Summary Review of Approved Curricula for the CAPP Grant Program

Prepared for EyesOpenIowa

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Introduction

School-based sexual health education programs are recognized nationally as an important component of healthy youth development. Ideally, these programs are part of a health education mission that includes both knowledge and skills for young people to avoid pregnancy, HIV, other STIs, and other health problems (CDC, 2014). Furthermore, medically accurate comprehensive programs are more effective than abstinence-only programs[1] in reducing and preventing key sexual risk behaviors such as unprotected sex and having multiple sexual partners (Chin, et al., 2012).

A systematic review by Chin and colleagues (2012) compared the effectiveness of comprehensive sexual education programs and abstinence-only sexual education programs. The review suggested that comprehensive programs resulted in favorable outcomes in rates of sexual activity, number of sexual partners, use of contraceptives, and STI prevalence. Results of comprehensive programs tended to be more favorable for male participants than female participants. Abstinence-only programs were found to result in reductions of frequency of sexual activity but there were no positive results regarding contraceptive use or other risk-reduction behaviors. These findings led to the authors' conclusion that the public health impact would be greater for comprehensive programs than abstinence-only programs (Chin et al., 2012).

Key components of effective sexual health education programs have been identified by various author groups (CDC, 2015; Kirby et al., 2007). In general, the most effective programs have common characteristics in the areas of program development, key educational strategies, and program implementation. For example, programs should be research-based and theory-driven and should incorporate rigorous formative evaluation during the development process. Effective programs generally make use of a variety of educational strategies such as role-play and other social experiences to enhance negotiation and refusal skills. Implementation of effective programs includes extensive training of educators to maximize the quality of the implementation and the confidence of those facilitating the programs. Cognitive characteristics of the educators implementing sexual health education curricula may be important moderating factors that influence student outcomes. These characteristics include comfort with the content, self-efficacy with program implementation, and perceived support from administrators and other educators (Coyle, 2011).

In addition, programs that incorporate parent/family involvement may be more effective than programs focusing solely on youth. Guilamo-Ramos and colleagues (2011) compared *Families Talking Together* (FTT, a parent-based intervention), *Making a Difference!* (MAD, a youth-only intervention), and a combined *FTT/MAD* intervention. The sample sizes of mother/adolescent dyads for the three conditions were 666, 679, and 671, respectively (75% Latino and 25% black). Results suggested that the two curricula were comparable in outcomes related to delaying sexual initiation, but the FTT curriculum improved parent/youth communication about sex as well as

[1] Comprehensive sexual education programs are defined as those that promote behaviors (such as contraceptive use) to prevent pregnancy and STI transmission. Abstinence-only programs focus exclusively on abstinence from sexual activity for pregnancy and disease prevention (Chin et al., 2012).

adolescent perceptions of maternal knowledge and trustworthiness related to sexual health topics. Satisfaction with their relationships with their mothers also improved in the FTT conditions (Guilamo-Ramos et al., 2011).

In a recent review of sexual health education curricula, evaluation results suggested that positive outcomes were found more frequently in programs that emphasized improving relationships between parents and youth, programs that included service learning or community service, programs that included homework (particularly interactive homework that included parent or family involvement), and programs that were culturally tailored to the population being served (Fish, Manlove, Moore, & Mass, 2014).

In two reviews of studies of group-based sexual health curricula implemented in the US and abroad, Kirby and colleagues (2007, 2009) found that two-thirds of the studies showed that behavior was positively impacted in areas such as reducing sexual activity and improving rates of contraceptive use. However, the authors identified many limitations of the evaluations described in these studies, including program implementation issues, weak evaluation designs, lack of statistical power or low quality statistical methods, lack of focus on STD and pregnancy rates, and a complete lack of programs targeting youth with same-sex partners. Based on these findings, several recommendations were made by the authors. Of particular relevance to the CAPP program, it was recommended that although communities should include evidence-based sexual education curricula that are developed and implemented using 17 characteristics, additional strategies should be used as well to create a larger initiative around teen pregnancy and STD reduction. Moreover, rigorous evaluations of curricula are needed to fill wide gaps in knowledge about program processes and outcomes (Kirby et al., 2007, 2009).

Evaluation concerns were raised by Fish and colleagues as well (2014). The vast majority of sexual/reproductive health curricula are evaluated in urban settings. Those few programs that have been evaluated in rural settings have had mixed results or have not worked at all. Regarding measures used for evaluation of programs, studies have tended to focus on teen pregnancy or teen birth as the sole or most important measure. Other indicators such as STI rates, contraceptive use, and sexual risk behaviors have been secondary or not measured at all. Finally, some of these programs have not been evaluated in over ten years, leading to potential concerns about whether the findings are still valid and relevant (Fish et al., 2014).

Recommendations:

1. **Consider reducing the number of approved curricula for use by CAPP grantees.**

The CAPP program currently approves 12 curricula for use by grantees. Of these 12 programs, seven have been shown to have clear positive impacts on participants, according to a review of published evaluation evidence by Fish and colleagues (2014). The CAPP evaluation has found that three curricula are used most often by grantees: *Draw the Line/Respect the Line, Making Proud Choices,* and *Reducing the Risk.* Reducing the field of approved curricula to two specifically culturally tailored (*SIHLE* and *Cuidate*) and five to seven additional curricula could

promote enhanced professional development for educators implementing these programs. The reduction in scope of programs offered could lead to more efficient and effective allocation of professional development resources.

2. **Consider seeking funding to rigorously evaluate one curriculum at a time.**

There is clear evidence that some approved programs have not been rigorously evaluated recently and no published evaluation research has examined the impacts of individual curricula on rural audiences. There is a gap in the evaluation science in this area and that leads to a gap in programmatic knowledge that may be impacting program outcomes for CAPP grantees. Seeking additional funding to evaluate one curriculum at a time could lead to important improvements in the way programs are implemented, thereby improving outcomes for Iowa teens. These targeted evaluations would include randomized controlled trial designs and a focus on rigorous methodology.

3. **Consider becoming more involved with curriculum development for rural audiences.**

Very few programs exist that were specifically designed for rural audiences. There is a gap in programming for this population. EyesOpenIowa may want to consider opening a dialogue with grantees about developing a sexual health education curriculum specifically intended for rural youth. The benefits of engaging in such a process may include capacity-building and engagement of CAPP grantees, improved programming for Iowa teens and families, and improved sexual health and pregnancy outcomes in the state. Extensive testing would be required to ensure the efficacy of the developed curriculum. Testing and evaluation would include randomized controlled trials with sufficient sample sizes to detect differences between intervention and control groups.

4. **Continue to promote comprehensive sexual health education curricula as part of a larger constellation of outreach activities to promote community-wide change.**
5. **Continue to promote parent involvement and parent/youth communication.**

The CAPP grant program was developed with an understanding of the evidence base in best practices for sexual health education. Reviews of the existing literature provide validation for the important work that CAPP grantees are doing alongside EyesOpenIowa. Regardless of *which* programs are included as "approved" curricula, the grant program should continue to locate school-based group sexual health education programs as part of a constellation of other programming and outreach.

Summary of Published Evaluation Evidence

Fish and colleagues (2014) reviewed published evaluations for the *Child Trends* publication *What Works*. The CAPP-approved curricula are listed in Table 1 alongside the evaluation findings for each of eight indicators.

Table 1. Summary of outcomes, by curriculum

	Sexual initiation	Frequency/ recency of sex	Number of partners	Anal/oral sex	Sex under the influence	Condom/ contraceptive use	Contracting STIs	Pregnancy or birth
All4You (and All4You2!)	x	x	x			x		x
Be Proud! Be Responsible!	x	x	+/-	+		+/-		
Be Proud! Be Responsible! Be Protective!			+			x		
Becoming a Responsible Teen (BART)	+	+	x			+		
Cuidate		+	+			+/-		
Draw the Line/Respect the Line	+/-	x	x			x		
Making a Difference	+	+/-	x			+/-		
Making Proud Choices	x	x	x			+/-		
Promoting Health Among Teens (PHAT) – Abstinence Only	+/-	x	+			x		
Reducing the Risk (5th Ed)	+/-	x				+/-		x
Safer Choices	x	x	x		x	+/-		
Sisters, Informing, Healing, Living, Empowering (SIHLE)		+				+	x	+/-

Note. "x" denotes areas in which no significant impacts or changes were found, "+/-" denotes areas in which results were mixed, and "+" denotes areas in which positive changes were seen. Blank spaces with no indications related to results represent areas that were not evaluated for that program.
Source: Fish, Manlove, Moore, & Mass, 2014

Specific evaluation information for each of the 12 curricula approved for use in the CAPP grant program is summarized in Table 2. In addition, evaluation evidence is described in more detail under curriculum title headings. Most curricula were evaluated in a school setting and all were evaluated using either a cluster randomized trial or a randomized controlled trial. Five of the 12 curricula have been evaluated in the last decade. None of the curricula were evaluated in a rural setting.

All4You!

Coyle, K.K., Glassman, J.R., Franks, H.M., Campe, S.M., Denner, J., & Lepore, G.M. (2013). Interventions to Reduce Sexual Risk Behaviors Among Youth in Alternative Schools: A Randomized Controlled Trial. *Journal of Adolescent Health, 53*(1), 68-78.

- Cluster randomized trial
    - 11 continuation high schools in northern California
    - Pre-test, post-tests at 6 and 18 months after baseline
    - African American and Hispanic, 53% male
- Six months after baseline: participants less likely to have unprotected sex in past three months, but no other behavioral variables significantly different.
- At 18 months post-baseline, no significant changes.

Coyle, K.K., Kirby, D.B., Robin, L.E., Banspach, S.W., Baumler, E., & Glassman, J.R. (2006). All4You! A randomized trial of an HIV, other STDs, and pregnancy prevention intervention for alternative school students. *AIDS Education and Prevention, 18*(3), 187–203.

- Cluster randomized trial
    - 24 alternative high schools in four urban northern California counties
    - Pre-test, post-tests at 6, 12, and 18 months after baseline
    - Ethnically mixed, 63% male
- 6-month post-test: participants reported lower frequency of intercourse and improved condom use, but no other behavioral variables were changed significantly.
- 12-month and 18-month follow-up: no statistically significant changes.

Table 2. Design details of published evaluation studies

Curriculum	Year	Study design	Setting	Sample size	Population	Measurement	Results
All4You!	2013	Cluster randomized trial	School	11 alt. high schools (652 youth)	Mixed race/ethn. 47% female Mean age 16	Pre-test Post-test 6 & 18 months after	6-month follow-up: Both studies showed some improvement in frequency of unprotected sex. No improvement at other follow-up intervals.
	2006	Cluster randomized trial	School	24 alt. high schools (998 youth)	Mixed race/ethn. 37% female 90% ages 14-17	Pre-test Post test 6, 12, & 18 months after	
Be Proud! Be Responsible!	2010	Cluster randomized trial	Community	86 organiz. (1,707 youth)	90% African American 56% female Ages 13-18	Pre-test Post-test following intervention and 3, 6 & 12 months after	Some improvement seen in frequency of sex and unprotected sex.
	1999	Randomized controlled trial	School (after school)	496 youth	African American 7th and 8th graders 54% female Mean age 13.2	Pre-test Post-test following intervention and 3 & 6 months after	
	1992	Randomized controlled trial	School (after school)	157 youth	African American males Mean age 14.6	Pre-test Post-test following intervention and 3 months after	
Be Proud! Be Responsible! Be Protective!	2003	Cluster randomized trial	School	Schools in 4 dist. (497 youth)	Pregnant/parenting females 78% Hispanic Mean age 16.7	Pre-test Post-test following intervention and 3, 6 & 12 months after	12-month follow-up: Fewer sexual partners in last 3 months. No other changes.
BART	1995	Randomized controlled trial	Health center	246 youth	African American 72% female Ages 14-18	Pre-test Post-test following intervention and 6 & 12 months after	Reduction in unprotected sex; among sexually experienced participants, lower frequency of sex.
Cuidate	2006	Randomized controlled trial	Community	684 youth	Latino (85% Puerto Rican) 55% female Ages 13-18	Pre-test Post-test following intervention and 3, 6 & 12 months after	Reduced frequency of sex, fewer partners, improvement in condom use and less unprotected sex.
Draw the Line/Respect the Line	2004	Cluster randomized trial	School	19 middle schools (2,829 youth)	Mixed race/ethn. 50% female Mean age 11.5	Pre-test in spring of 6th grade Post-tests in spring of 7th, 8th, & 9th grades	Boys only: reduced frequency of sex and number of sexual partners.

Making a Difference	1998	Randomized controlled trial	School (after school)		African American 53% female Mean age 11.8	Pre-test Post-test following intervention and 3, 6 & 12 months after	Delayed sexual initiation.
Making Proud Choices	1998	Randomized controlled trial	School (after school)		African American 53% female Mean age 11.8	Pre-test Post-test following intervention and 3, 6 & 12 months after	Reduced unprotected sex.
PHAT – Abstinence	2010	Randomized controlled trial	School (after school)	4 middle schools	African American 53% female Grades 6/7 Mean age 12	Pre-test Post-tests at 3, 6, 12, 18 & 24 months after	Delayed sexual initiation.
Reducing the Risk	1991	Quasi-experimental	School	46 high school classes (758 youth)	Mixed race/ethn. 53% female 56% 10th grade	Pre-test Post-test following intervention and 6 & 18 months after	18-month follow-up: female participants less likely to report unprotected sex.
Safer Choices	2011	Cluster randomized trial	School	20 high schools (3,869 youth)	Mixed race/ethn. 52% female Enrolled in 9th grade	Pre-test at beginning of 9th grade Post-test at end of 9th, 10th, & 11th grades	Improved contraceptive use at the end of 9th and 10th grades, but no changes at end of 11th grade.
SIHLE	2004	Randomized controlled trial	Health clinic	522 youth	African American girls ages 13-18	Pre-test Post-tests at 6 and 12 months	Reduced pregnancy reports and improved condom use.

Be Proud! Be Responsible!

Jemmott III, J. B., Jemmott, L. S., Fong, G. T., & Morales, K. H. (2010). Effectiveness of an HIV/STD risk-reduction intervention for adolescents when implemented by community-based organizations: A cluster-randomized controlled trial. *American Journal of Public Health, 100*(4), 720-726

- Cluster randomized trial
  - 86 community-based organizations in New Jersey and Philadelphia
  - Baseline, post-test immediately after intervention and at 3-month, 6-month, and 12-month follow-up intervals
  - 1,707 youth: 90% African American; 56% female; ages 13-18
- Averaged across follow-up measurements: Sexually experienced intervention participants reported more frequent and consistent condom use. No other statistically significant changes on behaviors related to sexual risk.

Jemmott, J. B., Jemmott, L. S., Fong, G. T., & McCaffree, K. (1999). Reducing HIV risk-associated sexual behavior among African American adolescents: Testing the generality of intervention effects. *American Journal of Community Psychology, 27*(2), 161-187.

- Randomized controlled trial
  - 497 African American 7th and 8th grade students
  - Pre-test, post-tests immediately following intervention and at 3-month and 6-month intervals
  - Mean age 13.2 years; 54% female
- 3-month follow-up: No statistically significant changes on any behavioral measures of sexual activity.
- 6-month follow-up: Intervention participants reported fewer occurrences of unprotected sex and fewer anal sex partners, but no significant impacts found on having had sexual intercourse or on the number of vaginal sex partners.

Jemmott III, J. B. (1992). Reductions in HIV risk-associated sexual behaviors among black male adolescents: Effects of an AIDS prevention intervention. *American Journal of Public Health, 82*(3), 372–377.

- Randomized controlled trial
  - 157 African American males
  - Pre-test, post-tests immediately following intervention and three months after
  - Mean age 14.6 years
- 3-month follow-up: participants reported fewer sexual partners and fewer occurrences of unprotected sex.

Be Proud! Be Responsible! Be Protective!

Koniak-Griffin, D., Lesser, J., Nyamathi, A., Uman, G., Stein, J. A., & Cumberland, W.G. (2003). Project CHARM: An HIV prevention program for adolescent mothers. *Family and Community Health, 26,* 94-107.

- Specifically developed for pregnant/parenting females
- Cluster randomized trial
    - Schools in four districts of Los Angeles County, California
    - Pretest, post-test, and 3-, 6-, and 12-month follow-ups
    - Hispanic and African American females in grades 7-12, all pregnant or parenting
- At 12 month follow-up, participants reported fewer sexual partners in past 3 months
- No other statistically significant results at any follow-up point

Becoming a Responsible Teen (BART)

St. Lawrence, J. S., Brasfield, T. L., Jefferson, K. W., Alleyne, E., O'Bannon, R. E. 3rd, & Shirley, A. (1995). Cognitive-behavioral intervention to reduce African American adolescents' risk for HIV infection. *Journal of Consulting and Clinical Psychology, 63*(2), 221–237.

- Randomized controlled trial
    - Health center in a "medium-sized city"
    - Pre-test, immediate post-test, 6- and 12-month follow-ups
    - African American 14-18 year-olds
    - 72% female
- Averaged across all follow-up measurements: Intervention participants reported greater incidence of condom use and reduced unprotected oral and anal sex. No other statistically significant changes.
- 12-month post-test: All intervention participants (sexually experienced and inexperienced at baseline) reported less sexual activity in the past two months than the control group.

Cuidate

Villarruel, A. M., Jemmott, J. B., & Jemmott, L. S. A randomized controlled trial testing an HIV prevention intervention for Latino youth. (2006). *Archives of Pediatrics & Adolescent Medicine, 160*(8), 772–777.

- Randomized controlled trial
    - Community based setting in NE Philadelphia
    - Pre-test, immediate post-test, and 3-, 6-, and 12-month follow-ups
    - Latino youth ages 13-18
    - 55% female, 85% Puerto Rican

- Averaged across follow-ups: Intervention participants were less likely to have had sexual intercourse, less likely to have had multiple partners, reported fewer instances of unprotected sex, and reported more consistent condom use.

Draw the Line, Respect the Line

Coyle, K.K., Kirby, D.B., Marin, B.V., Gomez, C.A., Gregorich, S.E. (2004). Draw the Line/Respect the Line: A randomized trial of a middle school intervention to reduce sexual risk behaviors. *American Journal of Public Health, 94*, 843-851.

- Cluster randomized trial
    - 19 public middle schools in Northern California
    - Pre-test; post-tests at end of grade 6, grade 7, and grade 8
    - Ethnically diverse; evenly split male/female ratio
- No statistically significant results for girls
- Among boys, sexual initiation, frequency of sexual intercourse, and number of sexual partners decreased

Making a Difference; Making Proud Choices

Jemmott, J.B., Jemmott, L.S., Fong, G.T. (1998). Abstinence and safer sex HIV risk-reduction interventions for African American adolescents: A randomized controlled trial. *Journal of the American Medical Association, 279*(19), 1529-1536.

- Randomized controlled trial
    - Three middle schools in low-income area of Philadelphia randomly assigned to receive either MAD, MPC, or control condition with general health curriculum
    - Pretest, post-test, and 3-, 6-, and 12-month follow-ups
    - African American sixth and seventh graders
    - 53% female
- Making a Difference results:
    - 3-month post-test: Additional delay of sexual initiation among sexually inexperienced youth. No other statistically significant changes.
    - 6-month and 12-month post-tests: No statistically significant results
- Making Proud Choices results:
    - 3-month post-test: Sexually experienced participants reported lower frequency of unprotected sex. No other statistically significant changes.
    - 6-month and 120month post-tests: Reduced rates of unprotected sex remained statistically significant. No other statistically significant changes.

PHAT – Abstinence Only

Jemmott III, J.B., Jemmott, L.S., Fong, G.T. (2010). Efficacy of a theory-based abstinence-only intervention over 24 months: A randomized controlled trial with young adolescents. *Archives of Pediatrics & Adolescent Medicine, 164*(2), 152-159.

- Randomized controlled trial
  - Saturday program for students at 4 middle schools
  - Pre-test, post-tests at 3, 6, 12, 18, and 24 months intervals
  - African American 6th and 7th graders; mean age 12
  - 53% female
- Averaged across follow-up intervals: Intervention participants less likely to have initiated sexual intercourse but no significant differences found in any indicators of other sexual risk behaviors.

Reducing the Risk

Kirby, D., Barth, R. P., Leland, N., & Fetro, J. V. (1991). Reducing the risk: Impact of a new curriculum on sexual risk-taking. *Family Planning Perspectives, 23*(6), 253–263.

- Quasi-experimental design
  - 46 high school classrooms in both rural and urban counties in northern California
  - Comparison classrooms; pre-test and 6- and 18-month post-tests
  - 62% white, 56% in 10th grade, 53% female
- 6 months post-intervention: No statistically significant behavioral changes
- 18 months post-intervention: Female participants who reported being sexually inexperienced at baseline were less likely than comparison females to have had unprotected sex. No other behavioral changes.

Safer Choices

Kirby, D.B., Baumler, E., Coyle, K.K. (2011). The impact of "Safer Choices" on condom and contraceptive use among sexually experienced students at baseline. *Unpublished manuscript*.

- Cluster randomized trial
  - 20 high schools in Texas and California
  - Baseline at beginning of 9th grade, post-tests at end of 9th, 10th, and 11th grades
  - Mixed race/ethnicity; 52% female
- End of 9th and 10th grades: Sexually experienced intervention participants more likely to have used contraceptives and condoms the last time they had sex. No other behavioral changes significant.
- No significant changes at the end of 11th grade.

SIHLE

DiClemente, R.J., Wingood, G.M., Harrington, K.F., Lang, D.L., Davies, S.L., Hook, E.W., et al. (2004). Efficacy of an HIV prevention intervention for African American adolescent girls: A randomized controlled trial. *Journal of the American Medical Association, 292*(2), 171–179.

- Randomized controlled trial
    - Conducted at Saturday program in a health clinic
    - Pre-test, post-tests at 6-month and 12-month intervals
    - 522 African American females ages 14 to 18
- 6-month follow-up: Intervention participants were less likely to have gotten pregnant and more likely to report consistent condom use.
- 12-month follow-up: Intervention participants were more likely to report having protected sex and consistent condom use. No significant impacts on reports of pregnancy during the follow-up period.

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Kirby, D.B., Laris, B.A., Rolleri, L.A. (2007). Sex and HIV education programs: Their impact on sexual behaviors of young people throughout the world. *Journal of Adolescent Health, 40*, 206-217. doi:10.1016/j.jadohealth.2006.11.143

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