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# The Fight Against HIV/AIDS: Public Education Standards Across the Globe

Kristanza M. Bronnenberg  
*University of Wyoming*, [kbronnen@uwyo.edu](mailto:kbronnen@uwyo.edu)

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The Fight Against HIV/AIDS: Public Education Standards  
Across the Globe

Kristanza Bronnenberg  
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## **Abstract**

The HIV/AIDS epidemic is one that has plagued the international community since its discovery in the 1980's. At the time of the discovery that HIV causes AIDS, researchers believed a vaccine for the HIV virus would be available within two years. But today, over 30 years later, no effective vaccine against HIV has been developed. In the fight against the spread of HIV/AIDS, prevention and education are the best weapons we possess. However, the standards and content of sex and HIV/AIDS education in public schools worldwide are extremely varied and often ineffective. In this literature review, I examined the standards of sex and HIV/AIDS education in various countries and regions, including: the United States, Great Britain, Sweden, Senegal, and Latin America. I then analyzed the effectiveness of these standards based upon the prevalence of HIV/AIDS and other sexually transmitted infections (STI's), teen pregnancy, and parental and public opinion. Finally, I examined the possibility of the development of a universal sex and HIV/AIDS education plan to be implemented internationally to further aid the fight against HIV/AIDS.

## **Introduction**

The HIV virus has been present in humans since at least the early 1950's, although the AIDS epidemic was not recognized until 1981 and its cause and mode of transmission were not understood until the mid 1980's when it began to spread throughout the developed world (Power). Since the discovery of the HIV virus in 1984 many advances have been made in the treatment of HIV/AIDS, however the

use of an approved program of education in schools to prevent HIV/AIDS along with other sexually transmitted infections (STI's) has not become universal throughout the United States or the world (Monk; Fisler).

In order to understand the need for education about HIV/AIDS, it is important to understand the disease itself. In the United States approximately 50,000 people are newly infected with HIV/AIDS each year, and 34 million people worldwide are living with AIDS (HIV/AIDS). HIV, the human immunodeficiency virus, causes AIDS, or acquired immune deficiency syndrome (HIV/AIDS). This virus attacks immune cells in the body, compromising the body's immune defense and leaving it susceptible to opportunistic infections (Understanding HIV/AIDS). If left untreated, 95% of patients infected with HIV will die from AIDS (Angelle). Additionally, patients can be infected with HIV for eight to ten years before they begin to display symptoms of AIDS, during which time they can infect others with the disease (Stages). Treatment for HIV/AIDS is expensive and life-long, and no cure is currently available (Treatment).

Education about HIV/AIDS in public schools is vital for the prevention of this potentially deadly virus. If students do not understand how the virus is spread or what actions put them at risk of infection, it is almost impossible for them to actively prevent infection. Additionally, increasing knowledge and understanding of the disease can positively impact the public view of those who are already infected, which could allow for increased dialogue about the disease and a reduction in fear and discrimination within the general public. (HIV/AIDS Education)

Standards regulating the extent of HIV/AIDS and STI education within sex and health education programs vary greatly globally and even within nations. The United States is an example of a nation in which the knowledge of the nation's youth regarding the subjects of sex, HIV/AIDS, and STI's varies immensely; this variation is dependent upon religious and political influences in the areas in which these youth live and attend school. On an international level, cultural, religious, socioeconomic, political, and regional differences have contributed to disparities in the prevalence of and knowledge about HIV/AIDS within the world's youth and the population at large.

In this literature review, I will examine the prevalence of HIV/AIDS, other STI's, and teen pregnancies and the methods of sex and HIV/AIDS education in public schools within various countries and regions. Different regions of the world are home to many different cultural, socioeconomic, political, and religious environments, and all of these factors can have large impacts on the methods of education and HIV/AIDS prevention used in various countries. This review will also examine which methods of sex and HIV/AIDS education seem to be the most effective in the prevention of HIV/AIDS and the plausibility of modifying the more successful approaches seen in select countries to implement them worldwide. Specifically, I will examine the HIV/AIDS prevalence and sex education practices in the United States, Great Britain, Sweden, Senegal, and Latin America to identify similarities and differences between the various regions and to determine if a universal, worldwide system of sex and HIV/AIDS education would be beneficial in the prevention of HIV/AIDS.

## **United States and Great Britain**

In the United States, as in other countries, the implementation and content of sex education programs in public schools has been left largely up to each state and even to individual school districts (Monk; Fidler). This freedom to structure sex and HIV/AIDS education however a state or school district sees fit has led to a great variety of programs. These programs vary from vague classes providing overarching health information and hardly touching on sex or HIV/AIDS to comprehensive sex and HIV/AIDS education that informs students not only about abstinence but also on viable means of contraception and STI protection. In addition to the large variety of content in these programs, the age at which students are first exposed to this information also differs greatly throughout the United States. In order to ensure that all students worldwide are receiving scientifically correct, updated, and adequate information on the subject of sex education and HIV/AIDS and that they receive this information before engaging in high-risk behavior, a uniform, informational program should be created to teach students about sex, HIV/AIDS, and other sexually transmitted infections. Implementation of a program such as this one at an appropriate grade level throughout the world would help to decrease teen pregnancies, HIV/AIDS transmission among young adults, and the spread of STI's among young adults. (Landry et. al)

In order to understand the need for a uniform, comprehensive sex and HIV/AIDS education program it is important first to understand the current situation. As stated above, in the United States, regulations regarding these types of

education programs are decided upon at the state or school district level. Within the United States, many states require the implementation of a health education program administered to age appropriate groups between kindergarten and 12<sup>th</sup> grade. Often these regulations allow the individual school districts to decide when students are developmentally ready to receive sex education and what information students receive. While it is important to ensure that schools have the freedom to structure their curriculum as they see fit, this does leave schools free to begin sex education as late as during the senior year of high school. (15-716; CA Codes)

In a study conducted by the Center for Disease Control in 2013, 47% of all U.S. high school students surveyed were sexually active and 41% of these students did not use a condom the last time they had sex. Additionally, 15% of these students had had sex with four or more people during their lifetime. Furthermore, in 2013, 10,000 people age 13 to 24 were diagnosed with the HIV infection. Clearly, these numbers indicate that a fairly large portion of all high school students are sexually active, including not just upperclassmen, but also the younger freshmen and sophomores. These statistics also indicate that often students are not practicing safe sex and that they engage in risky sexual behaviors almost 50% of the times that they have sex. (Sexual Risk Behaviors)

These statistics, which show the alarmingly large proportion of students engaging in risky sexual behaviors, indicate that a change in the type of sex and HIV education provided is likely needed throughout the United States. If schools were to implement an effective sex education program early on in students' scholastic careers, perhaps in seventh or eighth grade, they may be able to prevent some of the

students from engaging in these high risk sexual behaviors and may see a decline in the incidences of teen pregnancy and the spread of HIV/AIDS and STI's among adolescents.

Aside from the stage of education at which these programs are implemented, another extremely important factor in the effectiveness of any sex education program is the actual content of the program. As stated above, because the decision of if, how, and when to implement sex education systems within public schools is left up to the individual states or school districts, the disparity between different sex education programs is quite large. In a study conducted by researchers at the Alan Guttmacher Institute of New York in 2003, these researchers found that the type of sex education offered in schools varied greatly by region within the United States. (Landry et. al)

In this study, researchers surveyed teachers throughout the United States and looked at trends among regions, including the Northeast, West, Midwest, and South. These researchers looked into specific qualities of the programs, such as the abstinence-only programs in which teachers promote abstinence as the only means of protection from pregnancy, HIV/AIDS, and STIs and the more comprehensive programs in which all methods of contraception and STI protection are covered. In the more extreme abstinence-only programs, other contraceptive or protective methods, such as condoms or birth control, were not commonly discussed, and if they were discussed it was only to state their ineffectiveness in protecting against pregnancy and STIs. Some programs were more intermediate and included a strong abstinence-only stance, but also gave information about other methods of

contraception and protection. On the other side of the spectrum were comprehensive programs that provided information about abstinence along with information about all other types of preventative measures and instruction on the use of these measures and of other resources, such as family planning centers. (Landry et. al)

In this study, researchers found that abstinence-only education was most prevalent in the southern region, where many people of fundamentalist religions also reside. In the South, teachers reported the highest incidence of teaching an abstinence-only curriculum with 29.7 out of 100 programs using abstinence only. Additionally, the South had the second lowest incidence of teaching the effectiveness of other methods of birth control (55.3 out of 100) and the highest rate of completely ignoring other methods of birth control during instruction (15.6 out of 100). The South also had the second highest teen pregnancy rate and the highest teen birth rate. Additionally, the South lacked education about the risks of oral and anal sex more than any other region and was very lacking in education regarding sexuality and homosexuality in comparison to other regions. These results, as well as specific results detailing other regions can be found in Tables 1 and 2, listed below.

When the results of the Guttmacher study are compared with CDC data regarding the prevalence of HIV/AIDS infection in the United States in 2010, a correlation between the type and content of education used and the prevalence of HIV/AIDS seems apparent. In 2010, the South was home to 45% of the new HIV/AIDS infections in the United States. Additionally, in 2010, 40% of the people

living with HIV/AIDS in the United States resided in the South, and 48% of people who died of AIDS in 2010 lived in the southern region. This data is quite concerning, and though correlation does not always signify causation, it seems plausible to conclude that a lack of medically correct and informative education offered within Southern public schools may have contributed to the prevalence of HIV/AIDS in the South. This data, along with data concerning the other regions, can be found in Table 3, shown below.

**TABLE 1. Selected measures of public opinion on premarital sex and sex education, and of young women's sexual behavior and reproductive experience, United States, by region**

Measure	Total	Northeast	South	Midwest	West
<b>Public opinion, 1999</b>					
% who believe sex should occur only in marriage	33	26	40*	34*	29
% who support the teaching of sex education in high school	93	94	92	92	93
% who support the teaching of sex education in junior high school	84	82	82	85	87
% who agree that by grades 11–12, the following topics are appropriate to be taught					
Abstinence	95	96	93	96	93
Contraception	91	94	90*	89*	95
Condoms	90	93	89*	89*	93
<b>Sexual behavior/reproductive experience</b>					
% of sexually experienced 20–24-year-old women who had had sex by age 17, 1995	47	43	47	49	46
Rate per 1,000 women aged 15–17, 1996					
Pregnancies†	62	56	67	50	69
Births	34	24	41	29	36
Abortions	19	25	16	14	24

Table 1: Public opinion, sexual behavior, and reproductive experience (Landry et al).

**TABLE 2. Percentage distribution of U.S. public secondary school sex education teachers, by their presentation of abstinence and the effectiveness of methods for preventing pregnancy and STDs, according to region, 1999**

Presentation of topics	Total (N=1,657)	Northeast (N=305)	South (N=510)	Midwest (N=560)	West (N=282)
<b>Abstinence</b>					
The only option	23.4	16.8	29.7***	22.4	21.1
One option/the best option	71.8	78.1	64.9***	72.6	75.9
Not taught	4.8	5.1	5.4	5.0	3.1
<b>Method effectiveness†</b>					
Effective	60.3	72.2	55.3***	54.9***	64.4
Ineffective	27.5	17.1	29.1***	32.3***	26.8**
Not taught	12.2	10.7	15.6*	12.8	8.8
<b>Method effectiveness and abstinence‡</b>					
Methods effective, abstinence best	51.2	62.1	45.5***	47.4***	57.2
Methods effective, abstinence only	9.1	10.4	10.2	8.1	7.4
Methods ineffective, abstinence best	25.5	21.3	25.0	30.2**	21.9
Methods ineffective, abstinence only	14.2	6.2	19.4***	14.3***	13.5**
Total	100.0	100.0	100.0	100.0	100.0

Table 2: Presentation of topics and effectiveness of methods of contraception (Landry et al).

Region	Northeast	West	Midwest	South
% of new AIDS diagnoses (in 2010)	24%	19%	13%	45%
% of U.S. residents living with AIDS (in 2010)	29%	20%	11%	40%
% of U.S. AIDS deaths (in 2010)	24%	17%	11%	48%

Table 3: Prevalence of HIV/AIDS epidemic in the U.S. by region (HIV and AIDS in the United States)

These results are congruent with the political polarization of HIV/AIDS epidemic seen throughout America. For many years the South has housed some of the most traditionally conservative states in the nation, and these findings reflect the conservative, family-centered political views in this region.

(Landry et. al)

Interestingly enough, the views of the people residing in the South may no longer align with the conservative views of the politicians in this region in the case of HIV/AIDS and sex education. In a study conducted in South Carolina in 2009, 81% of adults polled were in favor of the implementation of sex education programs that not only taught abstinence as a means of prevention but that also included education about other contraceptives (i.e. a comprehensive sex education program) (Alton et. al). Additionally, in a study conducted in Alabama, 80% of adults polled supported a sex and HIV/AIDS education program that extended beyond abstinence-only education (Milner, Mulekar, Tullens).

In comparison to the South, all of the other regions researched by the team at the Alan Guttmacher Institute in New York were quite similar in their means of approaching sex education. The Northeast, Midwest, and West all had higher incidences of comprehensive sex education programs than the South, with the Northeast having the highest incidence of comprehensive sex education (78.1 out of 100). Throughout this study, the Northeast consistently scored highest in instances of sex and HIV/AIDS education that should be included in any comprehensive program and addressed difficult topics, such as abortion and homosexuality, more than any other region. The Northeast also had the lowest incidence of teaching the

ineffectiveness of other forms of birth control. These results can be found in Tables 1 and 2, shown above. Though they have taken a much more progressive stance on the manner of sex and HIV/AIDS education used, the Northeast did not abandon the teaching of abstinence as a highly effective form of protection, they merely supplemented this education with other pertinent information relating to the practice of safe sex. (Landry et. al)

The progressive nature of the Northeast's chosen form of sex and HIV/AIDS education is not surprising when looked at from a political standpoint. The Northeast is one of the areas in the United States with the highest concentration of democrats, and with the democratic political platform often comes a more progressive viewpoint (Jones). While the differences in sex and HIV/AIDS education through the United States, and most drastically between the Northeast and Southern regions, can be explained politically, it is unfortunate that important matters of public health have become so politically polarized and that our nation's youth may be negatively impacted by the politicians that are failing to take into consideration the health and well-being of American citizens.

Interestingly, many of the problems seen with sex and HIV/AIDS education in America are paralleled in other developed nations around the world, and especially so in Great Britain. As in America, the issue of sex and HIV/AIDS education in Great Britain has become highly politicized; and similarly to America, the struggle seems to be between upholding the morals of some who believe only abstinence should be taught and providing the students with the medically correct and necessary information needed to keep them safe and healthy. (Monk)

Unlike in America, in Great Britain a sex education program is compulsory for all secondary schools, however the decisions about what this education should entail and whether or not to begin this education in primary school are up to individual school districts and governors and are in this way similar to the procedure used in the United States. Many politicians and parents in Great Britain do not want to include HIV/AIDS education within the basic science curriculum because they feel that exposing children to HIV/AIDS within the curriculum will also expose them to homosexuality and what they define as deviant sexual behavior. Within Great Britain, the wishes of the parents greatly affect the actions of the governors, and parents make many of the important decisions regarding sex education within public schools. This is not necessarily a bad thing, however it has led to a very high incidence of abstinence-only or very basic sex education programs, which are most likely not providing the youth of Great Britain with the information they need to make informed decisions. (Monk)

When deciding which type of sex and HIV/AIDS education to use, many factors are taken into consideration. As stated before, many of the most relevant factors, in the United States and in Great Britain as well, are political, though this is likely not in the best interest of our citizens. Many studies have been conducted to determine which method of sex and HIV/AIDS education is the most effective, and these studies have repeatedly shown that a comprehensive approach to sex education is the best way to prepare students and to teach them to avoid risky sexual behaviors that can result in pregnancy or infection with an STI or HIV/AIDS. (Malone, Rodriguez)

In an article written by Patrick Malone and Monica Rodriguez discussing comprehensive sex education programs vs. abstinence only education programs, two specific studies on different types of sex education in the United States are referenced. The first study looked at the overall effectiveness of abstinence-only education and found that the use of an abstinence-only curriculum did not increase rates of sexual abstinence in students exposed to this education compared to students who received no sex education. Additionally, students who received abstinence-only education had approximately the same number of sex partners and same age of first sex as their peers who did not receive education. (Malone, Rodriguez)

In the second article referenced in the paper by Patrick Malone and Monica Rodriguez, the effectiveness of both abstinence-only and comprehensive sex education programs was considered. In this study, abstinence-only programs yielded no significant effect on the sexual practices of students receiving this education. Contrastingly, comprehensive sex education programs were shown to have at least one positive effect on the sexual practices of students receiving the education two-thirds of the time and were shown to decrease the number of sex partners, increase age at first sex, and increase condom or contraceptive use in students 40% of the time. (Malone, Rodriguez)

The results of these studies and of many other studies clearly show that abstinence-only programs are ineffective in changing the sexual behavior of youth, whereas comprehensive sex and HIV/AIDS education programs decrease the amount of risky sexual behaviors committed by young adults. With approximately

50,000 new cases of HIV infection diagnosed yearly in the United States and 6,800 new infections diagnosed yearly within Great Britain, it is clear that both nations desperately need a change in sex and HIV/AIDS education (HIV and AIDS in America; HIV and AIDS in the UK).

Unfortunately, the only sex and HIV/AIDS education program type endorsed by the United States federal government is an abstinence-only approach to sex and HIV/AIDS. Currently, under Section 510 of the Social Security Act, all federally funded sex and HIV/AIDS education programs must be based on an abstinence-only standpoint and may not discuss the use of other contraceptives except to detail their ineffectiveness in preventing pregnancy and the spread of STIs, including HIV/AIDS. This unwillingness of the federal government to support any type of comprehensive sex and HIV/AIDS education programs is unfortunate because it forces states and school districts to decide between receiving federal funding for ineffective abstinence-only education or providing their students with medically accurate information that many see as vital to their future health and well-being and that could be essential in fighting the spread of HIV and AIDS. (Landry et. al)

### **Sweden**

Contrastingly to both the United States and Great Britain, the HIV/AIDS situation in Sweden has never been as prevalent or as dire as has been seen in other developed countries. However, though the disease was and still is quite rare in Sweden, the Swedish government nonetheless adopted a strong, progressive

education plan in its schools and communities to combat the spread of this disease.  
(Vallgård)

Since 1955, sex education in public schools, or sexuality education as it is called in Sweden, has been mandatory (Sexuality Education). Additionally, the sexuality education offered in Sweden is not the watered-down, politically driven form of sex education commonly seen in the United States and Great Britain, it is a very open, student-driven form that aims to educate students on all aspects of sexual health, from common concerns such as STI's and teen pregnancy to more difficult topics such as abortion (Saers). In a yearly, national poll of Swedish students, it was found that the majority of people between the ages of 16 and 25 felt that they received the best information about STI's, contraception, and sexuality from education provided in their public schools (Saers).

Though formal studies on the effectiveness of this open and very comprehensive form of sex education provided in Sweden have not been conducted, it is clear that providing students with the information they need and desire about sex education has been effective in Sweden based upon a comparison of teen pregnancy and STI infection rates between the United States and Sweden published by the Alan Guttmacher Institute. In this comparison, the United States was found to have a rate of teen pregnancy five times higher than that of Sweden in 2000. Additionally, teens from the United States had higher rates of STI's, were less likely to use contraception, and had double the rates of chlamydia of their Swedish counterparts. More information regarding teen pregnancy and abortion rates as

well as contraceptive use in Sweden, the United States, and other European countries can be seen in Tables 4 and 5, shown below. (Saers)

Country	Ages 15–19				Ages 15–17				Ages 18–19			
	Births per 1,000	Abortions per 1,000	Pregnancies per 1,000	Abortion ratio	Births per 1,000	Abortions per 1,000	Pregnancies per 1,000	Abortion ratio	Births per 1,000	Abortions per 1,000	Pregnancies per 1,000	Abortion ratio
Sweden (1996)	7.8	17.2	25.0	68.8	2.7	13.7	16.4	83.5	15.5	22.6	38.1	59.3
France* (1995)	10.0	10.2	20.2	50.5	3.5	6.8	10.3	66.0	20.0	15.2	35.2	43.2
Canada (1995)	24.5	21.2	45.7	46.4	13.6	13.8	27.4	50.4	40.0	32.2	72.2	44.6
Great Britain† (1995)	28.3	18.4	46.7	39.4	14.8	13.8	28.6	48.3	49.8	25.6	75.4	34.0
United States (1996)	54.4	29.2	83.6	34.9	33.8	19.0	52.8	36.0	86.0	44.9	130.9	34.3

**Table 4: Teen pregnancy, birth, and abortion rates for various countries (Saers)**

**Table 5. Percentage distribution of ever sexually active women, by method used at first intercourse; and percentage distribution of currently sexually active women, by method used at last intercourse—all according to country**

Measure and country	Age-group	Injectable/ implant/IUD	Pill	Condom	Other methods*	No method	Total
<b>Method used at first intercourse†</b>							
Sweden (1991)	16–18	0.0	13.0	41.0	24.0	22.0	100.0
France (1994)	15–17	0.0	15.1	66.5	7.1	11.3	100.0
Great Britain (1990–1991)	16–19	0.0	12.5	61.4	5.1	21.0	100.0
United States (1995)	15–19	0.5	8.0	62.8	4.0	24.7	100.0
<b>Method used at last intercourse</b>							
Sweden (1996‡)	18–19	2.1	49.9	24.1	17.3	6.5	100.0
France (1992, 1994§)	15–19	0.0	59.2	28.4	0.6	11.9	100.0
Canada (1995**)	15–19	††	63.7	††	23.1‡‡	††	100.0
Great Britain (1990–1991§§)	16–19	1.3	67.5	23.3	3.8	4.1	100.0
United States (1995*†)	15–19	9.3	32.5	33.0	5.2	20.0	100.0

**Table 5: Contraceptive use by sexually active women from various countries (Saers)**

The differences in methods of sex education and the public opinion of what is appropriate in regards to sex education between countries such as the United States and Great Britain and more progressive countries such as Sweden may be largely attributed to cultural differences, and perhaps to religious and political differences as well. In Sweden, teen sexuality is seen as normal and healthy, which is the complete opposite of how it is often viewed in the United States, especially in regions with high incidences of abstinence-only education. In Sweden, the fact that virtually all children and teenagers will one day grow up to become sexually active is accepted and acknowledged, which contrasts significantly to the United States, where this fact is completely ignored. Because Sweden is more open and accepting of teen sexuality and the possibility (and inevitability) of teens engaging in sex, they are able to provide broader, more helpful sex education to these students. Consequently, because Sweden has provided their students with ample sex, STI, and HIV/AIDS education, they are also able to expect more from their students regarding safe sex and are able to instill the importance of practicing safe sex in their students from a young age. (Saers)

Though sex education standards in public schools within Sweden far outpace most programs throughout the world, there are still obstacles that Sweden must overcome in the fight against HIV/AIDS through the use of sex education. Swedish policies on sex education provide ample room for teachers to be creative and engaging in the manner of teaching and educational material they use during sex education. However, this also constitutes a certain lack of guidance for teachers, which can be problematic because according to a study done in 2004, only 6 percent

of Swedish teachers had received any type of sexuality education. For those studying to become teachers, sexuality education is not compulsory, and so even though Swedish teachers have many freedoms when teaching students about sex and STI's, they may struggle to create informative, engaging lessons due to a lack of personal knowledge on these subjects. This problem is one that RFSU, a Swedish organization focused on sexuality education, is working to rectify. (Saers, Sexuality Education)

In addition to the impressive sexuality education in public schools, it is worth noting that some of the success Sweden has seen in its prevention of the spread of HIV/AIDS could be attributed to certain public health policies put in place by the Swedish legislature. In Sweden, it is compulsory for anyone suspected to be infected with the HIV virus, or any other dangerous, communicable disease, to be tested and, if deemed necessary, to be isolated (in the case of some diseases) or to receive treatment for their disease (Vallgård). Furthermore, Swedes infected with HIV/AIDS who infect others through negligence during sexual intercourse and a failure to disclose important information to their sex partner can be tried and convicted of a criminal offense in Sweden (Challenging Sweden's HIV Policy). Certainly the push for people to be tested and receive treatment coupled with the fear of facing criminal charges if the disease is transmitted in the manner described above provide a strong incentive for anyone who suspects they may be infected to get treatment and be forthcoming with their diagnosis. While these policies may be effective in slowing and/or preventing the spread of HIV/AIDS, they can also breed

stigma and fear, which is detrimental in the fight against HIV/AIDS and stigma against HIV/AIDS (Challenging Sweden's HIV Policy).

Sweden's fight against HIV/AIDS is not perfect, and there are some areas in which definite improvements could be made to both sex education provided in schools and the public policies concerning HIV/AIDS. However, Sweden's methods have been largely effective, and could certainly provide a template from which other countries may be able to work to build new, better strategies to fight the spread of HIV/AIDS.

### **Senegal**

In stark contrast to the western countries examined previously, countries in sub-Saharan Africa have a much higher prevalence of HIV/AIDS and often have more factors contributing to difficulties in their fight against HIV/AIDS, such as higher rates of prostitution and stigma and more difficulty obtaining diagnostic, preventative, and treatment materials (HIV and AIDS in Sub Saharan Africa). One country in sub-Saharan Africa, however, has overcome many of these difficulties and has been successfully fighting HIV/AIDS since the mid-1980's, only a few years after the HIV virus was first discovered. This country is Senegal, and they have been successful in their fight thanks to early action from scientific, religious, and political leaders in the nation (Look).

This impressive collaboration of Senegal's national leaders began in 1985 when two top Senegalese doctors visited the President of Senegal, Abdou Diouf and explained to him the dire situation of HIV/AIDS. Unlike his counterparts in other

sub-Saharan African countries, President Diouf acknowledged the importance of taking quick, strong action against HIV/AIDS in his country. Together with the two doctors who initially presented this issue to him and religious leaders in Senegal, President Diouf established a highly successful HIV/AIDS prevention campaign. This campaign encompassed many different initiatives, including screening of the nation's blood supply, development of a system to provide ARV treatment to those who were infected with the disease, an "ABC" (Abstinence, Be Faithful, Use a Condom) campaign, and a highly successful sex and HIV/AIDS education program in secondary schools. (Look)

The sex and HIV/AIDS education program adopted in Senegal was put into place in 1990 as a family life education (FLE) program and has since been expanded to a comprehensive, cross-curricular program within the national curriculum of primary and secondary schools in Senegal. Within primary schools, this program originally entailed education about anatomy and physiology, relationships, sexual abuse, communication and refusal skills, and basic information about HIV. However when this program was eventually integrated into the national curriculum, information about sexual abuse, sexuality, and HIV was removed at the primary level due to opposition from various religious groups. In secondary schools, the FLE program initially included communication skills (including refusal and negotiation), relationships, gender-based violence and sexual abuse, human reproduction (including sexual and reproductive anatomy and physiology), pregnancy prevention, prevention of STI's and HIV, and sexuality education. When the secondary school FLE program was integrated into the national curriculum, coverage of topics such as

sexuality, sexual abuse, negotiation skills, and condom use were not included in the new curriculum. (Chau)

In addition to the education provided to the students, these programs also include training for teachers, principals, and educational inspectors as well as a “community sensitization” aspect, which is used to try to educate the community and gain their approval of the curriculum being taught in the schools. The secondary school program also has an extracurricular club option for students to learn more about these important topics. (Chau)

Despite support from national political and religious leaders, local communities and religious groups were and are quite opposed to the content of these sex education programs. Culturally, Senegal is a very religious country, with strong Muslim and Christian communities. In Senegal, sexuality is a taboo subject, and strong opposition from community members and local religious leaders was the main driving force of the cutbacks in certain subject areas of the program when the program was integrated into the national curriculum. In addition to resistance from the community, Senegal has also struggled to find teachers who are comfortable discussing topics of sexuality openly within their classrooms, and this has made presentation of this curriculum difficult in some regions. (Chau)

Another difficulty faced by Senegal in their campaign to educate students about sexuality and HIV/AIDS is the prevalence of poverty throughout the country, which leads to high dropout rates of students, especially females. In Senegal, families often need their children to work in order to make enough money to support the family. Often, this results in children dropping out of school before

reaching secondary school to move to the capital of Senegal, Dakar, where they can find work – work that appears to be more like a modern form of slavery. In Dakar, children in the workforce are often subjected to physical and sexual abuse and are unable to receive an education. While the sex and HIV/AIDS education program in schools in Senegal is exceptional, it has no impact if children and adolescents are unable to attend school and receive the information provided. Organizations such as Plan International are working to stop children from dropping out and to bring those who have already gone to work in the capital back to their families, however the issue of poverty in Senegal and in countries across sub-Saharan Africa will need to be addressed on a much larger scale if this problem is to be resolved. (Ford)

Even in the face of cultural and socioeconomic issues, it does appear that the sex and HIV/AIDS education programs in Senegal have been quite effective in preventing the spread of HIV/AIDS as well as other STI's and in preventing teen pregnancies (Kahn). In a study done by USAID in 2008, it was determined that a high percentage of Senegalese adolescents (96% of females and 92% of males) practice abstinence until the age of 19, one of the highest percentages in all of sub-Saharan Africa (Kahn). Additionally, despite cutbacks in the national sex education program, 88% of young women and 86% of young men surveyed in Senegal had knowledge of contraceptives, indicating high levels of knowledge about available contraceptive options, which, especially in the case of condoms, can prevent the spread of HIV/AIDS along with preventing pregnancy (Kahn). A graph showing the prevalence of HIV/AIDS within various countries in sub-Saharan Africa can be seen below in Figure 1, displaying the very low prevalence rates that are somewhat

unique to Senegal (HIV/AIDS Prevalence). These findings could be partially attributed to cultural and religious norms in Senegal, which discourage pre-marital sex, however it seems unlikely that cultural norms alone could produce these results. (Kahn)

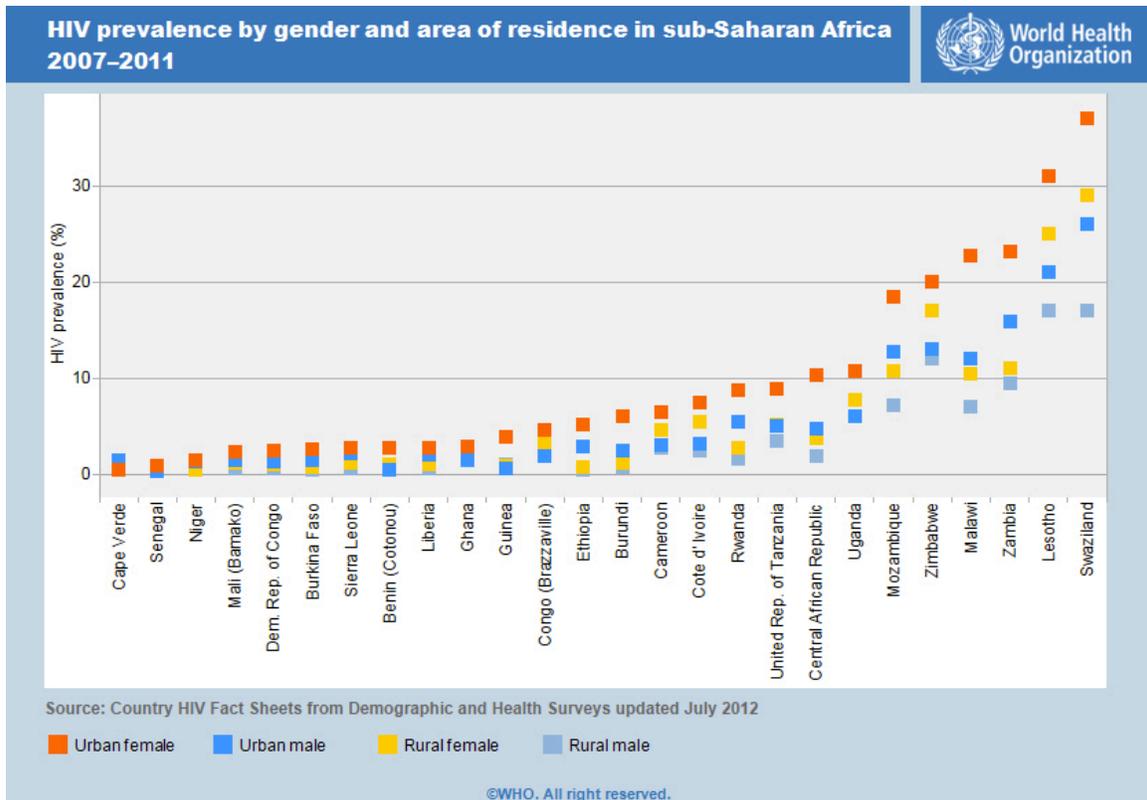


Figure 1: HIV prevalence within various sub-Saharan African countries (HIV/AIDS Prevalence)

### Latin America

Unlike other regions of the world, such as North America or Africa, the HIV/AIDS epidemic in Latin America has not been researched until fairly recently

and information regarding the epidemic in this area is very limited (AIDS, HIV and AIDS in Latin America Regional Overview). In many countries in Latin America, the separation of the Roman Catholic Church from the state has theoretically been in place for quite some time. However, this certainly does not mean that the church no longer has any influence on the policies and practices that permeate these countries, nor on the actions and opinions of the people residing here (Lloyd). As in the other countries discussed, there are many factors that influence the HIV/AIDS problem in Latin America, specifically religious, cultural, and economic concerns.

The somewhat dire HIV/AIDS situation in Latin America was exposed in 1997 when international researchers stated that “AIDS could become the leading cause of death among adolescents and young adults in Latin America and the Caribbean...” following an international report published by researchers from the Monitoring the AIDS Pandemic (MAP) network (AIDS). Though the infection rates in Latin America at this time were high, the HIV/AIDS epidemic did not seem to be spreading as quickly through the Latin American population as it does in other regions, such as Africa or Asia (AIDS). At this time, researchers believed that Latin America still had the capability to prevent the uncontrolled spread of HIV/AIDS if proper prevention techniques were put into action (AIDS). Today, the estimated number of people living with HIV/AIDS in Latin America is around 1.6 million, which is similar to the estimate given in 1996 (AIDS, HIV and AIDS in Latin America Regional Overview). This seemingly stable number of infections may be due in part to increased prevention programs and access to antiretrovirals in these areas, however the fight against HIV/AIDS is far from over in this region, as in the world.

An estimated 94,000 new infections occur each year in Latin America, and action is needed to halt this progression (HIV and AIDS in Latin America Regional Overview).

In response to the spreading epidemic of HIV/AIDS in Latin America, Ministers of Health and Education from various countries across Latin America met in Mexico City at the XVII International AIDS Conference in 2008 to create a declaration of their commitment to fight AIDS in Latin America (Antigua and Barbuda, Declaration). At this conference, 29 countries signed the declaration, pledging their support and efforts to the fight against HIV/AIDS in Latin America (Declaration). In 2009, four more countries added their signatures to the declaration, resulting in a total of 33 Latin American and Caribbean countries committed to fighting HIV/AIDS (Demaria). In this declaration, these 33 countries pledged to unite their health and education sectors to reduce by 75% the number of public schools failing to offer comprehensive sex education programs by 2015 and to reduce by 50% the number of adolescents and young adults without access to proper health services by 2015 (Antigua and Barbuda). Formal reports detailing the success of this declaration are not widely available, however it is certain that increased thought and action in these preventative areas has been helpful in the fight against AIDS.

Despite the aforementioned declaration, the content and availability of sex education programs within public schools throughout Latin America is quite varied. To illustrate the similarities and differences between sex education programs within public schools in various countries throughout Latin America, I have examined sex education practices in Mexico, Nicaragua, and Brazil. Though these countries are all

considered to be part of Latin America, their economic, geographic, and cultural differences have certainly led to disparities between their methods of sex education.

In Mexico, sex education has long been a controversial topic. Due to cultural and religious pressures, the topic of sex and sexuality is often taboo and difficult to address within the classroom. In a study done in low-income elementary schools in the states of Hidalgo and Campeche in Mexico, researchers trained teachers to administer a program called “I Want to, I Can...prevent HIV/AIDS” to 1,581 fourth grade students in a 3-year longitudinal study. This program worked to increase students’ communication skills and to make them more comfortable discussing taboos subjects such as sex, in order to create a foundation for better communication throughout their lives, and through this, to prevent the spread of HIV/AIDS. The results of this study showed increased communication skills and confidence in these students, and increased willingness to discuss these difficult topics and to receive information that is vital in preventing the spread of HIV/AIDS, as well as other risks associated with high-risk sexual behaviors. This study presented a method for combating the cultural taboo of sex that makes sexuality and HIV/AIDS education so difficult in these areas. If this program were to be implemented throughout Mexico, or even throughout all of Latin America, it could be instrumental in fighting the spread of HIV/AIDS. (Pick)

Currently in Mexico, sex and HIV/AIDS education is administered in the seventh grade in biology class, where one chapter is dedicated entirely to information about sex (Lloyd). This new chapter was added to textbooks across Mexico in 2006 and contains comprehensive sex education information (Lloyd).

This information was added in an effort to combat teen pregnancies and the spread of sexually transmitted infections (like HIV/AIDS) and is a step in the right direction for sex education within the public schools in Mexico (Lloyd). In the future, if this comprehensive education provided in seventh grade was coupled with the communication focused program for fourth graders described above, it could prove to be a highly successful combination in providing students with the information necessary for them to make informed, safe decisions in regards to sex.

In Nicaragua, like in many Latin American countries, a comprehensive sex education program has not yet been implemented in schools across the country, despite the declaration made in 2008. Though a comprehensive program has not been employed in all schools, some students have received education about sex and HIV/AIDS from outside programs funded by UNAIDS and other countries, such as Norway and Sweden. One such program is VozJoven, and though it lost funding in 2013, VozJoven was able to reach over 100,000 adolescents throughout its duration. (Lempiainen)

VozJoven provided a platform for group discussions and peer education on the issues of sex, prevention of the spread of sexually transmitted diseases, and contraception. They also held a youth-sexuality conference, which covered more topics, such as sexual rights, domestic violence, and pregnancy. Though this program eventually lost funding, efforts were made to ensure that the information provided continued to be available to students. A universal, comprehensive program provided by schools in Nicaragua would certainly be a preferable choice as it would provide many more students with appropriate information about sex and HIV/AIDS,

however the value of extracurricular programs such as VozJoven should not be forgotten. (Lempiainen)

Finally, the situation of a sex education program in public schools in Brazil falls somewhere between the universal program found in Mexico and the sporadic and sparse programs found in Nicaragua. Following the signing of the declaration in 2008, Brazil has implemented a sex education program in some schools throughout the country, however the methods used to teach these programs and the content discussed is varied. In a study conducted from 2010 to 2012, 124 Brazilian teachers from 56 public schools were interviewed about their opinions on sex education and its instruction in Brazil. This study revealed that sex education is not ubiquitous throughout Brazilian schools and that it mostly focuses upon the biomedical aspects of sex, including reproduction, fertilization, and contraception. This approach is successful in providing adequate information regarding the heterosexual spread of HIV/AIDS, however information pertaining to the homosexual spread of HIV/AIDS seems to be severely lacking. The topic of sex and sex education within public schools is still a very controversial issue in Brazil, especially in regards to homosexuality. As is common in countries throughout Latin America, much of the resistance and controversy that exists around these topics in Brazil is due to the continued prevalence and power of the Catholic Church. (Silva)

Another issue with the sex education system present in public schools in Brazil is the lack of organization and planning that is required of teachers in this particular subject area. Many teachers believe that information about sex should be provided if the topic comes up during the normal curriculum, but that it should not

be presented separately or as its own lesson. This could lead to confusion, misinformation, and to students receiving only certain parts of the information they need. Though Brazil has taken steps in the right direction in terms of sex education in public schools, there is still work to be done to ensure all students receive the information they need. (Silva)

Overall, Latin America has succeeded in completing the preliminary steps to creating a sex education program within public schools throughout the region. The declaration of prevention through education, signed in 2008, is a crucial step toward a better educational foundation in Latin America, however the mere signing of the declaration is not enough. Governments throughout Latin America are struggling to implement these programs, due largely to pushback from long-standing religious and cultural values present in this region. If Latin America is to make real strides in the fight against HIV/AIDS, the terms of the declaration signed by these countries will have to be better upheld and enforced by Latin American governments.

### **Implications and Conclusions**

In conclusion, many factors determine what type of sex education is used within a country, however all too often these factors do not seem to take into consideration the well being and future health of the world's youth. The HIV/AIDS epidemic has been prevalent throughout the world since before the 1980's and before we even understood what the disease was, and while many new treatment methods have been developed to delay the progress of AIDS, more needs to be done to prevent the spread of this deadly and incurable disease.

The use of any education to protect children and young adults from the repercussions of risky sexual behaviors, including pregnancy; the contraction of STI's; and infection with the HIV virus, is a step in the right direction, but more effort needs to be put into ensuring these education methods are successful. Many studies have proven the ineffectiveness of abstinence-only education, however it is up to the people of America and of the world to come to this realization. Abstinence-only programs do not provide students with enough information and viable options to practice safe sex. As is demonstrated in many studies, the most effective means of educating youth on the dangers of risky sexual behaviors and of the correct precautions to use when engaging in sex is a comprehensive sex and HIV/AIDS sex education program. These programs may not be popular and may challenge the morals, religion, and cultural values of some, however they are necessary to ensure the health and safety of our youth.

In countries in which a comprehensive sex education is already in place, the focus needs to be on ensuring that the program is offered universally throughout the country, and that all teachers are willing and able to teach the required information. This was a problem in both Senegalese and Latin American schools, and could be rectified with proper training of teachers, not only on the program itself but also on why it is so critical that students are able to receive the information these programs provide.

If we are to see a significant change in the sex education offered in America and across the world, parents and lawmakers will need to set aside their personal and political feelings and act to protect the students. Because a change in education

practices is needed globally, the most effective way to enact these changes may be through an internationally recognized, comprehensive sex education program that could be implemented in schools worldwide. Certainly, due to cultural and religious differences, the same program will not work in every country. However, programs designed specifically for certain regions, that all contain the same information, could be modified slightly to be successful in every different region. This will be a difficult task, but if we want to see an improvement in the fight against HIV/AIDS, it will be necessary to educate our youth and to give them the means to protect themselves.

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