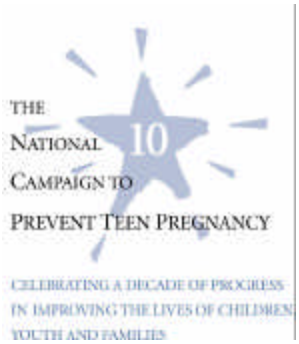

Executive Summary:

Sexual Risk and Protective Factors

Factors Affecting Teen Sexual Behavior, Pregnancy, Childbearing And Sexually Transmitted Disease: Which Are Important? Which Can You Change?

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In order to reduce the high rates of teen pregnancy and sexually transmitted disease (STD) in the United States, it is important to address two primary questions:

1) What factors influence adolescents' decisions about sex?

2) Which of these factors can be altered?

By identifying and targeting those factors that both affect adolescents' decisions about sex and can be changed by interventions, organizations can greatly increase their chances of reducing sexual risk-taking.

The full report summarizes findings from more than 400 research studies in an effort to answer these two questions.

Which Factors Influence Adolescents' Decisions about Sex?

Relevant factors include both *risk factors* and *protective factors,* which may be equally important in terms of their relevance. **Risk factors** are those that encourage behavior that could result in a pregnancy or sexually transmitted disease (STD) or, conversely, that discourage behavior that could prevent them. **Protective factors** are those that discourage behavior that could lead to a pregnancy or STD or that encourage behavior that can help prevent them. Put another way, as the number of risk factors in a teen's life increases and/or the number of protective factors decreases, the likelihood that he/she will have sex, become pregnant/cause a pregnancy, or contract an STD increases.

More than 400 factors are identified that affect one or more sexual behaviors (the initiation of sex, frequency of sex, number of sexual partners, use of condoms, and use of other contraceptives) or consequences of those behaviors (pregnancy, childbearing or STD).

Important risk and protective factors include characteristics of the teens' states, communities, families, friends and peers, romantic partners, and the teens themselves (See Table 1.) Factors also involve teens' relationships with these important individuals or organizations in their environment. Some factors directly involve sexuality, while others do not.

These risk and protective factors may be grouped into four key themes:

1) Individual biological factors (e.g. age, physical maturity and gender)
2) Disadvantage, disorganization and dysfunction in the lives of the teens themselves and their environments (e.g. rates of substance abuse, violence, and divorce; also levels of education)
3) Sexual values, attitudes, and modeled behavior (e.g. teens' own values about sexual behavior as well as those expressed by parents, peers, and romantic partners)
4) Connection to adults and organizations that discourage sex, unprotected sex, or early childbearing. (e.g. attachment to parents and other adults in their schools and places of worship)

Which Influential Factors Can Be Altered?
The full report then considers the extent to which these important factors can be influenced. That is, it indicates the extent to which they can be changed such that risk factors are minimized and/or protective factors are maximized. To that end, the factors are "scored" based on how feasible it would be for a youth-focused organization to change them. (See Table 2.)

Group I: Factors that are impossible or extremely difficult for most organizations to change themselves, though organizations may be able to do so by working with other community agencies.
These include biological factors, which, for all practical purposes, cannot be changed. Also included are factors describing community disorganization and percent foreign born (a protective factor). Other factors that are difficult to address are related to family structure, such as single parent households and parents' education level. These kinds of factors are particularly hard for an organization to address that is primarily focused on reproductive health. But if such organizations collaborate with other community or state agencies, progress may be possible.

Group II: Factors that are difficult for most organizations to change unless they have special programs or capabilities such as youth development activities or mental health services.
This category includes those factors related to teens' attachment – or lack thereof – to various people or institutions in their lives. These include parents, school, places of worship, and other adults. And, it includes not dating frequently at early ages and not having older romantic partners. This category also comprises risky behaviors – such as alcohol and other drug use and being in a gang – and protective ones, such as girls' involvement in sports. Finally, it includes having good mental health. Research suggests that these factors can sometimes be changed if specialized services are available. These would include, for example, counseling programs for parents, youth and families; alcohol and drug abuse prevention programs; tutoring services; community-based mentoring programs and sports for girls.

Group III: Factors that most directly involve sexuality and reproductive health and are, therefore, most amenable to change by organizations accustomed to addressing reproductive health. The majority of these factors involve sexual beliefs, values and attitudes, skills and behaviors of teens regarding having sex, using condoms and other methods of contraception, and avoiding pregnancy and HIV/STD. For example, efforts aimed at bolstering teens' motivation to avoid pregnancy and STD can reduce the chances that teens will take part in risky behaviors. Research demonstrates that some sex and STD/HIV education programs can improve these sexuality-related beliefs and attitudes and can thereby delay first sex, reduce the frequency of sex, lower the number of sexual partners and/or increase condom and other contraceptive use. Consequently, some of them reduce the incidence of teen pregnancy and STD.

The full review makes it clear that myriad dynamics are at play when it comes to teens' decisions about sex. This breadth of factors is both good news and bad news: good in the sense that there are multiple avenues that organizations can pursue to reduce the

incidence of teen pregnancy and STD; bad in that the sheer number of factors involved can seem overwhelming, and no single entity can address them all.

Given this complexity, it makes sense for each organization to focus on those factors that have a significant impact on teen sexual behavior and that it can change given its mission and resources. While some organizations may address sexuality-related factors and thereby reduce sexual risk-taking, other organizations may most effectively address multiple and varied factors and thereby reduce teens' risky sexual behavior and its consequences.

Table 1:
Potentially Important Risk and Protective Factors That May Affect Adolescent Sexual Behavior, Use of Condoms & Contraception, Pregnancy and STD[1]

Environmental Factors

Community

Foreign born
+ Higher percent foreign born

Community disorganization
- Greater community social disorganization (e.g., violence, hunger & substance use)

Family

Family Structure
+ Live with two biological parents (vs one parent or stepparents)
- Family disruption (e.g., divorce or change to single parent household)

Educational Level
+ Higher level of parental education

Substance abuse
- Household substance abuse (alcohol or drugs)

Positive family dynamics and attachment
+ Higher quality family interactions, connectedness & relationship satisfaction
+ Greater parental supervision and monitoring
- Physical abuse and general maltreatment

Family attitudes about and modeling of sexual risk-taking and early childbearing
- Mother's early age at first birth
- Older sibling's early sexual behavior and early age of first birth
+ Parental disapproval of premarital sex or teen sex
+ Parental acceptance and support of contraceptive use if sexually active

Communication about sex and contraception
+ Greater parent/child communication about sex and condoms or contraception especially before youth initiates sex

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[1] This table identifies risk and protective factors with strong and consistent evidence. Table 2 identifies the factors in this table that can be potentially changed by individuals or interventions.

"+" denotes a protective factor; "-" denotes a risk factor; "+/-" denotes a factor that was a protective factor for one or more behaviors and also a risk factor for one or more other behaviors.

Peer

Age
- Older age of peer group and close friends

Peer attitudes and behavior
- Peers' alcohol use, drug use and deviant behavior
- Peers' pro-childbearing attitudes or behavior
- Peers' permissive values about sex
- Sexually active peers
+ Positive peer norms or support for condom or contraceptive use
+ Peer use of condoms

Romantic Partner

Partner characteristics
- Having a romantic or sexual partner who is older
+ Partner support for condom and contraceptive use

Teen Individual Factors

Biological factors
+/- Being male
+/- Older age
+ Older age of physical maturity or menarche

Race/Ethnicity
- Being Black (vs white)
- Being Hispanic (vs non-Hispanic white)

Attachment to and success in school
+ Greater connectedness to school
+ Higher academic performance
- Being behind in school or having school problems
+ High educational aspirations and plans for the future

Attachment to faith communities
+ Having a religious affiliation
+ More frequent religious attendance

Problem or risk-taking behaviors
- Alcohol use
- Drug use
- Being part of a gang
- Physical fighting and carrying weapons
- Other problem behaviors or delinquency

Other behaviors
- Working for pay more than 20 hours per week
+ Involvement in sports (females only)

Cognitive and personality traits

+ Higher level of cognitive development
+ Greater internal locus of control

Emotional well-being and distress
- Thoughts of suicide

Sexual beliefs, attitudes and skills
- More permissive attitudes toward premarital sex
- Perceiving more personal and social benefits (than costs) of having sex
+ Greater feelings of guilt about possibly having sex
+ Taking a virginity pledge
+ Greater perceived male responsibility for pregnancy prevention
+ Stronger beliefs that condoms do not reduce sexual pleasure
+ Greater value of partner appreciation of condom use
+ More positive attitudes towards condoms and other forms of contraception
+ More perceived benefits and/or fewer costs and barriers to using condoms
+ Greater self-efficacy to demand condom use
+ Greater self-efficacy to use condoms or other forms of contraception
+ Greater motivation to use condoms or other forms of contraception
+ Greater intention to use condoms
+ Greater perceived negative consequences of pregnancy
+ Greater motivation to avoid pregnancy, HIV and other STD

Relationships with romantic partners and previous sexual behaviors
- Dating more frequently
- Going steady, having a close relationship
- Ever kissed or necked
+ Older age of first voluntary sex
- Greater frequency of sex
- Having a new sexual relationship
- Greater number of sexual partners
+ Discussing sexual risks with partner
+ Discussing pregnancy and STD prevention with partner
+ Previous effective use of condoms or contraception
- Previous pregnancy or impregnation
- History of STD
- History of prior sexual coercion or abuse
- Same-sex attraction or behavior
- Being married

Table 2:
Feasibility of Markedly Changing Risk and Protective Factors[2]

Risk and Protective Factors	Feasibility of Changing[3]	Comments on Feasibility of Possible Programs To Change Them
Environmental Factors		
Community		
Foreign born		
+ High percent foreign born	*	In general, pregnancy and STD prevention programs cannot affect the percent foreign born in a community.
Community disorganization		
- Greater community social disorganization (e.g., violence, hunger & substance use)	*	In general, pregnancy and STD prevention programs, themselves, do not have the resources or capability of markedly changing community-wide social disorganization such as violence, hunger or substance use. However, pregnancy and STD prevention programs can work collaboratively with other organizations to address these larger issues in some communities.
Family		
Family structure		
+ Live with two parents (vs one parent or stepparents)	*	In general, pregnancy and STD prevention programs cannot affect marital status, divorce risk and living arrangements of families. However, if their agencies have marriage or family counseling departments, then these departments may be able to help parents stay together.
- Family disruption (e.g., divorce or change to single parent household)	*	

2This table specifies which items can be most easily changed by different types of organizations. Thus, it can provide a guide to organizations by suggesting which factors they should focus upon given their goals, capabilities and resources.

3 * = Extremely difficult for most pregnancy and STD prevention agencies to change directly themselves, although they may have a long term effect by working with other agencies to change policies.

** = Difficult for most pregnancy and STD prevention agencies to change unless they have special programs or capabilities.

*** = Most amenable to change directly by pregnancy and STD prevention agencies. These are italicized.

Educational level		
+ High level of parental education	*	In general, pregnancy and STD prevention programs cannot affect the parents' educational level. However, in some communities, programs with a holistic approach may be able to provide guidance and counseling to parents and encourage and facilitate their obtaining a higher education.
Substance abuse		
- Household substance abuse (alcohol or drugs)	**	In general, pregnancy and STD prevention programs can have little effect on whether parents of teens abuse alcohol or drugs. However, some agencies may be able to provide alcohol and drug abuse prevention programs and thereby reduce parental abuse.
Positive family dynamics and attachment		
+ High quality family interactions, connectedness & relationship satisfaction	**	In general, pregnancy and STD prevention programs can have little effect on family interactions and connectedness. However, some agencies may be able to provide intensive family guidance and counseling and may be able to have an impact on these family interactions.
+ Greater parental supervision and monitoring	**	Some more holistic programs may be able to implement programs for parents that encourage them to supervise and monitor their teen children appropriately.
- Physical abuse and general maltreatment	**	In general, pregnancy and STD prevention programs can have little effect on physical abuse and maltreatment within the family. However, some agencies may be able to provide intensive family guidance and counseling and may be able to have an impact on these behaviors.
Family attitudes about and modeling of sexual risk-taking and early childbearing		
- Mother's early age at first sex and first birth	*	Programs cannot affect the teens' mothers' prior behavior. However, programs can prevent current teens from becoming teen mothers, and thereby help the next generation.
- Older sibling's early sexual behavior and early age of first birth	**	In general, pregnancy and STD prevention programs cannot affect the previous behavior of older siblings. However, they can, of course, affect the behavior of current teens who may have younger siblings.

+ Parental disapproval of premarital sex or teen sex	**	Pregnancy and STD prevention programs can provide parents with accurate information about teen sexual behavior and its consequences. Some programs, especially church-based programs, may emphasize conservative religious values about premarital sex and teen sex. Many programs may encourage parents to encourage their teens to be abstinent.
+ Parental acceptance and support of contraceptive use if sexually active	**	Pregnancy and STD prevention programs can provide parents with accurate information about teen sexual behavior, its consequences, and the effectiveness of condoms and contraception. Some programs may be willing to encourage parents to encourage their teens to use contraception if they do have sex.
Communication about sex and contraception		
+ Greater parent/child communication about sex and condoms or contraception especially before youth initiate sex	***	*Pregnancy and STD prevention programs can increase parent-child communication about sex, condoms and contraception through school homework assignments, special programs for parents, college courses for parents, and other approaches.*
Peer		
Age		
- Older age of peer group and close friends	**	In general, pregnancy and STD prevention programs cannot easily affect the age of youths' peers. However, some programs may be able to implement programs that provide activities for young people to interact with people their own age or to encourage same-age friends in other ways.
Peer attitudes and behavior		
- Peers' alcohol use, drug use and deviant behavior	**	If friends can be reached by programs, then some pregnancy and STD prevention programs with a youth development emphasis may be able to implement effective alcohol and drug abuse prevention programs and other effective youth development programs that reduce non-normative behavior.
- Peers' pro-childbearing attitudes or behavior	***	*If peers can be reached by programs, then agencies can implement effective sex education programs that reduce pro-childbearing attitudes and behavior. If peers cannot be reached in the program, then programs can implement activities in small or large group settings that demonstrate peer support for avoiding pregnancy.*

- Permissive values about sex	***	*If friends can be reached by programs, then agencies can implement effective abstinence-only or effective sex and HIV education programs that change permissive values about sexual behavior and delay the initiation of sex. If peers cannot be reached in the program, then programs can implement activities in small or large group settings that demonstrate peer support for delaying sex.*
- Sexually active peers	***	*If friends can be reached by programs, then agencies can implement effective abstinence-only or effective sex and HIV education programs that change permissive values about sexual behavior and delay the initiation of sex. If friends cannot be reached, then programs can implement activities demonstrating that perceptions of peer sexual activity are typically exaggerated.*
+ Positive peer norms or support for condom or contraceptive use	***	*If friends can be reached by programs, then agencies can implement effective sex and HIV education programs or effective clinic protocols that increase support for condom and contraceptive use and actually increase condom and contraceptive use. If peers cannot be reached, then programs can implement activities in small or large group settings that demonstrate peer support for condom and contraceptive use if sexually active.*
+ Peer use of condoms	***	*If peers can be reached by programs, then agencies can implement sex and HIV education programs that increase condom use. If peers cannot be reached in the program, then programs can implement activities in small or large group settings that demonstrate peer support for condom use.*
Romantic Partner		
Partner characteristics		
- Having a romantic partner who is older	**	Pregnancy and STD prevention programs can encourage youth to date people their own age and not older. However, such efforts have not yet been evaluated.
+ Partner support for condom and contraceptive use	**	If partners can be reached by programs, then effective sex and HIV education programs can be implemented that improve attitudes toward condom and contraceptive use. If partners cannot be reached in the program, then programs can implement activities in small or large group settings that demonstrate peer support for condom use.

Teen Individual Factors		
Biological factors		
+/- Being male	*	Within reason, it is not possible to change these biological factors.
+/- Older age	*	
+ Greater physical maturity	*	
Race/Ethnicity		
- Being Black (vs white)	*	Programs can not affect the race or ethnicity of people. However, sometimes in collaboration with other groups, they can help reduce minority poverty or minority cultural values that may contribute to sexual risks.
- Being Hispanic (vs non-Hispanic white)	*	
Attachment to and success in school		
+ Greater connectedness to school	**	Some pregnancy and STD prevention programs with a youth development emphasis may be able to implement tutoring programs, mentoring programs, job shadowing, intensive arts programs, sports, or service learning or other programs that may help keep youth in school, keep them involved, improve their grades and improve their future aspirations.
+ Higher academic performance	**	
- Being behind in school or having school problems	**	
+ High educational aspirations and plans for the future	**	
Attachment to faith communities		
+ Having a religious affiliation	**	Most pregnancy and STD prevention programs cannot strive to increase involvement in religious organizations. However, faith communities can implement youth programs or initiatives that may increase youths' involvement and faith communities can implement programs to help youth better understand their religions' values about sexuality.
+ More frequent religious attendance	**	
Problem or risk-taking behaviors		
- Alcohol use	**	Some pregnancy and STD prevention programs with a youth development emphasis may be able to implement effective alcohol and drug prevention programs and other effective youth development programs that reduce alcohol use or drug use.
- Drug use	**	
- Being part of a gang	**	Some pregnancy and STD prevention programs with a youth development emphasis may be able to implement programs that reduce gang membership.
- Physical fighting and carrying weapons	**	Some pregnancy and STD prevention programs with a youth development emphasis may be able to implement programs that reduce fighting, violence, other problem behaviors.
- Other problem behaviors or delinquency	**	

Other behaviors		
- Working for pay more than 20 hours per week	**	Most pregnancy and STD prevention programs will not wish to discourage youth from working and having the greater autonomy that accompanies work. However, some may be willing to discourage youth from working more than 20 hours per week.
+ Involvement in sports (females only)	**	Some pregnancy and STD prevention programs with a youth development emphasis may be able to implement sports programs for girls.
Cognitive and personality traits		
+ Higher level of cognitive development	**	Most pregnancy and STD prevention programs are not designed to increase level of cognitive development. However, some with a youth development emphasis may be able to implement programs that slightly increase level of cognitive development.
+ Greater internal locus of control	**	Internal locus of control is difficult to change. However, some programs with an intensive youth development focus may be able to improve locus of control.
Emotional well-being and distress		
- Thoughts of suicide	**	Most pregnancy and STD prevention programs are not equipped to address serious depression or thoughts of suicide. However, some programs may be able to refer youth to other agencies to obtain needed help or may provide these services in house.

SEXUAL BELIEFS, ATTITUDES AND SKILLS		
- More permissive attitudes toward premarital sex	***	*Pregnancy and STD prevention programs can implement effective abstinence-only education programs, sex and HIV education programs, and clinic protocols that target these factors and have been demonstrated to delay the initiation of sex, reduce the frequency of sex and the number of partners, and increase condom or contraceptive use.*
- Perceiving more personal and social benefits (than costs) of having sex	***	
+ Greater feelings of guilt about possibly having sex	***	
+ Taking a virginity pledge	***	
+ Greater perceived male responsibility for pregnancy prevention	***	
+ Stronger beliefs that condoms do not reduce sexual pleasure	***	
+ Greater value of partner appreciation of condom use	***	
+ More positive attitudes towards condoms and other forms of contraception	***	
+ More perceived benefits and/or fewer costs and barriers to using condoms	***	
+ Greater self-efficacy to demand condom use	***	
+ Greater self-efficacy to use condoms or other forms of contraception	***	
+ Greater motivation to use condoms or other forms of contraception	***	
+ Greater intention to use condoms	***	
+ Greater perceived negative consequences of pregnancy	***	
+ Greater motivation to avoid pregnancy, HIV and other STD	***	

Relationships with romantic partners and previous sexual behavior		
- Dating more frequently	**	Pregnancy and STD prevention programs can encourage parents to appropriately monitor and supervise dating and going steady. Programs can also encourage youth to delay dating and going steady and to participate in group activities rather than one-on-one dates. Such efforts have not been evaluated, however.
- Going steady, having a close relationship	**	
- Ever kissed or necked	**	
+ Older age of first voluntary sex	***	*Pregnancy and STD prevention programs can implement effective abstinence-only education programs and sex and HIV education programs that target these factors and have been demonstrated to delay the initiation of sex.*
- Greater frequency of sex	***	*Some effective sex and HIV education programs and clinic protocols can reduce the frequency of sex and the number of sexual partners (and hence also the number of new sexual relationships). Others can encourage young people in new sexual relationships to begin using contraception earlier in their relationship.*
- Having a new sexual relationship	***	
- Greater number of sexual partners	***	
+ Discussing sexual risks with partner	***	*Pregnancy and STD prevention programs can implement effective sex and HIV education programs and clinic protocols that increase communication about sexual risks and pregnancy and STD prevention.*
+ Discussing pregnancy and STD prevention with partner	***	
+ Previous effective use of condoms or contraception	***	*Pregnancy and STD prevention programs can implement effective sex and HIV education programs, and clinic protocols that target and increase condom and contraceptive use, and thereby reduce risk of pregnancy and STD.*
- Previous pregnancy or impregnation	***	
- History of recent STD	***	
- History of prior sexual coercion or abuse	*	Logically, pregnancy and STD prevention programs cannot prevent events that happened in the past and typically they are not equipped to prevent subsequent abuse or to properly address the consequences of past sexual abuse. However, they can refer sexually abused youth to intensive and skilled counseling services for sexually abused youth, if they exist, and some agencies may be equipped to implement support groups for victims.
- Same-sex attraction or behavior	**	Pregnancy and STD prevention programs cannot affect whether youth are gay or lesbian, but some programs designed for gay, lesbian and questioning youth may be able to reduce their sexual risk-taking.
- Being married	**	Most programs do not include delaying marriage in their mission. However, some programs, especially those with counseling components, may be able to get some young people to think seriously about the implications of early marriage.

About the Putting What Works to Work project:

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