Fact Sheet on Programmatic Example

(Note: this is just an example of the type of evidenced based or promising practice that may implement all or part of a BSK strategy.)

Strategy to be Addressed:

Helping youth stay connected to their families, caregivers and communities - Support for parents and youth focused on early intervention when a problem arises

Program Name:

Communities That Care (CTC)

Brief Program Description:

CTC is a prevention system, grounded in science, which gives communities the tools to address their adolescent health and behavior problems through a focus on empirically identified risk and protective factors. CTC guides a community coalition to create a strategic community prevention plan with specific, measurable community goals.

Prevention Results Achieved Elsewhere or in K.C. Pilot:

CTC has been studied in at least 24 communities across the country, and is currently in process in Southeast Seattle. Findings include significant impacts in reducing delinquent behavior; alcohol, cigarette and smokeless tobacco initiation; greater community cohesion and collaboration as well as acceptance of science-based approach to prevention; youth demonstrated significantly improved effects regarding protective factors, including better school performance and lower levels of risk factors.

Target Population and number of people served:

CTC can be targeted for a number of age ranges of children from ages 5 through 24 due to broad community engagement.

Estimated Cost to Administer:

Cost is approximately $127,855 for a community serving 800 families.

Estimated Cost Savings to Community:

CTC is a promising program with a strong research base. The cost per individual person and their household is approximately $573, and the net present value benefit per household is high, at approximately $1,826 per person/household. The odds of achieving a positive net present value ($1,253) are 85%.

Communities that Care (CTC)

The Communities That Care (CTC) prevention system is a community-level intervention that mobilizes stakeholders to collaborate on selecting and implementing evidence-based prevention programs designed to prevent youth problem behaviors, such as substance abuse and delinquency. CTC is installed in communities through a series of six training events delivered over the course of 6-12 months by certified CTC trainers. Implementation is organized into five phases:

- Getting Started--orientation session. The CTC trainer helps community leaders identify stakeholders to serve as champions of CTC, obtain school district support to administer the Community Youth Development Survey (CYDS) in classrooms for the collection of baseline data from students in grades 5-12, and hire a coordinator to manage CTC activities.
- Organizing, Introducing, Involving--training sessions 1 and 2 (Key Leader Orientation and Community Board Orientation). The CTC trainer educates the key community leaders and board members about protective and risk factors in youth development and helps the prevention coalition develop a vision for the future of the community's youth and an organizational structure for the board.
- Developing a Community Profile--training sessions 3 and 4 (Community Assessment Training and Community Resource Assessment Training). The CTC trainer helps the board administer the CYDS and analyze and interpret collected data to identify priority risk and protective factors. The CTC trainer also helps the board assess community resources by identifying the community's existing evidence-based programs that address the priority risk factors, identifying gaps in services from existing programs, and recommending new programs or policies as needed.
- Creating a Community Action Plan--training session 5 (Community Planning Training). The results of the community resource assessment are reviewed, and a community action plan is created. To target priority risk factors and fill gaps in current community prevention services, the board chooses 1-5 programs from a list of 56 evidence-based prevention programs described in the CTC Prevention Strategies Guide or on the Blueprints for Healthy Youth Development website. Once programs have been chosen, board members are trained to develop a community action plan that specifies clear, measurable goals regarding anticipated outcomes, with a plan for evaluating the outcomes.
- Implementing and Evaluating the Community Action Plan--training session 6 (Community Plan Implementation Training). The board implements the selected programs and evaluates the progress of students in grades 5-12 with the CYDS. Board members and implementation staff receive training in the importance of implementing the chosen programs with fidelity. Board members are also trained to track implementation progress, assess desired outcome changes among youth, and use collected data to make appropriate adjustments in program delivery.

The CTC prevention system is meant to be an ongoing process of monitoring community-level progress. After CTC has been installed in a community, changes in targeted risk factors should be seen in 2-5 years, and changes in adolescent substance use and delinquency outcomes should be observed in 5-10 years.

In the study reviewed for this summary, each of the 12 intervention communities implemented 1-5 programs yearly from among 16 prevention programs listed in the CTC Prevention Strategies Guide. The prevention programs available to the intervention communities in the study included school-based programs (All-Stars, Life Skills Training, Lion's Quest Skills for Adolescence, Project Alert, Olweus Bullying Prevention Program, and Program Development Evaluation Training), community-based youth-focused programs (academic tutoring, Big Brothers Big Sisters, Participate and Learn Skills, and Stay Smart), and family-focused programs (Strengthening Families 10-14, Guiding Good Choices, Parents Who Care, Family Matters, and Parenting Wisely). Each of the programs available to the intervention communities had some level of evidence from clinical trials in preventing alcohol, tobacco, and other drug use or delinquent behavior with students in grades 5-9.

Descriptive Information

Areas of Interest	Substance abuse prevention
Outcomes	**Review Date: April 2014** 1: Substance use 2: Delinquent behaviors 3: Monetary benefit-to-cost advantage
Outcome Categories	Alcohol Cost Crime/delinquency

	Drugs Tobacco Violence
Ages	6-12 (Childhood) 13-17 (Adolescent)
Genders	Male Female
Races/Ethnicities	Hispanic or Latino White Race/ethnicity unspecified
Settings	Home School Other community settings
Geographic Locations	Urban Rural and/or frontier
Implementation History	CTC was first implemented in 1989 in 24 Washington communities as Washington Together. Since then, CTC has been delivered to more than 250,000 youth in over 500 communities in Colorado, Florida, Georgia, Illinois, Indiana, Kansas, Maine, Maryland, Massachusetts, New York, North Carolina, Oregon, Pennsylvania, South Carolina, Texas, Utah, and Washington. CTC also is used in communities in Australia, Canada, Colombia, Croatia, Cyprus, Germany, the Netherlands, and Sweden.
NIH Funding/CER Studies	Partially/fully funded by National Institutes of Health: Yes Evaluated in comparative effectiveness research studies: Yes
Adaptations	The CTC prevention system has been culturally adapted for implementation in multiple sites in Colombia, Croatia, Germany, the Netherlands, and the United Kingdom. CTC materials have been translated into Croatian, Dutch, German, and Spanish.
Adverse Effects	No adverse effects, concerns, or unintended consequences were identified by the applicant.
IOM Prevention Categories	Universal

Quality of Research

Review Date: April 2014

Documents Reviewed

The documents below were reviewed for Quality of Research. The research point of contact can provide information regarding the studies reviewed and the availability of additional materials, including those from more recent studies that may have been conducted.

Study 1

Hawkins, J. D., Oesterle, S., Brown, E. C., Abbott, R. D., & Catalano, R. F. (2014). Youth problem behaviors 8 years after implementing the Communities That Care prevention system: A community-randomized trial. JAMA Pediatrics, 168(2), 122-129.

Hawkins, J. D., Oesterle, S., Brown, E. C., Arthur, M. W., Abbott, R. D., Fagan, A. A., et al. (2009). Results of a type 2 translational research trial to prevent adolescent drug use and delinquency: A test of Communities That Care. Archives of Pediatrics and Adolescent Medicine, 163(9), 789-798.

J. D., Oesterle, S., Brown, E. C., Monahan, K. C., Abbott, R. D., Arthur, M. W., et al. (2012). Sustained decreases in risk exposure and youth problem behaviors after installation of the Communities That Care prevention system in a randomized trial. Archives of Pediatrics and Adolescent Medicine, 166(2), 141-148.

Kuklinski, M. R., Briney, J. S., Hawkins, J. D., & Catalano, R. F. (2012). Cost-benefit analysis of Communities That Care outcomes at eighth grade. Prevention Science, 13(2), 150-161.

Oesterle, S., Hawkins, J. D., Fagan, A. A., Abbott, R. D., & Catalano, R. F. (2014). Variation in the sustained effects of the Communities That Care prevention system on adolescent smoking, delinquency, and violence. Prevention Science, 15(2), 138-145.

Study 2

One Study in Summary

Study 3

Only One Study in Summary

Supplementary Materials

Arthur, M. W., Briney, J. S., Hawkins, J. D., Abbott, R. D., Brooke-Weiss, B. L., & Catalano, R. F. (2007). Measuring risk and protection in communities using the Communities That Care Youth Survey. Evaluation and Program Planning, 30(2), 197-211.

Bachman, J. G., Johnston, L. D., O'Malley, P. M., & Schulenberg, J. E. (2011). The Monitoring the Future Project after thirty-seven years: Design and procedures (Monitoring the Future Occasional Paper Series, Paper 76). Ann Arbor: Institute for Social Research, University of Michigan.

Brown, E. C., Hawkins, J. D., Rhew, I. C., Shapiro, V. B., Abbott, R. D., Oesterle, S., et al. (2013). Prevention system mediation of Communities That Care effects on youth outcomes. Prevention Science. Advance online publication.

Fagan, A. A., Hanson, K., Briney, J. S., & Hawkins, J. D. (2012). Sustaining the utilization and high quality implementation of tested and effective prevention programs using the Communities That Care prevention system. American Journal of Community Psychology, 49(3-4), 365-377.

Fagan, A. A., Hanson, K., Hawkins, J. D., & Arthur, M. W. (2008). Implementing effective community-based prevention programs in the Community Youth Development Study. Youth Violence and Juvenile Justice, 6, 256-279.

Fagan, A. A., Hanson, K., Hawkins, J. D., & Arthur, M. W. (2009). Translational research in action: Implementation of the Communities That Care prevention system in 12 communities. Journal of Community Psychology, 37(7), 809-829.

Glaser, R. R., Van Horn, M. L., Arthur, M. W., Hawkins, J. D., & Catalano, R. F. (2005). Measurement properties of the Communities That Care Youth Survey across demographic groups. Journal of Quantitative Criminology, 21(1), 73-102.

Hawkins, J. D., Catalano, R. F., & Kuklinski, M. R. (2011, October). Mobilizing communities to implement tested and effective programs to help youth avoid risky behaviors: The Communities That Care approach (Research Brief, Publication No. 2011-25). Bethesda, MD: Child Trends.

Huizinga, D., & Elliott, D. S. (1986). Reassessing the reliability and validity of self-report delinquency measures. Journal of Quantitative Criminology, 2(4), 293-327.

Huizinga, D. H., Menard, S., & Elliott, D. S. (1989). Delinquency and drug use: Temporal and developmental patterns. Justice Quarterly, 6(3), 419-455.

Lee, S., Aos, S., Drake, E., Pennucci, A., Miller, M., Anderson, L., et al. (2012). Return on investment: Evidence-based options to improve statewide outcomes. Technical appendix. Methods and user-manual. Olympia: Washington State Institute for Public Policy.

Quinby, R. K., Hanson, K., Brooke-Weiss, B., Arthur, M. W., Hawkins, J. D., & Fagan, A. A. (2008). Installing the Communities That Care prevention system: Implementation progress and fidelity in a randomized controlled trial. Journal of Community Psychology, 36(3), 313-332.

Schafer, J. L., & Graham, J. W. (2002). Missing data: Our view of the state of the art. Psychological Methods, 7(2), 147-177.

Social Development Research Group. (2007). Community Youth Development Study. Youth Development Survey--2007. Seattle: University of Washington.

Outcomes

Outcome 1: Substance use	
Description of Measures	Substance use was assessed with substance-related items from the Youth Development

Survey (YDS), a self-report paper-and-pencil questionnaire consisting of 220 items completed during a 50-minute classroom period and administered yearly to students in grades 5-12 (except, as noted, at Grade 11). The substance-related items were taken from the Monitoring the Future survey, and they included different substances depending on the students' grade level: items for students in grades 5-12 included the use of alcohol, tobacco cigarettes, smokeless tobacco, marijuana, and inhalants, and items for students in grades 8-12 also included illicit prescription drug use and the use of psychedelics, ecstasy, stimulants, and cocaine. Students respond "yes" or "no" to lifetime substance-related items to ascertain initiation rates (e.g., "Have you ever smoked a cigarette, even just a puff?" and "Have you ever had more than just a sip or two of beer, wine, or hard liquor [for example, vodka, whiskey, or gin]?"). Frequency measures of recent substance use were dichotomized into use or no use, to ascertain prevalence.

On the basis of the responses, substance use was presented as the following rates:

- The initiation rate of substance use, which was calculated as the percentage of students who reported first use of a substance in grades 5-12 from among those students who had not initiated use before grade 5. Initiation rates for students in grade 12 also included sustained abstinence (from grades 5 through 12) from the following: any substance use, gateway drug use (defined as alcohol, cigarette, or marijuana use), and binge drinking (defined as consuming five or more drinks in one drinking occasion).
- The prevalence rates of substance use, which were calculated as the percentage of students who acknowledged binge drinking in the prior 2 weeks and the percentage of students who acknowledged use of an individual substance in the past month. Prevalence rates for students in grade 12 also included the use of individual substances in the past year, as well as composite indices of any substance use, including gateway drugs.

The yearly, longitudinal follow-up assessment data were reported at three time points: grades 8, 10, and 12.

Key Findings

In the 8-year Community Youth Development Study, one community in each of 12 pairs of demographically matched communities from seven States was randomly assigned (with a c toss) to the intervention condition (CTC) or the control condition, which consisted of prevention as usual (with at least some control communities implementing evidence-based school curricula and parenting programs). Students in grades 5 and 6 across 77 elementary and middle schools from the 24 participating communities were surveyed yearly through grade 12 with the YDS (except at Grade 11). Findings for initiation and prevalence rates were adjusted for student age, sex, race/ethnicity, parental educational achievement level, grade 5 religious attendance, and grade 5 rebelliousness; student population of the community; percent change in student population from 2001 to 2004; and percentage of students in the community receiving free or reduced-price school lunches. Findings for the prevalence rates among students in grades 8 and 10 also were adjusted for grade 5 (baseline) prevalence rates.

Findings for the initiation rate of substance use included the following:

- Between grades 7 and 8, students in control communities were more likely than those in CTC communities to start drinking alcohol ($p < .05$), start smoking cigarettes ($p < .05$), and start using smokeless tobacco ($p < .01$). These group differences were associated with small effect sizes (adjusted odds ratio = 1.60, 1.79, and 2.34, respectively).
- In grade 8, there were no significant differences between students in CTC communities and those in control communities in regard to initiation rates for starting marijuana use or inhalant use.
- In grade 10, students in control communities were more likely than those in CTC communities to start drinking alcohol ($p = .03$) and start smoking cigarettes ($p = .006$). These group differences were associated with small effect sizes (adjusted odds ratio = 1.61 and 1.85, respectively).
- Also in grade 10, there were no significant differences between students in CTC communities and those in control communities in regard to initiation rates for starting smokeless tobacco use, marijuana use, inhalant use, or illicit use of prescription drugs.
- Through grade 12, students in CTC communities were more likely than those in control communities to have sustained abstinence from drinking alcohol ($p < .05$), smoking cigarettes ($p < .05$), and using any drugs ($p < .05$). These group differences were associated with small (adjusted relative risk = 1.31 and 1.32 for drinking alcohol and using any drugs, respectively) and very small (adjusted relative risk = 1.13 for smoking cigarettes) effect sizes.

Findings for the prevalence rate of substance use included the following:

- In grade 8, students in control communities were more likely than those in CTC communities to report binge drinking in the past 2 weeks ($p = .03$) and past-month use of alcohol ($p = .04$) and smokeless tobacco ($p = .01$). These group differences were associated with small (adjusted odds ratio = 1.79 for past-month use of smokeless tobacco) and very small (adjusted odds ratio = 1.40 and 1.25 for binge drinking in the past 2 weeks and past-month use of alcohol, respectively) effect sizes.
- Also in grade 8, there were no significant differences between students in CTC communities and those in control communities in regard to prevalence rates for past-month cigarette use, marijuana use, inhalant use, illicit use of prescription drugs, or use of other illicit drugs.
- In grade 10, students in control communities were more likely than those in CTC communities to report past-month use of cigarettes ($p = .04$). This group difference was associated with a very small effect size (adjusted odds ratio = 1.27).
- Also in grade 10, there were no significant differences between students in CTC communities and those in control communities in regard to prevalence rates for binge drinking in the past 2 weeks and past-month alcohol use, smokeless tobacco use, marijuana use, inhalant use, illicit use of prescription drugs, or use of other illicit drugs.
- In grade 12, there were no significant differences between students in CTC communities and those in control communities in regard to prevalence rates for past-month alcohol use, cigarette use, smokeless tobacco use, marijuana use, inhalant use, or use of other illicit drugs, with the exception of ecstasy: students in control communities were less likely than those in CTC communities to report past-month use of ecstasy ($p < .05$). This group difference was associated with a small effect size (adjusted relative risk = 1.89).

Studies Measuring Outcome	Study 1
Study Designs	Experimental
Quality of Research Rating	3.6 (0.0-4.0 scale)

Outcome 2: Delinquent behaviors

Description of Measures

Delinquent behaviors were assessed with delinquent act-related items from the Youth Development Survey (YDS), a self-report paper-and-pencil questionnaire consisting of 220 items completed during a 50-minute classroom period and administered yearly to students in grades 5-12 (except in Grade 11). The delinquent act-related items were taken from the National Youth Survey, and they included different delinquent acts depending on the students' grade level: items for students in grades 5-12 included stealing, property damage, shoplifting, and attacking someone with intent to harm, and items for students in grades 8-12 also included carrying a handgun to school, beating someone up so badly that they probably needed medical attention, stealing a vehicle, selling drugs, and being arrested.

A subset of the nine types of delinquent acts assessed with the YDS was used to construct a measure of violent behaviors committed in the past year. Past-year violent behaviors in grade 5 consisted of a single act (attacking someone with intent to harm), which was scored as 0 (no) or 1 (yes). For the analyses of students in grades 10 and 12, the subset of violent behaviors consisted of three acts (attacking someone with intent to harm, carrying a handgun to school, and beating someone up so badly that they probably needed medical attention) and was scored from 0 (none) to 3 (all three violent acts).

On the basis of the responses, delinquent behaviors were presented as the following rates:

- The initiation rate of delinquent behaviors, which was calculated as the percentage of students who reported first occurrence in grades 5-12 of stealing, property damage, shoplifting, or attacking someone with intent to harm from among those students who had not initiated this behavior before grade 5. For the analyses of students in grades 10 and 12, the initiation rate of violent behaviors was reported separately as the percentage of students who reported first occurrence in grades 5-12 of attacking someone with intent to harm, carrying a handgun to school, or beating someone up so badly that they probably needed medical attention from among those students who had not initiated this behavior before grade 5. Initiation rates for students in grade 12 also included sustained abstinence (from grades 5 through 12) from ever engaging in delinquent or violent behaviors.

- The prevalence rate of delinquent behaviors in grades 10 and 12 was calculated as the percentage of students who acknowledged stealing, damaging property, shoplifting, attacking someone with intent to harm, carrying a handgun to school, beating up someone so badly that they needed medical attention, stealing a vehicle, selling drugs, or being arrested in the prior year. For the analyses of students in grades 10 and 12, the prevalence rate of violent behaviors was reported separately as the percentage of students who acknowledged attacking someone with intent to harm, carrying a handgun to school, or beating someone up so badly that they probably needed medical attention in the prior year.
- The number of different types of delinquent behaviors committed in the past year in grades 8, 10, and 12, ranging from 0 to 9, also was calculated.

The yearly, longitudinal follow-up assessment data were reported at three time points: grades 8, 10, and 12.

Key Findings

In the 8-year Community Youth Development Study, one community in each of 12 pairs of demographically matched communities from seven States was randomly assigned (with a coin toss) to the intervention condition (CTC) or the control condition, which consisted of prevention as usual (with at least some control communities implementing evidence-based school curricula and parenting programs). Students in grades 5 and 6 across 77 elementary and middle schools from the 24 participating communities were surveyed yearly through grade 12 with the YDS. Findings for initiation and prevalence rates were adjusted for student age, sex, race/ethnicity, parental educational achievement level, grade 5 religious attendance, and grade 5 rebelliousness; student population of the community; percent change in student population from 2001 to 2004; and percentage of students in the community receiving free or reduced-price school lunches. Findings for the prevalence rates among students in grades 10 and 12 also were adjusted for grade 5 (baseline) prevalence rates.

Findings for the initiation rate of delinquent and violent behaviors included the following:

- Between grades 5 and 8, students in control communities were more likely than those in CTC communities to initiate delinquent behaviors ($p < .05$). This group difference was associated with a very small effect size (adjusted odds ratio = 1.41).
- Between grades 6 and 10, students in control communities were more likely than those in CTC communities to initiate delinquent behaviors ($p = .03$). This group difference was associated with a very small effect size (adjusted odds ratio = 1.27).
- Through the grade 12 assessment, students in CTC communities were more likely than those in control communities to have sustained abstinence from initiating any delinquent behavior ($p < .05$) and were less likely to initiate violent behaviors ($p < .05$). These group differences were associated with very small effect sizes (adjusted relative risk = 1.18 and 0.86, respectively).

Findings for the prevalence rate of delinquent and violent behaviors included the following:

- In grade 8, students in control communities were more likely than those in CTC communities to report engaging in delinquent behaviors during the prior year ($p < .001$). This group difference was associated with a very small effect size (adjusted odds ratio = 1.34).
- Also in grade 8, students in control communities reported engaging in more types of delinquent behaviors during the prior year compared with those in CTC communities ($p < .01$).
- In grade 10, students in control communities were more likely than those in CTC communities to report engaging in delinquent behaviors ($p = .04$) and engaging in violent behaviors ($p = .03$) during the prior year. These group differences were associated with very small effect sizes (adjusted odds ratio = 1.20 and 1.33, respectively).
- Also in grade 10, there were no significant differences between students in CTC communities and those in control communities in regard to the number of different types of delinquent or violent behaviors reported in the prior year.
- In grade 12, there were no significant differences between students in CTC communities and those in control communities in regard to past-year prevalence and number of different types of different delinquent or violent behaviors.

Studies Measuring Outcome

Study 1

Study Designs	Experimental
Quality of Research Rating	3.5 (0.0-4.0 scale)

Outcome 3: Monetary benefit-to-cost advantage

Description of Measures

Monetary benefit-to-cost advantage of CTC was estimated with the Washington State Institute for Public Policy's benefit-cost model, which was used to calculate two benefit-cost summary statistics: (1) net present benefit per student participating in CTC, which reflects the total intervention benefit per student minus the intervention cost per student, and (2) the CTC benefit-cost ratio, calculated by dividing the benefit per student by cost per student. To determine these statistics, three cost measures were calculated in a comparison of eighth-grade students who received CTC and those in the control condition: (1) the average cost per student who received CTC, (2) the life-course benefits related to CTC's significant prevention effects on students initiating cigarette smoking and delinquent behaviors (i.e., between-group effect sizes for both outcomes), and (3) a comparison of per-student costs and benefits, both expressed in discounted 2004 dollars.

Benefits were projected using several bodies of research and databases: (1) empirical work linking adolescent tobacco use and delinquency initiation to future adult tobacco use and crime; (2) empirically established relationships between cigarette smoking and mortality and heath, and between crime and the criminal justice system and victim costs; and (3) several national datasets, including the Current Population Survey, the National Survey on Drug Use and Health, and the National Crime Victimization Survey. Benefits were specifically projected for the two outcomes of lower initiation rates of cigarette smoking and delinquent behaviors:

- Benefits from lower initiation rates of cigarette smoking were estimated by multiplying the expected cost of adult cigarette smoking per person by CTC's effect on the initiation of adolescent smoking per youth and by a factor reflecting the effect of delayed adolescent smoking on the likelihood of becoming an adult smoker. Per adult smoker, the model estimated lost future earnings and taxes due to premature death, as well as medical expenditures (i.e., ambulatory care, hospital care, prescription drugs, nursing homes, and other care) associated with 19 smoking-attributable diseases. Benefits were estimated to age 74 to capture effects that occur into older age.
- Benefits from lower initiation rates of delinquent behaviors were calculated with a model that incorporated four sets of cost data to determine the lifetime expected crime cost per person in the general population: (1) unit cost of police/sheriffs (per arrest), courts and county prosecutors (per conviction), and corrections facilities (per average daily population), including marginal operating costs and capital costs; (2) units used per crime type, including sentencing probabilities, number of years per sentence, and changes in sentencing when recidivism occurs; (3) likelihood of arrest, conviction, and recidivism for different populations (e.g., general population, juvenile offender, adult offender) and different types of crime; and (4) victimization costs (per unit of crime), which included both tangible (e.g., medical and mental health, property damage, loss of earnings) and intangible (e.g., pain, suffering, lost quality of life) costs. Benefits were estimated by multiplying expected lifetime crime costs per person in the general population by CTC's per-youth effect on the initiation of delinquency. Benefits were estimated to age 32 because of the availability of empirical data and because most crimes are committed by this age.

Future benefit streams were discounted at an annual rate of 3% to maintain 2004 dollar rates coinciding with the start of the study. Intervention costs in multiple years were converted from nominal to constant 2004 dollars using the implicit price deflator for personal consumption expenditures, as provided by the Bureau of Economic Analysis.

The costs of implementing CTC were estimated from bills and documentation provided by CTC communities for reimbursement, then summed to determine annual and total intervention costs for each CTC community. Costs were assigned to four major categories:

- Costs for the community coalition/board, which consisted primarily of coordinator salaries and related administrative costs (prorated for the portion of time spent on the intervention), including those for coalition meetings
- Costs of the intervention programs implemented, which included program materials; training for staff in the community to implement the program; implementation staff time; and, in some cases, incentives, meals, and child care or other supports for participants determined to be important for successful program implementation
- Costs for training, technical assistance, and implementation monitoring, which included

	training sessions, staff salaries, office rental, materials, travel, phone, mailing, and survey administration • Other costs, which consisted of obtaining independent funding in implementation years 4 and 5 when grant support was reduced, cost of substitutes during teacher training periods, additional incentives for participation, and cash donations in support of CTC Time costs for coalition board members and teachers were estimated by multiplying the total volunteer board hours and teacher hours spent delivering prevention programs in each community by State-specific wage rates provided by the Bureau of Labor Statistics. The State average wage rate across all occupations was used to calculate costs for board member time. Teacher hourly wages for classroom time with students were estimated from annual wages for middle school teachers. Volunteer costs were estimated by type of program, not community, using the national average for social and human service assistants. The national average fringe benefits rate for all civilian workers, as provided by the Bureau of Labor Statistics, was added to volunteer board member and program volunteer wages. The national average fringe benefits rate for State and local government workers was added to teacher wages.
Key Findings	In the 8-year Community Youth Development Study, one community in each of 12 pairs of demographically matched communities from seven States was randomly assigned (with a coin toss) to the intervention condition (CTC) or the control condition, which consisted of prevention as usual (with at least some control communities implementing evidence-based school curricula and parenting programs). Students in grades 5 and 6 across 77 elementary and middle schools from the 24 participating communities were surveyed yearly through grade 12 with the Youth Development Survey. Monetary benefit-to-cost advantage findings included the following: • The net present benefit of CTC was $5,250 per student, which reflected an average benefit of $812 from preventing the initiation of cigarette smoking and $4,438 from preventing.the initiation of delinquency. • The CTC benefit-cost ratio under conservative cost assumptions was $5.30 per student per $1.00 invested. Under less conservative but still viable cost assumptions, the benefit-cost ratio for CTC was $10.23 per $1.00 invested.
Studies Measuring Outcome	Study 1
Study Designs	Experimental
Quality of Research Rating	3.2 (0.0-4.0 scale)

Study Populations

The following populations were identified in the studies reviewed for Quality of Research.

Study	Age	Gender	Race/Ethnicity
Study 1	6-12 (Childhood) 13-17 (Adolescent)	50% Female 50% Male	67% White 20% Hispanic or Latino

Quality of Research Ratings by Criteria (0.0-4.0 scale)

External reviewers independently evaluate the Quality of Research for an intervention's reported results using six criteria:

1. Reliability of measures
2. Validity of measures
3. Intervention fidelity
4. Missing data and attrition
5. Potential confounding variables
6. Appropriateness of analysis

For more information about these criteria and the meaning of the ratings, see Quality of Research.

Outcome	Reliability of Measures	Validity of Measures	Fidelity	Missing Data/Attrition	Confounding Variables	Data Analysis	Overall Rating

1: Substance use	3.4	3.4	3.8	3.7	3.2	4.0	**3.6**
2: Delinquent behaviors	3.4	3.1	3.8	3.7	3.2	4.0	**3.5**
Monetary benefit-to-cost antage	2.5	2.5	3.8	3.7	3.2	3.7	**3.2**

Study Strengths

The substance use items from the CYDS were extracted verbatim from the Monitoring the Future survey, which has high face and construct validity, with convergent validity established by high correlation with other measures of adolescent risk and protection. The delinquent behavior items in the CYDS were extracted verbatim from the National Youth Survey, another instrument with high test-retest reliability. The delinquent behavior items of the CYDS have face and concurrent validity, correlating with other measures of adolescent risk and protection. The basis for establishing community costs of implementing CTC was reliable and valid. The reliability of the benefit estimates was supported by an empirically sound economic model that used validated measures for benefit projections based on standardized mean difference effect sizes from the clinical trial's intervention effect on target outcomes relative to the control condition. Fidelity to the CTC operating system was enhanced by the use of certified trainers, user-friendly support materials, systematic monitoring by community boards, and coaching and technical support provided by study research staff. The adherence to fidelity at the classroom or community-based workshop level (e.g., program/curriculum content; dosage; delivery quality; student responsiveness, attendance, and exposure) was reported by teachers or workshop facilitators and observed by independent assessors, with between 10% and 15% of observed classroom sessions rated for percent agreement with teacher reports; percent agreement between teacher or facilitator and independent assessor reports was very high. The measurement of multiple types of fidelity recorded by multiple reporters at both the community-systems level and the classroom-program level supported a high level of ongoing intervention fidelity tracking. Attrition across the seven waves of longitudinal CYDS data collection was low (8.6%). Substance use or delinquent behavior item nonresponse was less than 1%. Attrition and missing data were handled by sophisticated, multiple imputation modeling of the dataset. All analyses were appropriately adjusted by covariates for student and community characteristics and the respective baseline measure of outcomes. State-of-the-art statistical models were used to evaluate the outcomes of substance use and delinquent behavior from a large, nested longitudinal dataset. Costs and benefits were appropriately adjusted for inflation and discounted to account for the point in time when calculated. Standardized mean difference effect sizes were used in the benefit-cost model for estimating the intervention's effect on initiation rates of cigarette smoking and engaging in delinquent behaviors. The benefit-cost analyses were carried out by a well-tested, formalized economic model.

Study Weaknesses

The reliability of the cost measures was not formally assessed, and most cost measures have only face validity. The benefit-cost model used to calculate the net present benefit and benefit-cost ratio primarily used estimates based on projected benefit figures over the course of a hypothetical lifetime--and not observed benefits--which weakens internal validity, particularly since calculations of the net present benefit and benefit-cost ratio were carried out at 5 years into the study, instead of at the end of the 8-year study. Because some of the control communities implemented evidence-based prevention interventions, the absence of cost measurements for control communities (to compare with cost measurements of CTC communities) introduces a potential confound. However, this results in upward bias in the net cost estimate of implementing CTC compared to prevention as usual and suggests the benefit-cost ratio estimates may be conservative.

Readiness for Dissemination

Review Date: April 2014

Materials Reviewed

The materials below were reviewed for Readiness for Dissemination. The implementation point of contact can provide information regarding implementation of the intervention and the availability of additional, updated, or new materials.

Program Web site, http://www.communitiesthatcare.net/

Readiness for Dissemination Ratings by Criteria (0.0-4.0 scale)

External reviewers independently evaluate the intervention's Readiness for Dissemination using three criteria:

1. Availability of implementation materials
2. Availability of training and support resources
3. Availability of quality assurance procedures

For more information about these criteria and the meaning of the ratings, see Readiness for Dissemination.

Implementation Materials	Training and Support Resources	Quality Assurance Procedures	Overall Rating

4.0	4.0	4.0	**4.0**

Dissemination Strengths

All program materials are easily accessed from the program Web site. Implementation materials are comprehensive, straightforward, clearly organized, culturally diverse, and engaging. Practical resources such as community readiness assessment and organizing tools leader information, and sponsoring site planning tools are provided. Program consultants work closely with communities to develop a training plan, assess community readiness prior to implementation, and help identify barriers to implementation. Training is grouped by phases, and training outcomes are clearly defined. Clearly stated milestones and benchmarks enable implementers to assess fidelity to the framework on an ongoing basis. A youth survey is used to identify needs and set priorities. Additional evaluation studies provide examples of expected outcomes.

Dissemination Weaknesses

No weaknesses were identified by reviewers.

Costs

The cost information below was provided by the developer. Although this cost information may have been updated by the developer since the time of review, it may not reflect the current costs or availability of items (including newly developed or discontinued items). The implementation point of contact can provide current information and discuss implementation requirements.

Item Description	Cost	Required by Developer
Tools for Community Leaders	Free	Yes
Investing in Your Community's Youth	Free	Yes
Social Development Strategy Chart and Risk Factor Checklist	Free	Yes
Implementing the CTC Operating System	Free	Yes
Building Blocks of the CTC Community Planning System	Free	Yes
Milestones and Benchmarks Introduction	Free	Yes
CTC Milestones and Benchmarks	Free	Yes
CTC Big Picture	Free	Yes
Key Leader Orientation Guides, PowerPoint Slides, and Training Guides	Free	Yes
Community Board Orientation Participant Guides, PowerPoint Slides, and Training Guides	Free	Yes
Community Assessment Training Participant Guides, PowerPoint Slides, and Training Guides	Free	Yes
Community Resources Assessment Training Participant Guide, PowerPoint Slides, and Training Guides	Free	Yes
Community Planning Training Participant Guides, PowerPoint Slides, and Training Guides	Free	Yes
Community Plan Implementation Training Participant Guides, PowerPoint Slides, and Training Guides	Free	Yes
Complete 2-year training series (includes 2-day, on-site training for coordinator; 9 on-site training days for the coalition and workgroups; 8.5 days of distance technical assistance; and ongoing coaching)	~$30,000 per site, plus travel expenses	Yes
CTC Youth Survey	Free (but administration, data management, and analysis and report generation may require technical	Yes

	assistance)	
CTC Youth Survey Scale Dictionary	Free	Yes

Replications

ed citations are presented below. An asterisk indicates that the document was reviewed for Quality of Research.

Feinberg, M.E., Jones, D., Greenberg, M.T., Osgood, D.W., & Bontempo, D. (2010). Effects of the Communities That Care model in Pennsylvania on change in adolescent risk and problem behaviors. Prevention Science, 11 (2), 163-171.

Contact Information

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Consider these Questions to Ask (PDF, 54KB) as you explore the possible use of this intervention.

Web Site(s):

http://www.communitiesthatcare.net/

This PDF was generated from http://nrepp.samhsa.gov/ViewIntervention.aspx?id=392 on 3/27/2015

Washington State Institute for Public Policy

Benefit-Cost Results

Communities That Care

Benefit-cost estimates updated December 2014. Literature review updated April 2012.

Current estimates replace old estimates. Numbers will change over time as a result of model inputs and monetization methods

The WSIPP benefit-cost analysis examines, on an apples-to-apples basis, the monetary value of programs or policies to determine whether the benefits from the program exceed its costs. WSIPP's research approach to identifying evidence-based programs and policies has three main steps. First, we determine "what works" (and what does not work) to improve outcomes using a statistical technique called meta-analysis. Second, we calculate whether the benefits of a program exceed its costs. Third, we estimate the risk of investing in a program by testing the sensitivity of our results. For more detail on our methods, see our **technical documentation**.

Program Description: Communities that Care (CTC) is a coalition-based community prevention program that aims to prevent youth problem behaviors including underage drinking, tobacco use, violence, delinquency, school dropout, and substance abuse. CTC works through a community board to assess risk and protective factors among the youth in their community. The board works to implement tested and effective programs to address the issues and needs that are identified.

Benefit-Cost Summary

Program benefits		Summary statistics	
Participants	$691	Benefit to cost ratio	$3.25
Taxpayers	$561	Benefits minus costs	$1,253
Other (1)	$726	Probability of a positive net present value	85 %
Other (2)	($151)		
Total	$1,826		
Costs	($573)		
Benefits minus cost	$1,253		

The estimates shown are present value, life cycle benefits and costs. All dollars are expressed in the base year chosen for this analysis (2013). The economic discount rates and other relevant parameters are described in our **technical documentation**.

Detailed Monetary Benefit Estimates

Source of benefits	Benefits to Participants	Taxpayers	Other (1)	Other (2)	Total benefits
From primary participant					
Crime	$0	$226	$686	$112	$1,024
Health care (smoking)	$7	$43	$38	$22	$110
Labor market earnings (alcohol abuse/dependence)	$683	$291	$0	$1	$975
Property loss (alcohol abuse/dependence)	$1	$0	$2	$0	$3
Adjustment for deadweight cost of program	$0	$0	$0	($285)	($285)
Totals	**$691**	**$561**	**$726**	**($151)**	**$1,826**

We created the two "other" categories to report results that do not fit neatly in the "participant" or "taxpayer" perspectives. In the "Other (1)" category we include the benefits of reductions in crime victimization and the economic spillover benefits of improvement in human capital outcomes. In the "Other (2)" category we include estimates of the net changes in the value of a statistical life and net changes in the deadweight costs of taxation.

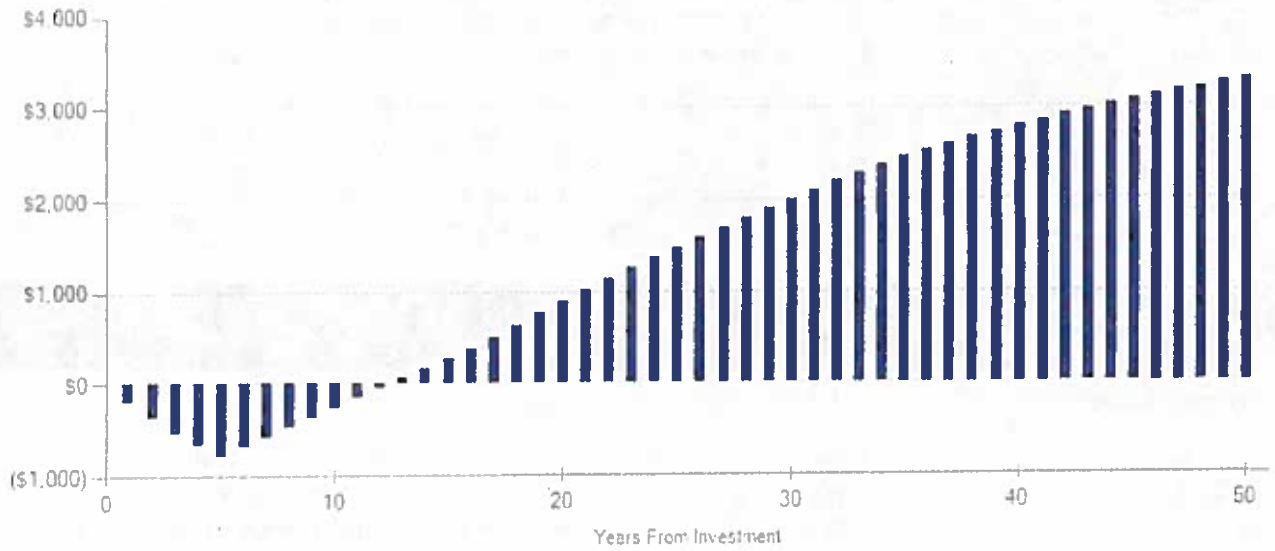
Detailed Cost Estimates

	Annual cost	Program duration	Year dollars	Summary statistics	
Program costs	$103	5	2004	Present value of net program costs (in 2013 dollars)	($573)
Comparison costs	$0	1	2004	Uncertainty (+ or - %)	35 %

Weighted average of per child costs across twelve CtC demonstration communities. Provided by M. Kuklinski, Social Development Research Group, January 2013

The figures shown are estimates of the costs to implement programs in Washington. The comparison group costs reflect either no treatment or treatment as usual, depending on how effect sizes were calculated in the meta-analysis. The uncertainty range is used in Monte Carlo risk analysis, described in our **technical documentation**

Cumulative Net Cash Flows Over Time (Non-Discounted Dollars)



Meta-Analysis of Program Effects

Outcomes measured	Primary or secondary participant	No. of effect sizes	Treatment N	Unadjusted effect size (random effects model)		Adjusted effect sizes and standard errors used in the benefit-cost analysis					
						First time ES is estimated			Second time ES is estimated		
				ES	p-value	ES	SE	Age	ES	SE	Age
Crime	Primary	1	1926	-0.135	0.001	-0.051	0.042	16	-0.051	0.042	26
Smoking in high school	Primary	1	2227	-0.092	0.017	-0.035	0.039	16	-0.035	0.039	26
Alcohol use in high school	Primary	1	1917	-0.150	0.001	-0.057	0.045	16	-0.057	0.045	26
Cannabis use in high school	Primary	1	2395	-0.041	0.291	-0.015	0.039	16	-0.015	0.039	26
Illicit drug use in high school	Primary	1	2372	-0.039	0.314	-0.015	0.039	16	-0.015	0.039	26

Citations Used in the Meta-Analysis

Kuklinski, M.R., Briney, J.S., Hawkins, J.D., & Catalano, R.F. (2012). Cost-benefit analysis of communities that care outcomes at eighth grade. *Prevention Science, 13*(2), 150-61.

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Washington State Institute for Public Policy

The Washington State Legislature created the Washington State Insititute for Public Policy in 1983. A Board of Directors-representing the legislature, the governor, and public universities-governs WSIPP and guides the development of all activities. WSIPP's mission is to carry out practical research, at legislative direction, on issues of importance to Washington State.