency, health consequences, and treatment outcomes. Obstetrics and Gynecology, 105(1), 99-108. Tjaden, P. & Thoennes, N. (2000). Extent, nature, and consequences of intimate partner violence: Findings from the National Violence against Women Survey. Washington, DC: U.S. Department of Justice, Office of Justice Programs, National Institute of Justice and the Centers for Disease Control. Willson, P., McFarlane, J., Lemmey, D. & Malecha, A. (2001). Referring abused women: Does police assistance decrease abuse? Clinical Nursing Research, 10(1), 69-81.	
125	Domestic violence: Reduction in minor injuries because of reduced abuse	(XX participants) * (XX percent of participants get assistance solely because of the program) * (65 percent of participants would continue to be abused without the program) * (12 percent of abused women would be injured badly enough to need medical care) * (75 percent of injured women would suffer minor injuries) * (50 percent of participants avoid further abuse due to the program) * (0.04 QALY increase) * ($50,000 per QALY)
	Explanation: The number of participants in the program is based on the actual number reported by our grantee. The percentage of participants who get assistance solely because of the program is estimated	

Metric #	Name of Metric	Equation
	by Robin Hood staff. We conservatively estimate a 65 percent future abuse rate based on research findings that the typical re-assault rate for women suffering from interpersonal violence (I.P.V.) is approximately 65 percent, with much higher rates of re-assault once a pattern of abuse has been established (McFarlane et al., 2005; Willson, McFarlane, Lemmey & Malecha, 2001). Our 12 percent estimate for the percentage of badly injured I.P.V. victims is based on research that finds that I.P.V. leads to injury for 42 percent of victims, only considering the most recent assault, and that of those, 28 percent are injured badly enough to get medical care (Tjaden & Thoennes, 2000). From this, we estimate that 12 percent of all victims are injured enough to need medical care (28% of 42% = 12%). Our 75 percent estimate for the percentage of injured victims who would suffer minor injuries is based on Tjaden & Thoennes (2000), who find that 75 percent of those who are injured receive "minor" injuries characterized by bruising, scratches or welts. Our 50 percent estimate for the effect of our grantee's work is our best guess, based loosely on the findings that most interventions for children with post-traumatic stress disorder are approximately 50 percent effective (Cohen, Deblinger, Mannarino & Steer, 2004). We estimate the 0.04 QALY value for the avoidance of minor injuries to be about 0.96, which is the QALY associated with living after hospitalization with trauma (Cost Effectiveness Analysis Registry, n.d.) (1.00 – 0.96 = 0.04). Robin Hood places a value of $50,000 per QALY. **References:** Cohen, J., Deblinger, E., Mannarino, A. & Steer, R. (2004). A multisite, randomized controlled trial for children with sexual abuse-related P.T.S.D. symptoms. Journal of the American Academy of Child and Adolescent Psychiatry, 43(4), 393-402. Cost Effectiveness Analysis Registry. (n.d.). Retrieved from https://research.tufts-nemc.org/cear4/SearchingtheCEARegistry/SearchtheCEARegistry.aspx McFarlane, J., Malecha, A., Watson, K., Gist, J., Batten, E., Hall, I. & Smith, S. (2005). Intimate partner sexual assault against women: Frequency, health consequences, and treatment outcomes. Obstetrics and Gynecology, 105(1), 99-108. Tjaden, P. & Thoennes, N. (2000). Extent, nature, and consequences of intimate partner violence: Findings from the National Violence against Women Survey. Washington, DC: U.S. Department of Justice, Office of Justice Programs, National Institute of Justice and the Centers for Disease Control. Willson, P., McFarlane, J., Lemmey, D. & Malecha, A. (2001). Referring abused women: Does police assistance decrease abuse? Clinical Nursing Research, 10(1), 69-81.

Metric #	Name of Metric	Equation
126	Domestic violence: Adult deaths averted	(XX participants) * (XX percent of participants get assistance solely because of the program) * (65 percent of participants would continue to be abused without the program) * (0.1 percent of women suffering abuse would be killed) * (50 percent of abused women saved from death due to the program) * ($4,000,000 per life saved)
	Explanation: The number of participants in the program is based on the actual number reported by our grantee. The percentage of participants who get assistance solely because of the program is estimated by Robin Hood staff. We conservatively estimate a 65 percent future abuse rate based on research findings that the typical re-assault rate for women suffering from interpersonal violence (I.P.V.) is approximately 65 percent, with much higher rates of re-assault once a pattern of abuse has been established (McFarlane et al., 2005; Willson, McFarlane, Lemmey & Malecha, 2001). Our 0.1 percent estimate for the homicide of women who are abused is from the National Center for Injury Prevention and Control (2003). However, concerning women who leave their home because they are afraid and seek help from our grantee, the odds of domestic homicide are probably much higher because prior I.P.V. increases the risk of domestic homicide 15-fold (National Center for Injury Prevention and Control, 2003). We leave the increase in the risk aside and conservatively use the one-tenth of 1 percent estimate. Our 50 percent estimate for the effect of our grantee's work is our best guess, based loosely on the findings that most interventions for children with post-traumatic stress disorder are approximately 50 percent effective (Cohen, Deblinger, Mannarino & Steer, 2004). Although the value of human life is incalculable, economists face a difficult task to include the value of saved lives in benefit-cost analyses. We borrow from the literature on the value of statistical life (V.S.L.), which is used by government agencies to determine policies in environmental protection and transportation safety. Our $4 million V.S.L. estimate is based on Kenkel's (2001; 2006) findings that the average V.S.L. in 1990 dollars is $4.8 million, with a confidence interval of $3.2 million. We apply a conservative, current dollar, midrange estimate of $4 million. **References:** Cohen, J., Deblinger, E., Mannarino, A. & Steer, R. (2004). A multisite, randomized controlled trial for children with sexual abuse-related P.T.S.D. symptoms. Journal of the American Academy of Child and Adolescent Psychiatry, 43(4), 393-402. Kenkel, D. (2001). Using estimates of the value of a statistical life in evaluating regulatory effects. In Valuing the health benefits of food safety: A proceedings. Washington, DC: U.S.	

Metric #	Name of Metric	Equation
	Department of Agriculture Misc. Pub. No. 1570. Electronic Report from the Economic Research Service. Kenkel, D. (2006). WTP- and QALY-based approaches to valuing health for policy: Common ground and disputed territory. Environmental & Resource Economics, 34, 419-437. McFarlane, J., Malecha, A., Watson, K., Gist, J., Batten, E., Hall, I. & Smith, S. (2005). Intimate partner sexual assault against women: Frequency, health consequences, and treatment outcomes. Obstetrics and Gynecology, 105(1), 99-108. National Center for Injury Prevention and Control. (2003). Costs of intimate partner violence against women in the United States. Atlanta, GA: Centers for Disease Control and Prevention.	
127	Death averted: Infant deaths averted	(XX women in program while pregnant) * (XX percent of women get assistance solely because of the program) * (1 percent of infants would die without intervention) * (60 percent of infants saved from death due to the program) * ($4,000,000 per life saved)
	Explanation: The number of women in the program while pregnant is based on the actual number reported by our grantee. The percentage of women who get assistance solely because of the program is estimated by Robin Hood staff. Our 1 percent estimate for the percentage of baseline infant deaths for high-risk families is based on the average infant mortality rate for minority families in New York City (Bureau of Vital Statistics, 2010). Our 60 percent estimate for the percentage of infant deaths averted is based on the findings of Donovan et al. (2007), who report that Nurse Family Partnership and Healthy Families America enrollment prenatally is associated with an average 60 percent decrease in the risk of infant death before one year of age, in an urban sample. Although the value of human life is incalculable, economists face a difficult task to include the value of saved lives in benefit-cost analyses. We borrow from the literature on the value of statistical life (V.S.L.), which is used by government agencies to determine policies in environmental protection and transportation safety. Our $4 million V.S.L. estimate is based on Kenkel's (2001; 2006) findings that the average V.S.L. in 1990 dollars is $4.8 million, with a confidence interval of $3.2 million. We apply a conservative, current dollar, midrange estimate of $4 million. **References:** Bureau of Vital Statistics. (2010). Summary of vital statistics 2009: The City of New York. Table 3.3. New York, NY: Bureau of Vital Statistics, New York City Department of Health and Mental	

Metric #	Name of Metric	Equation
	Hygiene. Donovan, E., Ammerman, R., Besl, J., Atherton, H., Khoury, J., Altaye, M., Putnam, F. and Van Ginkel, J. (2007). Intensive home visiting is associated with decreased risk of infant death. Pediatrics, 119, 1145-1151. Kenkel, D. (2001). Using estimates of the value of a statistical life in evaluating regulatory effects. In Valuing the health benefits of food safety: A proceedings. Washington, DC: U.S. Department of Agriculture Misc. Pub. No. 1570. Electronic Report from the Economic Research Service. Kenkel, D. (2006). WTP- and QALY-based approaches to valuing health for policy: Common ground and disputed territory. Environmental & Resource Economics, 34, 419-437.	
128	Death averted: Deaths averted by training addicts to treat overdose	(XX addicts trained to inject Naloxone) * (XX percent of addicts get training solely because of the program) * (7 percent of addicts will use their training to reverse an overdose) * (5 percent of overdoses would be fatal without the program) * ($4,000,000 per life saved)
	Explanation: The number of addicts trained to inject Naloxone is based on the actual number reported by our grantee. The percentage of addicts who get training solely because of the program is estimated by Robin Hood staff. Our 7 percent estimate for the percentage of addicts reversing an overdose is based on the findings of Piper et al. (2007). During the first year of a New York City program to train substance users to reverse overdose, 1,445 users were trained. Of those, about 104, or approximately 7 percent, reported using their training to reverse overdoses over a period of about 17 months. Our 5 percent estimate for the baseline percentage of fatal overdoses is based on Sporer (1999), who reports that approximately 5 percent of overdoses that are witnessed by others are fatal. Although the value of human life is incalculable, economists face a difficult task to include the value of saved lives in benefit-cost analyses. We borrow from the literature on the value of statistical life (V.S.L.), which is used by government agencies to determine policies in environmental protection and transportation safety. Our $4 million V.S.L. estimate is based on Kenkel's (2001; 2006) findings that the average V.S.L. in 1990 dollars is $4.8 million, with a confidence interval of $3.2 million. We apply a conservative, current dollar, midrange estimate of $4 million. **References:** Kenkel, D. (2001). Using estimates of the value of a statistical life in evaluating regulatory effects. In Valuing the health benefits of food safety: A proceedings. Washington, DC: U.S.	

Metric #	Name of Metric	Equation
	Department of Agriculture Misc. Pub. No. 1570. Electronic Report from the Economic Research Service. Kenkel, D. (2006). WTP- and QALY-based approaches to valuing health for policy: Common ground and disputed territory. Environmental & Resource Economics, 34, 419-437. Piper, T., Rudenstine, S., Stancliff, S., Sherman, S., Nandi, V., Clear, A. & Galea, S. (2007). Overdose prevention for injection drug users: Lessons learned from naloxone training and distribution programs in New York City. Harm Reduction Journal, 4(3). Sporer, K. (1999). Acute heroin overdose. Annals of Internal Medicine, 130(7), 584-590.	
129	Death averted: Deaths averted by reducing repeat criminality	(XX participants in program) * (XX percent of participants get assistance solely because of the program) * [(XX percent of initial offenders would recidivate without treatment) – (XX percent recidivate despite treatment)] * (0.3 percent reduced risk of death due to reduced recidivism) * ($4,000,000 per life saved)
	Explanation: The number of participants in the program is based on the actual number reported by our grantee. The percentage of participants who get assistance solely because of the program is estimated by Robin Hood staff. The percentage of initial offenders who would recidivate without treatment is estimated by Robin Hood staff. The percentage of participants who recidivate despite treatment is based on the actual number reported by our grantee. Our 0.3 percent estimate for the percentage of deaths averted by reducing repeat criminality is based on the findings of Binswanger et al. (2007), which indicate that for inmates released from prison, the risk of death increases to 3.5 times the average rate of the general population, even after controlling for age, race and gender. We apply this estimated increase over a baseline death rate for adolescent black males ages 15 to 19 of 124/100,000 based on the Kaiser Family Foundation (2006). Although the value of human life is incalculable, economists face a difficult task to include the value of saved lives in benefit-cost analyses. We borrow from the literature on the value of statistical life (V.S.L.), which is used by government agencies to determine policies in environmental protection and transportation safety. Our $4 million V.S.L. estimate is based on Kenkel's (2001; 2006) findings that the average V.S.L. in 1990 dollars is $4.8 million, with a confidence interval of $3.2 million. We apply a conservative, current dollar, midrange estimate of $4 million. **References:**	

Metric #	Name of Metric	Equation
	Binswanger, I., Stern, M., Deyo, R., Heagerty, P., Cheadle, A., Elmore, J. & Koepsell, T. (2007). Release from prison: A high risk of death for former inmates. New England Journal of Medicine, 356, 157-165. Kaiser Family Foundation. (2006, July). Race, Ethnicity & Health Care Fact Sheet. Menlo Park, CA: Author. Kenkel, D. (2001). Using estimates of the Value of a Statistical Life in evaluating regulatory effects. In Valuing the health benefits of food safety: A proceedings. Washington, DC: U.S. Department of Agriculture Misc. Pub. No. 1570. Electronic Report from the Economic Research Service. Kenkel, D. (2006). WTP- and QALY-based approaches to valuing health for policy: Common ground and disputed territory. Environmental & Resource Economics, 34, 419-437.	
130	Education: Health benefit due to graduation from high school	(XX participating high school students, adjusted, who enter high school as ninth graders) * [(XX percent actual high school graduation rate) – (50 percent counterfactual graduation rate)] * (1.80 QALY increase) * ($50,000 per QALY)
	Explanation: The number of students is based on the actual number reported by our grantee. The percentage of students who graduate from high school is based on the actual number reported by our grantee. We account for a 50 percent baseline rate of high school graduation for minority students, reported by the New York City Department of Education (2009) and corroborated widely in the research literature. Our 1.80 QALY estimate for the impact of high school graduation on better health is based on the work of Muennig (Muennig, Franks & Gold, 2005; Levin, Belfield, Muennig & Rouse, 2007). Robin Hood places a value of $50,000 per QALY. **References:** Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Muennig, P., Franks, P. & Gold, M. (2005). The cost effectiveness of health insurance. American Journal of Preventive Medicine, 28(1), 59-64. New York City Department of Education. (2009). High school graduation rate rises above 60 percent. Retrieved from http://schools.nyc.gov/Offices/mediarelations/NewsandSpeeches/2008-2009/20090622_grad_rates.htm	

Metric #	Name of Metric	Equation
131	Education: Health benefit due to impact of early-childhood program on high school graduation	(XX participating students) * (50 percent of children graduate from high school on average) * (30 percent increase in the high school graduation rate solely because of the program) * (1.80 QALY increase) * ($50,000 per QALY)

Explanation:

The number of students is based on the actual number reported by our grantee.

We account for a 50 percent baseline rate of high school graduation for minority students, reported by the New York City Department of Education (2009) and corroborated widely in the research literature.

We apply a 30 percent estimated average increase in the rate of high school graduation due to attendance in high-quality preschool based on the findings of well-known, gold-standard longitudinal studies—a rough average across the high school graduation findings of the Abecedarian (Campbell & Ramey, 2010), Perry (Schweinhart et al., 2005) and Chicago (Reynolds, Temple & Ou, 2010) studies.

Our 1.80 QALY estimate for the impact of high school graduation on better health is based on the work of Muennig (Muennig, Franks & Gold, 2005; Levin, Belfield, Muennig & Rouse, 2007).

Robin Hood places a value of $50,000 per QALY.

References:

Campbell, F. A. & Ramey, C. T. (2010). Carolina Abecedarian Project. In A. J. Reynolds, A. J. Rolnick, M. M. Englund & J. A. Temple (Eds.), Childhood programs and practices in the first decade of life: A human capital integration (pp. 76-98). New York, NY: Cambridge University Press.

Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University.

Muennig, P., Franks, P. & Gold, M. (2005). The cost effectiveness of health insurance. American Journal of Preventive Medicine, 28(1), 59-64.

New York City Department of Education. (2009). High school graduation rate rises above 60 percent. Retrieved from http://schools.nyc.gov/Offices/mediarelations/NewsandSpeeches/2008-2009/20090622_grad_rates.htm

Reynolds, A. J., Temple, J. A. & Ou, S. (2010). Impacts and implications of the Child-Parent Center preschool program. In A. J. Reynolds, A. J. Rolnick, M. M. Englund & J. A. Temple (Eds.), Childhood programs and practices in the first decade of life: A human capital integration (pp. 168-187). New York, NY: Cambridge University Press.

Schweinhart, L., Monty, J., Xiang, Z., Barnett, W. S., Belfield, C. & Nores, M. (2005). Lifetime effects: The High/Scope Perry Preschool Study through age 40 (Monographs of the High/Scope

Metric #	Name of Metric	Equation
	Educational Research Foundation No. 14). Ypsilanti, MI: High/Scope Press.	
132	Education: Health benefit from earning a high school equivilency diploma plus attending college for at least one year	(XX participants who pass the high school equivilency exam) * [(XX percent of high school equivilency holders who complete a year of college) – (20 percent of high school equivilency holders enroll in college) * (50 percent counterfactual success rate)]* (1.80 QALY increase) * ($50,000 per QALY)
	Explanation: The number of students who pass the high school equivilency testis based on the actual number reported by our grantee. The percentage of high school equivilency holders who complete a year of college is based on the actual number reported by our grantee. We account for a counterfactual one-year college retention rate for high school equivilency holders, based on a body of research indicating that approximately 20 percent of high school equivilency holders enroll in college and half of them will drop out during the first year (Murnane, Willet & Boudett, 1997; Schuyler Center for Analysis and Advocacy, 2009; Tyler & Lofstrom, 2008). Our 1.80 QALY estimate for the impact of high school graduation on better health is based on the work of Muennig (Muennig, Franks & Gold, 2005; Levin, Belfield, Muennig & Rouse, 2007). Robin Hood places a value of $50,000 per QALY. **References:** Levin, H., Belfield, C., Muennig, P. & Rouse, C. (2007). The costs and benefits of an excellent education for all of America's children. New York, NY: Teacher's College, Columbia University. Muennig, P., Franks, P. & Gold, M. (2005). The cost effectiveness of health insurance. American Journal of Preventive Medicine, 28(1), 59-64. Murnane, R., Willet, J. & Boudett, K. (1997). Does a GED lead to more training, post-secondary education, and military service for school drop outs? Industrial and Labor Relations Review, 51(1), 100-116. Schuyler Center for Analysis and Advocacy. (2009). Getting serious about the GED: How New York can build a bridge from high school dropout to postsecondary success. Albany, NY: Author. Tyler, J. H. & Lofstrom, M. (2008). Is the GED an effective route to postsecondary education for school dropouts? (Working Paper No. 13816). Cambridge, MA: National Bureau of Economic Research.	

Metric #	Name of Metric	Equation
133	Job training and placement: Health insurance acquisition by graduates of job-training programs	Present discounted value of the following equation: [(XX participants enter the program) * (XX percent of participants who enter training, graduate and remain employed for at least one year solely because of the program) * [(XX percent of participants who acquire health insurance through their new employment) – (YY percent counterfactual health insurance rate, the rate at which these participants would likely have health insurance in the absence of the training)] * (0.07 QALY increase per year) * ($50,000 per QALY)]
	Explanation: The number of participants who enter the training program and the percentage that stay in a job for at least one year are based on the actual numbers reported by our grantee. Some percentage of placed and retained enrollees will receive health insurance through their new employer. We count here only those receiving health insurance, based on the actual percentages reported by our grantee, who did not have health insurance before their new employment. If we cannot get this data directly, we estimate health insurance coverage by the number of new employees with fringe benefits. We value this benefit by estimating the value of the health insurance on quality of life, and only for those trainees who have been retained in employment at least one year. Our 0.07 QALY estimate for the value of one year of access to health care is based on Muennig, Glied & Simon (2005). Because the health benefits are linked to employment for the length of employment, we allow the health benefits to extend across the estimated additional years of employment due to our grantee's job training program. Robin Hood places a value of $50,000 per QALY. **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.	
134	Homeless prevention: Reduction of chronic health problems by reducing homelessness	(XX recipients) * (25 percent would wind up homeless) * (50 percent of those who would otherwise wind up homeless will benefit solely due to the program) * (90 percent of those who benefit from the program will stay housed for at least one year) * [(16 percent of homeless individuals are chronically ill) – (9 percent of the general poor population is chronically ill)] * (0.10 QALY increase) * ($50,000 per QALY)
	Explanation: The number of recipients is based on the actual number reported by our grantee.	

Metric #	Name of Metric	Equation
	The 25 percent figure for those who would wind up homeless is estimated by Robin Hood staff. The 50 percent figure of those who will benefit from an eviction-prevention program is estimated by Robin Hood staff. The 90 percent figure for average housing duration is based on the work of Burt (2001) and Burt & Pearson (2005), who find that 10 percent of people in poverty will fall into homeless in a given year. Our estimate for the percentage of homeless children who would be chronically ill is based on the findings of the National Center for Family Homelessness (1999) and the Family Housing Fund (1999), which report that while approximately 9 percent of children in poverty who are not homeless suffer from some chronic illness, 16 percent of homeless children do—a 7 percentage point difference. We estimate a 0.10 QALY value for the avoidance of chronic illness based on the average difference in QALY between those with totally controlled versus not well controlled asthma (Briggs, Wallace, Clark & Bateman, 2006). We additionally extrapolate the benefit to adults. Asthma is the most prevalent chronic illness afflicting poor children, so it provides an appropriate yet conservative guess for the cost of chronic illness—conservative because homeless children are twice as likely to suffer from at least one chronic illness. Robin Hood places a value of $50,000 per QALY. **References:** Briggs, A., Wallace, M., Clark, T. & Bateman, E. (2006). Cost-effectiveness of asthma control: An economic appraisal of the GOAL study. Allergy, 61, 531-536. Burt, M. (2001). What will it take to end homelessness? Washington, DC: The Urban Institute. Burt, M. & Pearson, C. (2005). Strategies for preventing homelessness. Washington, DC: The Urban Institute. Family Housing Fund. (1999). Homelessness and its effects on children. Minneapolis, MN: Author. National Center for Family Homelessness. (1999). Homeless children: America's new outcasts. Newton Centre, MA: Author.	
135	Home visiting resulting in fewer low birth weight babies	(XX pregnant mothers) * (XX percent of mothers get assistance solely because of the program) * (XX percent of mothers will typically give birth to a low-weight baby) * (20 percent of babies sufficiently increase birth weight due to program) * (0.02 QALY

Metric #	Name of Metric	Equation
		increase) * ($50,000 per QALY)
	Explanation: The number of pregnant mothers is based on the actual number reported by our grantee. The percentage of mothers who get assistance solely because of the program is estimated by Robin Hood staff. The percentage of mothers who will typically give birth to a low-weight baby is estimated by Robin Hood staff. We base the 20 percent figure for babies who increase birth weight due to the program on data reported by our grantee. The 0.02 QALY estimate for the value of avoidance of low birth weight is based on the work of Johnson & Shoeni (2007), which reports that children born at low birth weight are more likely to face continuing problems, even after accounting for important covariates. Robin Hood places a value of $50,000 per QALY. *For possible use to estimate baseline rates:* The rate of low birth weight is about 15 percent across all education levels for black mothers, rising to 20 percent in poor neighborhoods and is about 7 percent among all Hispanic mothers (Collins, Wambach, David & Rankin, 2009; Elo et al., 2009; Hamilton, Martin & Ventura, 2010). **Research:** Collins, J. W., Jr., Wambach, J., David, R. J. & Rankin, K. M. (2009). Women's lifelong exposure to neighborhood poverty and low birth weight: A population study. Maternal and Child Health, 13(3), 326-333. Elo, I., Culhane, J., Kohler, I., O'Campo, P., Burke, J., Messer, L., Kaufman, J., Laraia, B., Eyster, J., and Holzman, C. (2009). Neighbourhood deprivation and small-for-gestational term births in the United States. Paediatric Perinatal Epidemiology, 23(1), 87-96. Hamilton, B. E., Martin, J. A. & Ventura, S. J. (2010). Births: Preliminary data for 2009. National Vital Statistics Reports, 59(3). Johnson, R. C. & Shoeni, R. F. (2007). The influence of early-life events on human capital, health status, and labor market outcomes over the life course. Berkeley, CA: Institute for Research on Labor and Employment, University of California at Berkeley. Retrieved from http://www.psc.isr.umich.edu/pubs/pdf/rr07-616.pdf	
136	Primary care	(XX individuals receiving primary care) * (XX percent of participants get medical services solely because of the program) * (0.07 QALY increase) * ($50,000 per QALY)
	Explanation:	

Metric #	Name of Metric	Equation
	The number of individuals receiving primary care is based on the actual number reported by our grantee. The percentage of participants who get medical services solely because of the program is estimated by Robin Hood staff. The 0.07 QALY estimate for the value of one year of access to health care is based in the work of Muennig (Muennig, Glied & Simon, 2005; Muennig, 2005). Robin Hood places a value of $50,000 per QALY. **References:** Muennig, P. (2005). The cost effectiveness of health insurance. American Journal of Preventive Medicine, 28(1), 59-64. Muennig, P., Glied, S. & Simon, J. (2005). Estimation of the health benefits produced by Robin Hood Foundation grant recipients. New York, NY: Robin Hood.	
137	Hepatitis B screening, prevention and vaccinations	(XX individuals vaccinated) * (XX percent of individuals are vaccinated solely because of the program) * (0.06 QALY increase) * ($50,000 per QALY)
	Explanation: The number of individuals vaccinated is based on the actual number reported by our grantee. The percentage of individuals who are vaccinated solely because of the program is estimated by Robin Hood staff. We estimate a 0.06 QALY value for the avoidance of hepatitis B through screening, prevention and vaccinations in a high-risk population of immigrants specifically from East Asia (Wong, Woo, Heathcote & Krahn, 2011). Robin Hood places a value of $50,000 per QALY. **References:** Wong, W., Woo, G., Heathcote, E. J. & Krahn, M. (2011). Cost effectiveness of screening immigrants for hepatitis B. Liver International, 2011, 1179-1190.	
138	Cancer: Biopsy (all)	(XX individuals biopsied) * (XX percent of individuals get a biopsy solely because of the program) * (0.11 QALY increase) * ($50,000 per QALY)
	Explanation: The number of individuals biopsied is based on the actual number reported by our grantee. The percentage of individuals who get a biopsy solely because of the program is estimated by	

Metric #	Name of Metric	Equation
	Robin Hood staff. Our 0.11 QALY estimate for the value of cancer biopsy comes from the Cost Effectiveness Analysis Registry (n.d.). Robin Hood places a value of $50,000 per QALY. **References:** Cost Effectiveness Analysis Registry. (n.d.). Retrieved from https://research.tufts-nemc.org/cear4/SearchingtheCEARegistry/SearchtheCEARegistry.aspx	
139	Cancer: Breast cancer screening	(XX individuals screened) * (XX percent of individuals get screened solely because of the program) * (0.01 QALY increase) * ($50,000 per QALY)
	Explanation: The number of individuals screened is based on the actual number reported by our grantee. The percentage of individuals who get screened solely because of the program is estimated by Robin Hood staff. We estimate a 0.01 QALY value for breast cancer screening, compared with no screening (Stout et al., 2006). Robin Hood places a value of $50,000 per QALY. **References:** Stout, N., Rosenberg, M., Trentham-Dietz, A., Smith, M., Robinson, S. & Fryback, D. (2006). Retrospective cost-effectiveness analysis of screening mammography. Journal of the National Cancer Institute, 98(11), 774-782.	
140	Cancer: Cervical cancer screening	(XX individuals screened) * (XX percent of individuals get screened solely because of the program) * (0.01 QALY increase) * ($50,000 per QALY)
	Explanation: The number of individuals screened is based on the actual number reported by our grantee. The percentage of individuals who get screened solely because of the program is estimated by Robin Hood staff. We estimate a 0.01 QALY value for cervical cancer screening, compared with no screening (Mandelblatt et al., 2002).	

Metric #	Name of Metric	Equation
	Robin Hood places a value of $50,000 per QALY. **References:** Mandelblatt, M., Lawrence, W., Womack, S., 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.	
141	Cancer: Colon cancer screening	(XX individuals screened) * (XX percent of individuals get screened solely because of the program) * (0.05 QALY increase) * ($50,000 per QALY)
	Explanation: The number of individuals screened is based on the actual number reported by our grantee. The percentage of individuals who get screened solely because of the program is estimated by Robin Hood staff. We estimate a 0.05 QALY value for colon cancer screening with colonoscopy, compared with no screening (Tafazzoli, Roberts, Ness & Dittus, 2005). Robin Hood places a value of $50,000 per QALY. **References:** 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.	
142	Diabetes: Screening	(XX individuals screened) * (XX percent of individuals are screened solely because of the program) * (0.02 QALY increase) * ($50,000 per QALY)
	Explanation: The number of individuals screened is based on the actual number reported by our grantee. The percentage of individuals who get screened solely because of the program is estimated by Robin Hood staff. We base the 0.02 QALY estimate for the screening of patients for type 2 diabetes on the work of the Centers for Disease Control and Prevention, Diabetes Cost-Effectiveness Group (1998) and Engelau, Narayan & Herman (2000), which indicate that the QALY value for diabetes screening can on average be estimated at about 0.02. Robin Hood places a value of $50,000 per QALY.	

Metric #	Name of Metric	Equation
	References: Centers for Disease Control and Prevention, Diabetes Cost-Effectiveness Group. (1998). The cost-effectiveness of screening for type 2 diabetes. Journal of the American Medical Association, 280, 1757-1763. Engelau, M., Narayan, K. & Herman, W. (2000). Screening for type 2 diabetes. Diabetes Care, 23(10), 1563-1580.	
143	Diabetes: Treatment for prediabetic patients	(XX prediabetic patients are treated) * (60 percent of individuals are treated solely because of the program) * (0.16 QALY increase) * ($50,000 per QALY)
	Explanation: The number of prediabetics who are treated is based on the actual number reported by our grantee. The percentage of individuals who get treated solely because of the program is estimated by Robin Hood staff. The estimated 60 percent of individuals who are treated for diabetes solely because of the program is based on research indicating that nearly 60 percent of patients in New York City with or close to a diabetes diagnoses have never been enrolled in a self-management program (Kim, Berger & Matte, 2006). We estimate a 0.16 QALY value for best-practice diabetes prevention for prediabetic patients based primarily on Eddy, Schlessinger & Kahn (2005), currently the most rigorous and thorough study of the subject, as it relates to lifetime health-related quality of life. Robin Hood places a value of $50,000 per QALY. **References:** Eddy, D., Schlessinger, L. & Kahn, R. (2005). Clinical outcomes and cost-effectiveness of strategies for managing people at high risk for diabetes. Annals of Internal Medicine, 143, 251-264. Kim M., Berger, D. & Matte, T. (2006). Diabetes in New York City: Public health burden and disparities. New York, NY: New York City Department of Health and Mental Hygiene.	
144	Diabetes: Treatment after onset	(XX individuals treated for type 2 diabetes) * (60 percent of individuals are treated solely because of the program) * (0.13 QALY increase) * ($50,000 per QALY)
	Explanation:	

Metric #	Name of Metric	Equation
	The number of individuals treated after the onset of type 2 diabetes is based on the actual number reported by our grantee. The estimated 60 percent of individuals who are treated for prevention solely because of the program is based on research indicating that nearly 60 percent of patients in New York City with or close to a diabetes diagnoses have never been enrolled in a self-management program (Kim, Berger & Matte, 2006). We estimate a 0.13 QALY value for best-practice diabetes treatment based on Eddy, Schlessinger & Kahn (2005), currently the most rigorous and thorough study of the subject, as it relates to lifetime health-related quality of life. Robin Hood places a value of $50,000 per QALY. **References:** Eddy, D., Schlessinger, L. & Kahn, R. (2005). Clinical outcomes and cost-effectiveness of strategies for managing people at high risk for diabetes. Annals of Internal Medicine, 143, 251-264. Kim M., Berger, D. & Matte, T. (2006). Diabetes in New York City: Public health burden and disparities. New York, NY: New York City Department of Health and Mental Hygiene.	
145	Hepatitis C testing, high-risk population	(XX individuals tested) * (XX percent of individuals are tested solely because of the program) * (0.01 QALY increase) * ($50,000 per QALY)
	Explanation: The number of individuals tested is based on the actual number reported by our grantee. The percentage of individuals who get tested solely because of the program is estimated by Robin Hood staff. We estimate a 0.01 QALY value for hepatitis C testing for high-risk populations (Stein et al., 2004). Robin Hood places a value of $50,000 per QALY. **References:** Stein, K., Dalziel, K., Walker, A., Jenkins, B., Round, A. & Royle, P. (2004). Screening for hepatitis C in injecting drug users: A cost utility analysis. Journal of Public Health, 26(1), 61-71.	
146	H.I.V. testing	(XX individuals tested) * (XX percent of individuals are tested solely because of the program) * (0.03 QALY increase) * ($50,000 per

Metric #	Name of Metric	Equation
		QALY)
	Explanation: The number of individuals tested is based on the actual number reported by our grantee. The percentage of individuals who get tested solely because of the program is estimated by Robin Hood staff. We estimate a 0.03 QALY 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. Robin Hood places a value of $50,000 per QALY. **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.	
147	Cancer: Prostate cancer screening	(XX individuals screened) * (XX percent of individuals are screened solely because of the program) * (0.05 QALY increase) * ($50,000 per QALY)
	Explanation: The number of individuals screened is based on the actual number reported by our grantee. The percentage of individuals who get screened solely because of the program is estimated by Robin Hood staff. We estimate a 0.05 QALY value for prostate cancer screening (Cookson, 2001; Doggett, Mitchell, Tappe & Turkelson, 2000). Robin Hood places a value of $50,000 per QALY. **References:** Cookson, M. (2001). Prostate cancer: Screening and early detection. Cancer Control, 8(2), 133-140. Doggett, D., Mitchell, M., Tappe, K. & Turkelson, C. (2000). Prostate cancer screening with PSA: A Markov process cost-effectiveness decision analysis. Paper presented at the Annual Meeting of the International Society of Technology Assessment in Health Care, the Hague, Netherlands.	

Metric #	Name of Metric	Equation
148	Syringe exchange enrollment	(XX individuals enrolled) * (XX percent of individuals are enrolled solely because of the program) * (0.01 QALY increase) * ($50,000 per QALY)
	Explanation: The number of individuals enrolled is based on the actual number reported by our grantee. The percentage of individuals who are enrolled solely because of the program is estimated by Robin Hood staff. We estimate a 0.01 QALY value for syringe exchange programs (Belani & Muennig, 2008), the quality of life benefits arising primarily through prevention of the spread of H.I.V. We apply this QALY to each client our grantee serves who tests negative for H.I.V. Robin Hood places a value of $50,000 per QALY. **References:** Belani, H. & Muennig, P. (2008). Cost-effectiveness of syringe exchange for the prevention of HIV in New York City. Journal of HIV/AIDS and Social Services, 7(3), 229-240.	
149	Nutritional counseling: Prevention of nutrition-related disease	(XX participants) * (XX percent of participants get services solely because of the program) * (XX percent of participants at risk for nutrition-related diseases) * (0.01 QALY increase) * ($50,000 per QALY)
	Explanation: The number of participants is based on the actual number reported by our grantee. The percentage of participants who get services solely because of the program is estimated by Robin Hood staff. The percentage of participants at risk for nutrition-related diseases is estimated by Robin Hood staff. We apply an estimated 0.01 QALY for any obesity prevention program, including nutritional counseling, based on an extensive review of the obesity-related literature by Columbia University's Mailman School of Public Health (Brittenham, Gohil, Gonzalez & Sriprasert, 2008). Robin Hood places a value of $50,000 per QALY. **References:** Brittenham, M., Gohil, L., Gonzalez, S. & Sriprasert, M. (2008). Childhood obesity intervention	

<table>
<tr><th>Metric #</th><th>Name of Metric</th><th>Equation</th></tr>
<tr><td></td><td colspan="2">review. Annotated presentation to Robin Hood. New York, NY: Robin Hood.</td></tr>
<tr><td>150</td><td>Obesity treatment: Specific programs with grantee reported data</td><td>(XX participants) * (XX percent of individuals get services solely because of the program) * (0.01 QALY increase) * ($50,000 per QALY)</td></tr>
<tr><td></td><td colspan="2">
Explanation:

The number of participants is based on the actual number reported by our grantee.

The percentage of participants who get services solely because of the program is estimated by Robin Hood staff.

In an extensive review of the obesity-related literature, a group of graduate students at Columbia University's Mailman School of Public Health (Brittenham, Gohil, Gonzalez & Sriprasert, 2008), mentored by Dr. Sherry Glied, found that the overall average QALY for obesity-prevention programs for children and adolescents is about 0.01 QALY. This estimate includes interventions to increase physical activity and improve diet (including nutritional counseling), and includes programs directed at the parents of younger children. Furthermore, these researchers found that combining program types does not improve outcomes. When programs do not have strong data to indicate at least better than average performance, this is the QALY to apply.

When programs are able to provide us with valid data to indicate that they have substantially impacted the patients in their care by arresting the progress of obesity or some health outcomes related to it, we can apply the following more specific QALY values to the programs. The following list identifies the QALY associated with keeping a child at his or her current body mass index from becoming obese:

Age 75th PR 85th PR 95th PR

M / F M / F M / F
3 0.39 0.60 0.47 0.73 0.59 1.03
4 0.39 0.52 0.43 0.69 0.55 1.08
5 0.59 0.65 0.74 0.90 1.21 1.59
6 0.55 0.60 0.62 0.86 0.90 1.85
7 0.55 0.69 0.74 0.95 1.48 1.76
8 0.47 0.69 0.55 0.99 0.86 1.98
9 0.55 0.73 0.67 1.08 1.17 2.19
10 0.43 0.65 0.66 0.99 1.45 2.24
11 0.47 0.65 0.63 1.08 1.10 2.54
12 0.47 0.60 0.70 0.99 1.49 2.15
13 0.59 0.69 0.86 1.16 1.80 2.75
14 0.47 0.60 0.71 1.08 1.56 2.75
15 0.43 0.60 0.78 0.99 2.11 2.58
16 0.47 0.56 0.78 1.08 2.03 3.01
</td></tr>
</table>

Metric #	Name of Metric	Equation
	17 0.43 0.77 0.78 1.38 2.03 3.31 18 0.66 0.65 1.29 1.12 3.01 2.92 20 0.47 1.29 1.76 2.80 3.82 4.26 Robin Hood places a value of $50,000 per QALY. **References:** Brittenham, M., Gohil, L., Gonzalez, S. & Sriprasert, M. (2008). Childhood obesity intervention review. Annotated presentation to Robin Hood. New York, NY: Robin Hood.	
151	Asthma: Treatment	(XX children with asthma) * (60 percent of children get services solely because of the program) * (0.05 QALY increase) * ($50,000 per QALY)
	Explanation: The number of children with asthma is based on the actual number reported by our grantee. The percentage of children who get services solely because of the program is estimated by Robin Hood staff at about 60 percent. This estimate is based on research indicating that just over 40 percent of asthmatic children in New York City have an asthma management plan (Schwarz et al., 2008) and that about 35 percent of asthmatic people in New York City visit an outpatient clinic per year (New York State Department of Health, 2009). We infer from these statistics that about 60 percent of asthma patients received treatment solely because of our grantee. We estimate a 0.05 QALY value for a year of comprehensive asthma intervention based on research findings specific to Robin Hood grantees and closely corroborated by others (Muennig, Glied & Simon, 2005; Schermer et al., 2002). This gain is applied to all enrolled children across the cohort. Robin Hood places a value of $50,000 per QALY. **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. New York State Department of Health. (2009). New York State asthma surveillance summary report. New York, NY: Public Health Information Group Center for Community Health, New York State Department of Health. Schermer, T. R., Thoonen, B. P, van den Boom, G., Akkermans, R. P., Grol, R. P., Folgering, H. T., van Weel, C., & van Schayck, C. P. (2002). Randomized controlled economic evaluation of asthma self-management in primary health care. American Journal of Respiratory and Critical Care	

Metric #	Name of Metric	Equation
	Medicine, 166, 1062-1072. Schwarz, A. G., McVeigh, K. H., Matte, T., Goodman, A., Kass, D. & Kerker, B. (2008). Childhood Asthma in New York City. N.Y.C. Vital Signs, 7(1), 1-4.	
152	Asthma: Home health inspection and improvement	(XX children receive home inspection) * (XX percent of children get services solely because of the program) * (50 percent of children will have improvements in the quality of their home environment) * (0.02 QALY increase) * ($50,000 per QALY)
	Explanation: The number of children who receive a home inspection is based on the actual number reported by our grantee. The percentage of children who get services solely because of the program is estimated by Robin Hood staff. We apply a 50 percent home improvement estimate based on reports from Harlem Hospital that approximately 53 percent of patients whose homes were visited and made healthier maintained home improvements at the one-year follow up. We estimate a 0.02 QALY value for a year of comprehensive asthma education and home support based on the findings of Muennig, Glied & Simon (2005), who report that a comprehensive asthma intervention of medical, education and self-help support produces a 0.05 QALY improvement in the lives of the patients, while medical-only care produces on average 0.03 QALY improvement. The approximate values between 0.03 and 0.05 are corroborated in additional research (Schermer et al., 2002). We subtract the medical-only estimate from the total estimate to find the estimate for education and home support (0.05 – 0.03 = 0.02). Robin Hood places a value of $50,000 per QALY. **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. Schermer, T. R., Thoonen, B. P, van den Boom, G., Akkermans, R. P., Grol, R. P., Folgering, H. T., van Weel, C., & van Schayck, C. P. (2002). Randomized controlled economic evaluation of asthma self-management in primary health care. American Journal of Respiratory and Critical Care Medicine, 166, 1062-1072.	
153	Dental care: Reduction in pain	(XX individuals receive dental work) * (18 percent of individuals get care solely because of the program) * (15 percent of individuals suffer dental pain that can be improved with treatment) * (0.39 QALY increase) * ($50,000 per QALY)
	Explanation:	

Metric #	Name of Metric	Equation
	The number of individuals who receive dental work is based on the actual number reported by our grantee. The 18 percent estimate for the percentage of individuals unable to find dental care is based on Newacheck, Hughes, Hung, Wong & Stoddard (2000), who report that about 18 percent of children from families in poverty cannot obtain needed dental care. The 15 percent estimate for the percentage of individuals who suffer dental pain that can be improved with treatment is estimated by Robin Hood staff. Our 0.39 QALY estimate for the value of stopping dental pain is a rough average of QALY values found in the literature for chronic pain and its control (Thomsen, Gundgaard, Sorenson, Sjogren & Eriksen, 2000; Schmeir, Palmer, Flood & Gourlay, 2002). Robin Hood places a value of $50,000 per QALY. **References:** Newacheck, P., Hughes, D., Hung, Y., Wong, S. & Stoddard, J. (2000). The unmet health needs of America's children. Pediatrics, 105(4), 989-997. Schmeir, J., Palmer, C., Flood, E. & Gourlay, G. (2002). Utility assessment of opioid treatment for pain. Pain Medicine, 3(3), 218-230. Thomsen, A., Gundgaard, J., Sorenson, J., Sjogren, P. & Eriksen, J. (2000). Cost-effectiveness of multidisciplinary treatment of patients with chronic non-malignant pain. Copenhagen, Denmark: Multidisciplinary Pain Centre, Danish National Hospital.	
154	Hepatitis B treatment	(XX individuals receive hepatitis B treatment) * (XX percent get treatment solely because of the program) * (1.90 QALY increase) * ($50,000 per QALY)
	Explanation: The number of individuals who receive hepatitis B treatment is based on the actual number reported by our grantee. The percentage of individuals who get treatment solely because of the program is estimated by Robin Hood staff. We estimate a 1.90 QALY increase for hepatitis B treatment, averaged over several different types of treatments, populations and studies (Dakin, Bentley & Dusheiko, 2010 ; Kanwal et al., 2005; Veenstra et al., 2008). Robin Hood places a value of $50,000 per QALY. **References:** Dakin, H., Bentley, A. & Dusheiko, G. (2010). Cost-utility analysis of tenofovir disoproxil fumarate in the treatment of chronic hepatitis B. International Society for Pharmacoeconomics and Outcomes Research, 13(8), 922-933.	

Metric #	Name of Metric	Equation
	Kanwal, F., Gralnek, I. M., Martin, P., Dulai, G. S., Farid, M. & Speigel, P. M. (2005). Treatment alternatives for chronic Hepatitis B virus infection: A cost-effectiveness model. Annals of Internal Medicine, 142, 821-831. Veenstra, D. L., Sullivan, S. D., Lai, M., Lee, C., Tsai, C. & Patel, K. K. (2008). HBeAg-negative chronic hepatitis B: Cost-effectiveness of peginterferon alfa-2a compared to lamivudine in Taiwan. International Society for Pharmacoeconomics and Outcomes Research, 11(2), 131-138.	
155	Hepatitis C treatment	(XX individuals receive hepatitis C treatment) * (XX percent get treatment solely because of the program) * (2.00 QALY increase) * ($50,000 per QALY)
	Explanation: The number of individuals who receive hepatitis C treatment is based on the actual number reported by our grantee. The percentage of individuals who get treatment solely because of the program is estimated by Robin Hood staff. We estimate a 2.00 QALY improvement for best-practice hepatitis C treatment based on a reading of the current research literature, especially Siebert & Sroczynski (2005) and Deniz et al. (2011). Robin Hood places a value of $50,000 per QALY. **References:** Deniz, B., Brogan, A. J., Miller, J. D., Talbird, S. E, Thompson, J. R., 2RTI Health Solutions & 3RTI Health Solutions. (2011). Cost-effectiveness of telaprevir combination treatment compared to pegylated-iInterferon + ribavarin alone in the management of chronic hepatitis C in patients who failed a prior pegylated-interferon + ribavarin treatment. Paper presented at the 62nd Annual Meeting of the American Association for the Study of Liver Diseases, San Francisco, CA. Siebert, U. & Sroczynski, G. (2005). Effectiveness and cost-effectiveness of initial combination therapy with interferon/peginterferon plus ribavirin in patients with chronic hepatitis C in Germany: A health technology assessment commissioned by the German Federal Ministry of Health and Social Security. International Journal Technology Assessment in Health Care,21(1), 55-65.	
156	H.I.V. treatment	(XX individuals receive H.I.V. treatment) * (XX percent get treatment solely because of the program) * (0.24 QALY increase) * ($50,000 per QALY)
	Explanation: The number of individuals who receive H.I.V. treatment is based on the actual number reported	

Metric #	Name of Metric	Equation
	by our grantee. The percentage of individuals who get treatment solely because of the program is estimated by Robin Hood staff. We estimate a 0.24 QALY improvement for H.I.V. treatment for the cohort of patients who receive care solely due to our grantee's progam based on the findings of Tengs & Lin (2002) and Farnham, Gopalappa, Sansom, Hutchinson, Brooks et al. (2013). Robin Hood places a value of $50,000 per QALY. **References:** Farnham, P.G., Gopalappa, C., Sansom, S.L., Hutchinson, A.B., Brooks, J.T., Weidle, P.J., Marconi, V.C. & Rimland, D. (2013). Updates of lifetime costs of care and quality-of-life estimates for HIV-infected persons in the United States: Late versus early diagnosis and entry into care. Journal of Acquired Immune Deficiency Syndrome, 64(2). Pp 183-189. Tengs, T.O. & Lin, T.H. (2002). A meta-analysis of utility estimates for HIV/AIDS. Medical Decision Making, 22. Pp. 475-481. http://mdm.sagepub.com	
157	Obesity treatment: General	(XX participants in program) * (XX percent get treatment solely because of the program) * (0.01 QALY increase) * ($50,000 per QALY)
	Explanation: The number of individuals who receive obesity treatment is based on the actual number reported by our grantee. The percentage of individuals who get treatment solely because of the program is estimated by Robin Hood staff. We apply an estimated 0.01 QALY for any obesity prevention program, based on an extensive review of the obesity-related literature by Columbia University's Mailman School of Public Health (Brittenham, Gohil, Gonzalez & Sriprasert, 2008). Robin Hood places a value of $50,000 per QALY. **References:** Brittenham, M., Gohil, L., Gonzalez, S. & Sriprasert, M. (2008). Childhood obesity intervention review. Annotated presentation to Robin Hood. New York, NY: Robin Hood.	
158	Reduced hospitalizations: General illness	[(XX participants hospitalized during the year)/(0.7 to represent a 30 percent decrease in hospitalizations) – (XX participants hospitalized during the year)] * (XX percent of participants get assistance solely because of the program) * (20 percent of participants hospitalized as a result of a physical illness) * (0.07 QALY increase) * ($50,000

Metric #	Name of Metric	Equation
		per QALY)
	Explanation: The number of participants hospitalized during the year is based on the actual number reported by our grantee. Our estimate for a 30 percent decrease in hospitalizations for people receiving supportive housing is based on research indicating that the provision of supportive housing reduces the number of previously homeless people needing hospitalizations by about 30 to 40 percent (Culhane, Metreaux & Hadley, 2002; Martinez & Burt, 2006; Sadowski, Kee, VanderWeele & Buchanan, 2009). We apply the lower estimate. We estimate that 20 percent of those who are housed in supportive housing and who avoided hospitalization would have been hospitalized due to some general diagnoses, based on the findings of Salit, Kuhn, Hartz, Vu & Mosso (1998). Our 0.07 QALY estimate for the value of avoiding hospitalization is derived by subtracting the QALY for hospitalization for general diagnoses, 0.93, from full health, 1.0 (Cost Effectiveness Analysis Registry, n.d.). Robin Hood places a value of $50,000 per QALY. **References:** Cost Effectiveness Analysis Registry. (n.d.). Retrieved from https://research.tufts-nemc.org/cear4/SearchingtheCEARegistry/SearchtheCEARegistry.aspx Culhane, D. P., Metreaux, S. & Hadley, T. (2002). The impact of supportive housing for homeless people with severe mental illness on the utilization of the public health, correcting, and emergency shelter systems: The New York-New York Initiative. Washington, DC: Fannie Mae Foundation. Martinez, T. E. & Burt, M. (2006). Impact of permanent supportive housing on the use of acute care health services by homeless adults. Psychiatric Services: A Journal of the American Psychiatric Association, 57(7), 992-999. Sadowski, L., Kee, R., VanderWeele, T. & Buchanan, D. (2009). Effect of a housing and case management program on emergency department visits and hospitalizations among chronically ill homeless adults: A randomized trial. Journal of the American Medical Association, 301(17), 1771-1777. Salit, S., Kuhn, E., Hartz, A., Vu, J. & Mosso, A. (1998). Hospitalization costs associated with homelessness in New York City. New England Journal of Medicine, 338(24), 1734-1740.	
159	Reproductive health services for teens	(XX participants receive treatment) * (XX percent get treatment solely because of the program) * (0.10 QALY increase) * ($50,000 per QALY)

Metric #	Name of Metric	Equation
	Explanation: The number of individuals who receive treatment is based on the actual number reported by our grantee. The percentage of individuals who get treatment solely because of the program is estimated by Robin Hood staff. We base our 0.10 QALY estimate for the average value of reproductive health services to adolescents on QALY values related to several different aspects of this care (Cost Effectiveness Analysis Registry, n.d.). We know that health care focused on adolescent reproductive health is critical for sexually active teenagers, but there is very little research to help us estimate the benefits of that care. The Cost Effectiveness Analysis Registry indicates the following related QALY values: early lesion human papillomavirus, 0.03; symptomatic acute chlamydia, 0.10; pelvic inflammatory disease, 0.35; and urinary tract infection, 0.10 (all subtracted from 1.0). We currently borrow the average, 0.10 QALY, to conservatively represent the typical impact of a reproductive health problem for adolescents who receive treatment through our grants. Robin Hood places a value of $50,000 per QALY. **References:** Cost Effectiveness Analysis Registry. (n.d.). Retrieved from https://research.tufts-nemc.org/cear4/SearchingtheCEARegistry/SearchtheCEARegistry.aspx	
160	Smoking cessation: Benefits for children	(XX children whose parents quit smoking) * (XX percent quit solely because of the program) * (0.60 QALY value of quitting smoking) * ($50,000 per QALY)
	Explanation: The number of children whose parents quit smoking is based on the actual number reported by our grantee. The percentage of individuals who quit smoking solely because of the program is estimated by Robin Hood staff. Our 0.60 QALY estimate for the benefit to children of their adult family member's smoking cessation for one year is based on the work of the New Zealand Ministry of Health (2004). To apply the 1.20 QALY value to children, who benefit from adult smoking cessation through less second-hand smoke, we estimate the gain to be about half the value for the smoker, or about 0.60 QALY. This benefit is conservatively estimated, because it would accrue to all family members but is only applied to the target child. Robin Hood places a value of $50,000 per QALY.	

Metric #	Name of Metric	Equation
	References: New Zealand Ministry of Health. (2004). An economic evaluation of the quitline Nicotine Replacement Therapy (NRT) Service. Wellington, New Zealand: Author.	
161	Smoking cessation: Benefits for adults	(XX individuals quit smoking) * (XX percent quit smoking solely because of the program) * (1.20 QALY value of quitting smoking) * ($50,000 per QALY)
	Explanation: The number of individuals who quit smoking is based on the actual number reported by our grantee. The percentage of individuals who quit smoking solely because of the program is estimated by Robin Hood staff. The 1.20 QALY estimate for quitting smoking for one year is based on the work of the New Zealand Ministry of Health (2004). Robin Hood places a value of $50,000 per QALY. **References:** New Zealand Ministry of Health. (2004). An economic evaluation of the quitline Nicotine Replacement Therapy (NRT) Service. Wellington, New Zealand: Author.	
162	Substance abuse treatment	(XX individuals receive treatment) * (XX percent get treatment solely because of the program) * (0.03 QALY increase) * ($50,000 per QALY)
	Explanation: The number of individuals who receive treatment is based on the actual number reported by our grantee. The percentage of individuals who get treatment solely because of the program is estimated by Robin Hood staff. We apply a conservatively estimated 0.03 QALY value for substance abuse programs. Research indicates that currently active substance abuse disorder reduces quality of life between about 0.13 and 0.20 QALY (Kilmer, 2009), with the higher range reserved for heroin users (Nicosia, Pacula, Kilmer, Lundberg & Chiesa, 2009). Aos, Mayfield, Miller & Yen (2006) report a 22 percent reduction in symptoms based on an average drug treatment program. Applying these findings together, we find a 0.03 QALY improvement due to a typical substance abuse program (0.13 reduction in quality of life * 0.22 expected improvement due to intervention = 0.03	

Metric #	Name of Metric	Equation
	improvement in QALY due to our grantee's program). Robin Hood places a value of $50,000 per QALY. **References:** Aos, S., Mayfield, J., Miller, M. & Yen, W. (2006). Evidence-based treatment of alcohol, drug, and mental health disorders: Potential benefits, costs, and fiscal impacts for Washington State. Olympia, WA: Washington State Institute for Public Policy. Retrieved from http://www.wsipp.wa.gov/rptfiles/06-06-3901.pdf Kilmer, B. (2009). Substance use and treatment in NYC: Cost, benefits, and opportunities. Annotated presentation to Robin Hood. New York, NY: Robin Hood. Nicosia, N., Pacula, R., Kilmer, B., Lundberg, R. & Chiesa, J. (2009). The economic cost of methamphetamine use in the United States, 2005 (MG-829). Santa Monica, CA: RAND.	
163	Vision: Eye exam resulting in new glasses and improved quality of life	(XX individuals receive new glasses) * (XX receive glasses solely because of the program) * (0.08 QALY increase) * ($50,000 per QALY)
	Explanation: The number of individuals who receive new glasses is based on the actual number reported by our grantee. The percentage of individuals who receive glasses solely because of the program is estimated by Robin Hood staff. We estimate a 0.08 QALY value for the eye exams resulting in new glasses based on Clemons, Chew, Bressler & McBee (2003). Vision problems lower quality of life, with visual acuity reductions from less than 20/20 vision reducing QALY by about 0.08. We use this finding to represent the value of vision screenings and lens corrections for students who need them. Robin Hood places a value of $50,000 per QALY. **References:** Clemons, T., Chew, E., Bressler, S. & McBee, W. (2003). National Eye Institute Visual Function Questionnaire in the Age-related Eye Disease Study (NIH Public Access Author Manuscript, Report No. 10). Archives of Ophthalmology, 121(2): 211-217.	