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Changing Emphases in Sexuality Education In U.S. Public Secondary Schools, 1988-1999

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Context: Since the late 1980s, both the political context surrounding sexuality education and actual teaching approaches have changed considerably. However, little current national information has been available on the content of sexuality education to allow in-depth understanding of the breadth of these changes and their impact on current teaching.

Methods: In 1999, a nationally representative survey collected data from 3,754 teachers in grades 7-12 in the five specialties most often responsible for sexuality education. Results from those teachers and from the subset of 1,767 who actually taught sexuality education are compared with the findings from a comparable national survey conducted in 1988.

Results: In 1999, 93% of all respondents reported that sexuality education was taught in their school at some point in grades 7-12; sexuality education covered a broad number of topics, including sexually transmitted diseases (STDs), abstinence, birth control, abortion and sexual orientation. Some topics—how HIV is transmitted, STDs, abstinence, how to resist peer pressure to have intercourse and the correct way to use a condom—were taught at lower grades in 1999 than in 1988. In 1999, 23% of secondary school sexuality education teachers taught abstinence as the only way of preventing pregnancy and STDs, compared with 2% who did so in 1988. Teachers surveyed in 1999 were more likely than those in 1988 to cite abstinence as the most important message they wished to convey (41% vs. 25%). In addition, steep declines occurred between 1988 and 1999, overall and across grade levels, in the percentage of teachers who supported teaching about birth control, abortion and sexual orientation, as well as in the percentage actually covering those topics. However, 39% of 1999 respondents who presented abstinence as the only option also told students that both birth control and the condom can be effective.

Conclusions: Sexuality education in secondary public schools is increasingly focused on abstinence and is less likely to present students with comprehensive teaching that includes necessary information on topics such as birth control, abortion and sexual orientation. Because of this, and in spite of some abstinence instruction that also covers birth control and condoms as effective methods of prevention, many students are not receiving accurate information on topics their teachers feel they need.

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In some form, sexuality education has been part of the curriculum in U.S. public schools for many years. A 1988 survey of public school teachers in grades 7-12 found that 93% worked in schools offering sexuality education.[1] Among women aged 18-19 in

1995, 96% had received some formal sexuality education instruction.[2]

The term "sexuality education," however, can span a broad range of topics. In 1988, almost all sexuality education instructors in public secondary schools taught about how HIV is transmitted and about sexually transmitted diseases (STDs); roughly nine in 10 taught about sexual decision-making, abstinence and birth control methods; and 64-83% covered abortion, homosexuality and "safer sex" practices. However, these topics were taught later, and less often, than secondary school teachers thought they should be.[3]

Although the major aim of school sexuality education was originally to teach young people about their physical and sexual development, such courses are now often expected to delay adolescents' initiation of sexual activity and to increase the chance that those who do have sex will use contraceptives to protect against pregnancy and STDs. Indeed, in recent years, assessments of the effects of some sexuality education curricula on young people's behavior have shown that they can contribute to a delay in sexual initiation and an increase in contraceptive use among young people who do have intercourse.[4]

Studies have identified a number of factors associated with effective sexuality education programs, including early and developmentally appropriate timing, instruction on how to identify social influences and pressures, and the use of role playing and other teaching strategies to enhance students' skills in such areas as resisting peer pressure, negotiating with partners and obtaining contraceptives.[5]

Notwithstanding the high prevalence of, and the high levels of public support for, sex education in U.S. public schools,[6] this issue has generated continuous, and often heated, disagreement. A 1998 survey of school superintendents found that only 69% of districts had a policy of teaching sexuality education, while the remainder left the decision up to the school principal or to teachers. Among school districts with a sexuality education policy, 35% (23% of all school districts) required that abstinence be taught as the only option for unmarried people, either prohibiting the discussion of contraception or requiring instructors to emphasize its shortcomings; 51% required that abstinence be taught as the preferred option for adolescents but also permitted discussion of contraception as an effective means of protecting against unintended pregnancy and STDs; and 14% had a policy of teaching about both abstinence and contraception as part of a broad sexuality education program.[7]

Pressures to teach abstinence as the central, if not sole, component of sexuality education have led to the establishment of a five-year federal and state program likely to spend about $440 million, and designed to fund educational efforts focused narrowly or exclusively on the promotion of sexual abstinence.[8]Yet opinion polls show that the majority of adults think that even though teenagers should be given a strong message to abstain from sexual intercourse until they are at least out of high school, sexually active young people should be given information about, and have access to, birth control.[9]

Public attention has recently been focused on debates over abstinence-only education. Little nationally representative information is available, however, on what is currently being taught in sexuality education courses in public schools.[10] Moreover, variations

in the methodologies and sample design of the few studies that do exist make it difficult to compare results across studies, or to measure changes in sexuality education over time.

Because the present study uses a questionnaire and sample design comparable to that of the 1988 national survey of teachers, we can examine trends in the extent and content of sexuality education in public schools over the period 1988-1999.

METHODOLOGY

This article compares findings from two nationally representative sample surveys of 7th-12th-grade public school teachers responsible for the school subjects that usually include sexuality education—a 1988 survey of 4,241 teachers, and a 1999 survey of 3,754 teachers. (The methodology of the 1988 survey is discussed elsewhere.[11]) The 1999 survey was specifically designed to be comparable to the earlier survey in terms of coverage, sample and subject matter. In both 1988 and 1999, the study sample was drawn from teachers of biology, health education, family or consumer science (termed home economics in 1988) and physical education. School nurses were also included in both surveys.

We used the 1988 survey instrument as the starting point for the 1999 questionnaire; further development was based in part on an extensive review of the current standards on curricula for sexuality education and on consultation with sexuality educators and other researchers in this field. Preliminary questionnaire development work included a series of six focus groups with sexuality education teachers in three regions of the United States—the Northeast, the South and the West. A pretest of 250 randomly sampled public school teachers was conducted to refine the questionnaires. Where possible, the wording of questions in 1999 was the same as or very similar to the wording used in 1988, so we could measure trends in key aspects of sexuality education.

A sample of 7,772 teachers in grades 7-12 was drawn from a national database maintained by the commercial firm Market Data Retrieval. The universe from which the sample was drawn included school nurses and all teachers of the four selected subjects who, in spring 1999, were teaching in public schools that included one or more secondary grades (7-12). The sample was a systematic random sample, stratified by teaching specialty. Teachers were chosen using a sampling fraction proportional to the likelihood that teachers in their specialty were providing sex education, as estimated from the 1988 survey and other studies.[12] The strata ranged from 2,534 physical education teachers to 1,009 health education teachers.

We sent sampled teachers a questionnaire in early April 1999 and followed up with a reminder postcard one week later. We sent nonresponding teachers an additional questionnaire in late April. Beginning in early May, we faxed teachers who still had not responded a one-page questionnaire to ascertain whether they had taught sexuality education during the current school year (1998-1999) or the prior school year (1997-1998). If they responded that they had or if they did not answer, we sent them a third questionnaire. If they responded that they did not teach sexuality education, follow-up was concluded and they were recorded as not being sexuality education teachers.

If a sampled teacher was no longer teaching at the school, we asked that the

questionnaire be directed to the teacher who had taken over that teacher's duties. In some cases, questionnaires were erroneously forwarded to teachers who taught sexuality education, rather than to the sampled teacher or the sampled teacher's replacement. In these cases, we directed a new questionnaire to the original respondent or the valid replacement and discarded the invalid questionnaire. During fielding, 92 sampled teachers (1% of those surveyed) were found to be ineligible because they were no longer teaching the same specialty and no one had taken over those duties, because they had never taught the specialty identified by the sample or because their school had been
permanently closed.

In all, 3,754 teachers responded to the survey, representing 49% of all eligible surveyed teachers.* Response rates varied by type of teacher, ranging from 40% among physical education teachers to 68% among school nurses.

Using the same methodology as in 1988, we calculated weights for each of the sample strata. All data presented have been weighted to reflect the national distribution of 164,329 public school teachers in these grades and specialties.[13] We used the software package Stata to conduct tests of significance because the survey was based on a complex stratified sample. (Stata uses the unweighted number of cases and incorporates information from the sample weights and stratified design to inflate the standard errors for significance testing.)

Respondents whose replies to the first few questions indicated that they were not providing sexuality education in the current school year and had not done so in the previous year did not have to respond to any further questions. Therefore, most of our information is from the 1,767 responding teachers who had taught sexuality education in at least one of those years.

To achieve comparability in trend analyses of the 1988 and 1999 surveys, we made two important changes from the analytic approaches used for the published analysis of the 1988 survey. First, for analyses of specific grades, we excluded teachers from the base populations if their school did not include that grade. We also based estimates of specific topics taught by grade solely on teachers' answers to grade-specific questions (rather than applying the assumption previously made, that teachers who reported teaching a particular topic covered that topic in every grade in which they taught sexuality education). We retabulated the 1988 data for consistency with the 1999 analyses; thus, they may differ somewhat from those in previous publications.

FINDINGS

Almost all teachers (93%) reported that sexuality education was taught at some time during grades 7-12 in their schools. Some 49% of respondents were teaching sexuality education in 1999 (an increase from 45% in 1988).† In all, an estimated 81,200 teachers and school nurses in grades 7-12 were teaching sexuality education during the 1999 school year. Of these, more than half were teachers of health education (30%) or physical education (28%). This finding is similar to the results of the survey carried out in 1988, when health education and physical education teachers accounted for 57% of all sexuality education instructors.‡ As in 1988, biology and family or consumer science teachers each accounted for about one-fifth of those teaching sexuality

education, while school nurses accounted for 3%.

What Teachers Think Should Be Taught

In both years, almost two-thirds of teachers said the most important messages or topics of information they wanted to communicate to their students were related to abstinence and responsibility[§] (Table 1). Abstinence was the message most frequently identified as most important in 1999 (by 41% of teachers), while responsibility was the highest-priority message in 1988 (cited by 38%). STDs (including HIV and AIDS), reproductive facts and self-esteem were more likely to be cited as one of teachers' three most important messages in 1999 than they were in 1988. In contrast, the emphasis placed on contraception decreased: Teachers were less likely to cite the topic in 1999 than in 1988, either as their most important message (2% vs. 5%) or as one of their three most important messages (15% vs. 22%).

Seven teachers in 10 said that students who receive sexuality education that stresses abstinence are less likely to have sexual intercourse than students who do not, while 86% said that students who are taught to use contraceptives if they are sexually active are more likely to use them if they have sexual intercourse than are students who are not taught about contraceptives; 6% said that neither type of instruction is effective. One in five teachers (19%) thought students taught to be sexually abstinent, but to use contraceptives if they do have sex, are more likely to become sexually active than those taught only about abstinence (not shown).

Almost all sexuality education teachers in public secondary schools said that students should be taught about sexual development, sexual behavior and its possible negative outcomes (Table 2). Thus, 98% or more believed that by the end of grade 12, courses should have covered puberty, how HIV is transmitted, STDs, how to resist peer pressure to have sexual intercourse, implications of teenage parenthood, abstinence from intercourse, dating, sexual abuse and nonsexual ways to show affection. The overwhelming majority (78-98%) also thought that these topics should be covered in grade seven or earlier, although fewer than half would cover topics other than puberty and sexual abuse by the end of grade five.

Secondary school sexuality education teachers were about as likely in 1999 as in 1988 to think that courses should include information on the implications of teenage parenthood, STDs and how HIV is transmitted; they were slightly more likely to think they should cover abstinence from intercourse by the end of grade 12. However, 1999 survey respondents were much more likely to think that all of these topics should be covered in grade seven or earlier. The proportion who believed that implications of teenage parenthood should be taught by the end of grade seven increased by 16 percentage points between the two surveys. There were smaller increases in the proportion who cited that timing for instruction on STDs other than HIV (11 percentage points), abstinence from intercourse (11 percentage points) and how HIV is transmitted (five percentage points).

Although a majority of the teachers (78-93%) believed sexuality education courses should cover birth control methods, factual information and ethical issues about abortion, where to go for birth control, the correct way to use a condom, and sexual orientation, the proportions favoring coverage of these subjects were lower than they

were for the other topics, especially in the earlier grades. Teachers were less likely in 1999 than in 1988 to say that classes should cover topics related to birth control, abortion and sexual orientation in grade seven or earlier (except ethical issues about abortion) or by the end of grade 12. The largest change was in views on teaching about sexual orientation. Teachers were 14-17 percentage points less likely in 1999 to think the topic should be covered at all or by the end of grade seven than they were in 1988.

Timing and Content

In 1999, teachers reported that sexuality education was offered in 63-69% of schools that included grades seven, eight, nine and 10, and in roughly half of schools with grades 11 and 12 (Table 3). There was a small increase between 1988 and 1999 in the proportion of teachers who reported that sexuality education was taught in their school at some time during grades 7-12 (from 90% to 93%). This increase was concentrated in grades seven and eight. For individual grades between nine and 12, the proportions of teachers who said that the subject was offered did not change significantly over time.

•*Topics*. When sexuality education was taught, teachers were most likely to cover how HIV is transmitted, STDs and abstinence (94-95%). All other topics were significantly less likely to be taught in grades 7-12 overall (51-88%). In most grades in 1999, such topics as the implications of teenage parenthood, puberty, birth control methods and nonsexual ways to show affection were significantly less likely to be taught than abstinence. Dating and how to resist peer pressure to have sexual intercourse were significantly less likely to be taught than abstinence only in some grades. In all grades, other topics—sexual abuse, where to go for birth control, abortion facts, ethical issues about abortion, the correct way to use a condom and sexual orientation—were significantly less likely than abstinence to be taught.

The content of sexuality education thus varies according to students' ages. In 1999, sexuality education teachers in grade nine were more likely than those teaching in any lower or higher grade to cover a given topic. For example, 87% of teachers in grade nine taught students about abstinence, compared with 73-75% in grades seven and eight and 66-71% in grades 10-12. Some 76% of sexuality education teachers in grade nine covered birth control methods, compared with 33% in grade seven, 53% in grade eight and 64-67% in higher grades.

Sexuality education teachers were more likely in 1999 than in 1988 to teach about STDs, abstinence from intercourse and how to resist peer pressure to have intercourse, and they were equally likely to cover how HIV is transmitted. In addition, these topics were taught somewhat earlier in 1999 than in 1988. They were most likely to be taught in the 10th grade in 1988, a grade later than the most common grade in 1999. Some 70-74% of seventh-grade sexuality education teachers covered these topics in 1999, compared with 36-64% in 1988. Teachers in all grades were more likely to teach the correct way to use a condom in 1999 than in 1988 (53% vs. 49%).

In contrast, the proportions of secondary school sexuality education teachers covering birth control methods, abortion facts, ethical issues about abortion and sexual orientation decreased sharply. Each of these topics was 14-20 percentage points less likely to be covered in 1999 than in 1988. Although the likelihood that a

sexuality education teacher would cover birth control in the ninth grade differed little between the surveys, the proportion decreased by 24 percentage points in the seventh grade (from almost 58% in 1988 to more than 33% in 1999) and by 12-17 percentage points in other grades.

•*Comparison with teachers' recommendations*. In 1999 as in 1988, specific topics were less likely to be covered than teachers thought they should be, and they were often covered later than teachers thought appropriate. For example, when Tables 2 and 3 are compared, we see that the gap between teachers' recommendations and the actual coverage of topics in sexuality education courses was less than 10 percentage points for HIV transmission (100% vs. 94%), STDs (100% vs. 95%) and abstinence (99% vs. 95%). For puberty, how to resist peer pressure to have intercourse, implications of teenage parenthood, dating and birth control methods, the gap was 10-20 percentage points. Differences for other topics—sexual abuse, nonsexual ways to show affection, abortion facts and ethical issues, where to go for birth control, the correct way to use a condom and sexual orientation—were 21-30 percentage points.

•*Specific skills, concepts and topics*. We asked sexuality education teachers whether they taught certain skills and concepts. One set of questions asked about skills and concepts related to sexual behavior and abstinence. In addition, because preventing STDs (including HIV) and avoiding unplanned pregnancy are topics central to good reproductive knowledge and health and thus critical to sexuality education, we asked teachers who covered STDs and HIV or birth control (in their teaching or in response to student questions) about selected concepts and skills related to each of these topics.

To improve our understanding of the relationships within this large group of measures, we carried out a factor analysis that included all questions on specific skills, concepts and topics. The results indicated that the skills and concepts related to STDs and HIV clustered into two different factors, one focused on facts and prevention and the other focused on services. Although a question about discussing condoms as a form of STD and HIV prevention was asked in the context of STDs and HIV, it clustered instead with items related to birth control; thus, we included it in a cluster of items labeled "methods for pregnancy and infection prevention." On average, 90% of teachers covered topics related to STD and HIV facts and prevention in 1999; 75%, sexual behavior and abstinence; 67%, STD and HIV services; and 52%, pregnancy and infection prevention (Table 4).

At least 80% of teachers covered each of the topics in the STD and HIV facts and prevention group (including abstinence and monogamy as forms of prevention), and some topics in the sexual behavior and abstinence group (how alcohol and drugs affect behavior; negative consequences of sexual intercourse for teenagers; how to resist peer pressure to have sexual intercourse; that sexuality is a natural and health part of life; and how to stick to a decision, even under pressure). In contrast, no more than half talked about how to negotiate sexual limits or about some items from the pregnancy and infection prevention group (how to communicate with a sexual partner about birth control, where to get birth control, demonstration of how to use condoms and showing actual birth control devices in a class).

Key Topics

As Table 4 shows, the great majority of sexuality education instructors reported teaching skills and concepts related to STD and HIV facts and prevention and those related to sexual behavior and abstinence, but only about half said they covered skills and concepts related to methods for pregnancy and infection prevention. The proportions differed somewhat, depending on how the question was asked, because some teachers who did not formally teach a particular topic did cover it in response to student questions.

•*STDs and HIV.* In 1999, almost all sexuality education teachers covered HIV as well as other STDs. Some 94% did so in their teaching, while 5% said they did so only in response to students' questions (data not shown). At least nine in 10 teachers gave students basic biological information about STDs and HIV, although fewer (eight in 10) told students these infections can be contracted through oral or anal intercourse (Table 4). Some 95% covered sexual abstinence as a form of prevention of STDs and HIV, compared with 80% who covered monogamy and 78% who taught students about condoms as forms of prevention. Almost eight in 10 taught students about the importance of notifying all sexual partners if they had an infection, but only about six in 10 covered the specifics of getting testing and treatment.

Secondary school teachers were more likely to teach about abstinence as a means of preventing STDs (including HIV) in 1999 than in 1988. The percentage teaching about signs and symptoms of STDs and HIV and about sexual monogamy as a means of prevention remained stable between the two surveys, but the percentage who covered three related topics—condoms as a form of prevention, the importance of notifying partners and where to go for help—declined.

In 1988, for example, 87% of teachers taught that condoms can be an effective means of preventing STDs and HIV for sexually active individuals, compared with 59% in 1999. Some 22% of teachers in 1999 taught that condoms were ineffective in preventing STDs and HIV, and the remainder did not cover the topic (not shown).

•*Birth control.* Half of sexuality education teachers said they had been directed by their school or school district to teach students about birth control; 23% said coverage of the topic was left to their own discretion. However, 24% had been told not to teach about birth control. Some had been told they could answer students' questions about birth control (10%), while a second group had been instructed not to teach the topic and not to answer student questions (6%); a few others had been told to refer students to someone else or to use outside speakers (8%). The remaining 3% of teachers responded simply that they did not cover birth control. In 1988, 19% of sexuality education teachers reported that there were formal constraints on their teaching about birth control and another 19% said there were informal constraints.[14] The questions asked in 1988 and 1999 were different, so it is not clear whether there has been any change in the prevalence of constraints over time.

The proportion of teachers who formally taught about the topic of birth control changed very little between the two surveys (from 70% in 1988 to 68% in 1999). However, the proportion who did not teach about it formally but who answered students' questions declined sharply (from 25% in 1988 to 16% in 1999). As a result, the proportion not covering the topic at all rose from 6% in 1988 to 16% in 1999.

Teachers' reports of how they covered the topic of birth control did not always match what they said they had been told to do, but the survey did not ascertain whether this was because their directions were more nuanced than the survey questions or because they were bending school policies to take into account student needs or pressures from other groups. Among 1999 survey respondents told only to answer students' questions about birth control, 47% only answered questions, 18% taught about birth control and 35% did not deal with the topic at all. Although 68% of those told to use their own discretion taught about birth control, 20% only answered questions and 12% did not cover the topic. Some 93% of those told to teach about birth control did so, but 7% simply responded to students' questions. Among those told not to cover birth control, 79% never covered the topic, 11% only responded to questions and 10% taught students about contraceptive methods.

Abstinence was the birth control method most commonly covered by teachers who formally taught or responded to questions about birth control (97%). In comparison, fewer covered the condom (90%) or birth control pills (86%). Some 60-77% of teachers covered spermicides, the diaphragm or cervical cap, periodic abstinence, the IUD, sterilization, the implant, the injectable and withdrawal. Only 40% discussed emergency contraceptive pills.

Sexuality education teachers were more likely to talk about general issues related to contraception than about details of use or access to methods. Some 78% covered condoms as a means of STD and HIV prevention, while slightly more than 60% discussed the need to plan pregnancies, the necessity of correct and consistent contraceptive use, the importance of dual use (using condoms to prevent STDs and HIV infection along with another method to avoid pregnancy) and how each birth control method works (Table 4). Teachers were less likely, however, to talk about specifics of how to obtain and use methods. Only half told their students which methods can be purchased without a medical visit and discussed how to communicate with a partner about birth control, and just one-third gave information about specific clinics or doctors from whom students could obtain birth control, showed actual birth control devices or demonstrated the correct use of the condom.

In 1999, teachers who taught about birth control were more likely to include each concept and skill related to contraception than were teachers who only responded to students' questions about the topic (data not shown). For example, 83-84% of those who formally taught about birth control pointed out the necessity of using a method correctly and consistently, discussed the importance of dual use and explained how each method works, compared with 18-27% of those who only responded to student questions. Similarly, those who formally taught about birth control were 60 percentage points more likely than those who only responded to students' questions to explain which methods can be purchased over the counter and which require going to a doctor or clinic.

Some significant changes in teaching on birth control occurred between 1988 and 1999. Sexuality education teachers in 1999 were less likely than similar teachers in 1988 to explain how methods work and to give information on specific clinics or doctors from whom students can obtain birth control. However, they were just as likely as in 1988 to discuss how to communicate with a sexual partner about birth

control, to show birth control devices and to demonstrate proper condom use in class.

•*Abstinence.* Most teachers reported teaching students about abstinence from intercourse, but their treatment of the subject varied. Two-thirds (65%) presented abstinence as the best alternative for preventing pregnancy and STDs and another 7% presented it as one alternative for prevention. In contrast, 23% of teachers said they presented abstinence as the only way of preventing pregnancy and STDs, a steep increase from 2% in 1988. The remaining 5% reported that they did not teach about abstinence (data not shown).

In 1999, most sexuality education teachers covered specific skills and concepts related to decision-making and behaviors that could influence whether a young person actually had sexual intercourse (Table 4). Roughly nine in 10 instructors taught about how alcohol and drugs affect behavior, that sexual intercourse can have negative consequences and about how to resist peer pressure to have sex. These last two topics were more likely to be taught in 1999 than in 1988. At least three in four teachers told students that sexuality is a natural and healthy part of life and taught them skills such as how to stick to a decision, even under pressure, and how to say no to a boyfriend or girlfriend who wants to have sexual intercourse. About two in three said they taught their students specific ways to avoid sex, the difference between consensual and forced sexual contact, the importance of both partners agreeing to any sexual behavior and ways of recognizing and resisting media pressure regarding sexual behavior. Only 47% of teachers covered how to negotiate sexual limits.

Responses to summary questions may mask important differences among teachers in the content they actually cover. The terms "abstinence-focused" and "abstinence-only" are commonly used by those favoring and criticizing this type of sexuality education. There are, however, no standard definitions of these terms. The data from this survey provide information that increases our understanding of what these categories mean in practice.

Teachers who presented abstinence as the only way to prevent pregnancy and STDs and those who presented it as the best (or one) alternative varied little in whether they taught most skills and concepts related to sexual behavior and abstinence and most items related to STD and HIV facts and prevention (Table 4). Those who presented abstinence as the only alternative were, however, less likely to teach the importance of both partners agreeing to any sexual behavior, that STDs and HIV can be contracted during oral or anal sexual intercourse and that sexual monogamy is a form of STD and HIV prevention (differences of 5-9 percentage points). Even greater differences were found between the two groups of teachers in their instruction about STD and HIV services, especially the availability of confidential testing and treatment, and in their coverage of skills and concepts related to method use (differences of 12-24 percentage points).

Six in 10 teachers who presented abstinence as the only alternative discussed condoms as a form of STD and HIV prevention and 46-47% explained how each birth control method works, the necessity of using methods correctly and consistently and the importance of using both condoms and a more effective method to avoid both pregnancy and STDs (including HIV). One-quarter gave students information about specific sources from which they could obtain birth control, and 17-18% showed birth

control devices and the proper way to use a condom.

Some teachers who taught about abstinence as the best option or as one option did not teach about any other means of preventing pregnancy and STDs, but others covered the range of prevention options while stressing abstinence as the best choice. Still others apparently emphasized abstinence in part by focusing on the potential ineffectiveness of contraceptive methods for the prevention of infection and pregnancy.

Although 70% of sexuality education teachers covered all three of the central reproductive health topics—STDs (including HIV), abstinence and birth control, about 30% only taught about abstinence and STDs and HIV. About half of these teachers (16% of all sexuality education teachers) only answered student questions about birth control and the others (14%) did not cover birth control at all (data not shown).

Most teachers (59%) said they taught that birth control can be effective in preventing pregnancy or that condoms can be effective in preventing HIV and other STDs while they also stressed abstinence as the only option (9%) or as the best or as one option (50%) for teenagers (Table 5). However, 36% either taught that birth control and condoms are ineffective means of preventing pregnancy and STDs (27%, the sum of 9.8% and 17.6%) or did not cover birth control or condoms at all (9%, the sum of 4.4% and 4.4%), while they presented abstinence as the only (14%, the sum of 9.8% and 4.4%) or the preferred alternative (22%, the sum of 17.6% and 4.4%).

Thus, while there is a strong association between the approach to teaching abstinence and the effectiveness attributed to birth control and condoms, the information students receive cannot be clearly deduced from teachers' approach to teaching abstinence. Some 69% of teachers who discussed abstinence as the best or as one option for teenagers also presented birth control and condoms as effective alternative means of prevention, while 39% of those who said they taught abstinence as the only alternative nevertheless presented both birth control and condoms as effective means of prevention. In addition, 61% of those who taught abstinence as the only alternative either presented no information about birth control and condoms (19%) or taught that one or both are ineffective (42%), compared with 31% of those who presented abstinence as the best or as one alternative.

Support and Problems

In 1999, 68% of sexuality education teachers were in school districts with a policy of teaching sexuality education, but a substantial minority were in districts that left the decision to individual schools (7%) or to individual teachers (24%). As in 1988, almost two-thirds (65%) of sexuality education teachers reported in 1999 that their school administration supported their efforts to meet the sexuality education needs of their students. Fewer than half reported support from parents (47%) or from the community (44%). Teachers whose district had a policy of teaching sexuality education were slightly more likely than those in districts that left the decision to individual schools or teachers to feel that they had their school administration's support (68% vs. 61%). However, the two groups differed little in their perception of support from the community (46% and 41%, respectively) and support from parents (48% and 45%, data not shown).

Forty-three percent of sexuality education teachers were in schools that required them to use a specific curriculum for sexuality education. Some 26% of teachers said that information their students needed was not included in their curriculum, with little difference between those who were required to use a specific curriculum and those who were not. Moreover, 22% of teachers reported that their school restricted their ability to answer students' questions on topics not included in their curriculum.

In 1999, 35% of teachers said they had to be careful about what they taught because of the possibility of adverse community reactions to sexuality education. (Equivalent data for 1998 were not available.) Twenty-four percent believed that their administration was nervous about community reaction, a large reduction from the level in 1988 (34%). Some 19% said that restrictions imposed on sexuality education prevented them from meeting the sexuality education needs of their students—similar to the level seen in 1988 (21%).

Most teachers (86%) reported that their school had policies designed to foster parental involvement regarding sexuality education. The policy most commonly reported (by 82% of teachers) was to give parents the opportunity to review curriculum content. Most teachers also reported that their school informed parents that they could remove their child from sexuality education classes (62%) or required that parents be notified about the topics that would be covered (56%). Some 31% worked in schools that required written parental permission (active consent) for students to attend sexuality education classes.

The most common problem teachers reported facing in 1999 was difficulties with the students themselves, including apathy and failure to pay serious attention to the subject, perceived invincibility, misinformation, diverse maturity levels and such environmental problems as high pregnancy rates and high levels of sexual abuse. In fact, 41% of secondary school sexuality education teachers said problems with students were their worst problem. Another common problem mentioned was pressure about what they taught (cited by 18% of teachers as their worst problem). Other difficulties included insufficient instructional time and the lack of updated, appropriate and readily available teaching materials.

The 1999 survey respondents were much more likely than their 1988 counterparts to say that student-created difficulties were one of their three worst problems (58% vs. 37%, respectively), but they were less likely to cite deficiencies in teaching materials (20% vs. 37%) or insufficient time (15% vs. 19%). Teachers in the two years were equally likely to claim that external pressure was one of their three worst problems, but this factor was slightly less likely to be reported as the single most important problem in the later survey than in the earlier one (18% vs. 23%).

DISCUSSION

In many ways, sexuality education in U.S. public secondary schools has changed little in the last decade. The subject continues to be taught almost universally. Teachers continue to say that their top educational messages focus on abstinence and responsibility. Many topics are covered in sexuality education; the most common are STDs (including HIV) and abstinence, followed by birth control, abortion and sexual orientation. Teachers in 1999 continue to feel less than total support from their

administration, their community and the parents of their students.

This overall stability, however, masks some notable changes in the level and content of sexuality education. Most topics covered as part of sexuality education continue to be taught less often and later than teachers think should be the case, but others—how HIV is transmitted, STDs, how to resist peer pressure to have sexual intercourse, abstinence and the correct way to use a condom—are now taught earlier than they were in 1988.

In contrast, steep declines occurred between 1988 and 1999 in teacher support for coverage of birth control, abortion, information on obtaining contraceptive and STD services, and sexual orientation, as well as in the proportions actually teaching those topics. Secondary school sexuality education teachers overall were less likely to teach about birth control methods in 1999 than in 1988; the decline in grade seven was particularly strong.

Many of the changes occurring between 1988 and 1999 reflect the increasingly strong promotion of abstinence as the only appropriate option for adolescents.[15] Four in 10 teachers cited abstinence as their most important message in 1999, up from one in four in 1988. The proportion of all secondary school teachers covering abstinence increased between 1988 and 1999. In addition, this topic is now being taught to younger students—the proportions of teachers covering it increased in grades 7-9, even as they dropped in grades 10-12. Teaching about abstinence has become much more directive as well: In 1999, one in four secondary teachers were teaching abstinence as the only way to prevent pregnancy and STDs, compared with one in 50 teachers in 1988.

In 1999, students in almost all grades were much less likely to be taught about birth control, abortion and sexual orientation than about abstinence from intercourse. When students were taught about both abstinence and birth control, teachers who presented abstinence as the only way to prevent pregnancy and STDs—rather than as the best option or as one among several alternatives—were more likely to present contraceptives as ineffective in preventing pregnancy and condoms as ineffective in preventing STDs (including HIV).

Nevertheless, a significant proportion of teachers who defined their teaching as abstinence-only did not appear to accept the notion that contraceptive use is unacceptable for young people. Among teachers who instructed students that abstinence is the only means of avoiding pregnancy and STDs, four in 10 also taught that birth control can be effective in preventing pregnancy or that condoms can be effective in preventing HIV and other STDs. In contrast, three in 10 teachers who taught that abstinence is the best alternative or is one alternative told students that contraception is ineffective in preventing pregnancy or STDs (including HIV). What we do not know is the emphasis that teachers place on abstinence relative to other preventive measures. Given that teachers' views about abstinence and contraception do not necessarily correspond to the lines drawn in the political debate over abstinence and prevention strategies, more detailed research is needed about how teachers present the effectiveness of contraception in prevention of pregnancy and STDs (including HIV) in the context of teaching about abstinence.

One limitation of a broad sexuality education survey such as this one is that it cannot measure many details about the content of particular topics of instruction. Studies that examine the curriculum content and other instructional materials can measure the relative balance of topics as well as the finer details about how components of topics are emphasized. Given that the content of a given curriculum may differ markedly from what is actually taught, observational studies of sexuality education instructors could provide another important means of learning how students are taught sexuality education in the public schools.

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*Teachers who responded during follow-up were somewhat less likely than those who responded immediately to be sexuality education teachers.

†Another 5% of teachers had taught sexuality education in the prior school year; they were included in the 1999 data presented here, unless otherwise noted.

‡In fact, there is some crossover between these two specialties. In 1999, 20% of physical education instructors in grades 7-12 said they also taught health education, and 8% of health education teachers also identified themselves as physical education teachers. We classified these respondents by their sampled specialty.

§We categorized the following responses from teachers to an open-ended question as indicating the teaching of "responsibility": decision-making or making responsible choices; consequences of sexual activity; consequences of parenthood; male responsibility; and recognizing risky situations.