The Delivery of Sexuality-related Patient Education to Adolescent Patients: A Preliminary Study of Family Practice Resident Physicians

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Abstract

Background: Risky sexual behavior among adolescents is one of the leading health behaviors most associated with mortality, morbidity, and social problems. Adolescents need reliable sources of information to help them promote healthy sexual behaviors. Physicians in the United States are often seen by adolescents as a reliable and trustworthy source of accurate sexual information. However, many physicians feel uncomfortable or ill-prepared to deal with sexuality issues among their adolescent patients. Purpose: This study examined the impact of family resident physicians' sexual attitudes, knowledge, and comfort, on the delivery of sexuality-related patient education to their adolescent patients. Materials and Methods: Pre-post-test scales were administered to 21 physicians. Data were also collected for patient (n=644) charts. Factors that determined the delivery of sexuality-related patient education were analyzed. Results: Results indicate that sexuality-related patient education was rarely provided to adolescent patients. Conclusions: Adolescent sexuality education is not a high priority for physicians. Professional medical organizations should play a leadership role in training physicians on delivering sexuality education to adolescent patients.

Keywords: Adolescent, childhood, medical education, physicians, sexuality

Introduction

Risky sexual behavior is one of the leading health behaviors most associated with mortality, morbidity, and social problems among youth.[1] Recent statistics indicate that a little less than half (46%) of adolescents in the United States have engaged in sexual intercourse, while more than 14% had four or more lifetime sex partners. Approximately 40% did not use a condom during their last intercourse, and 20% reported using birth control pills before their last intercourse.[2] It has been suggested that adolescents practice unsafe sexual activity because of their lack of critical information, knowledge, and behavioral skills necessary for the promotion of positive sexual behaviors.[3]

Adolescents get information regarding sexuality from a variety of sources—parents/caregivers, peers, the media, religious organizations, and formal sexuality education programs. The physician is often overlooked as a creditable source of sexuality information even though the physicians invoke a high level of trust and confidence from both adolescents and their parents.[4-8]

It is generally recognized that patient education is crucial for high quality healthcare. Patient education is defined as "the process of influencing patient behavior, producing changes in knowledge, attitudes, and skills required to maintain or improve health."[9] In most circumstances, patient education involves a one-to-one relationship in the medical setting. Well-informed patients are considered to be in a position to make better decisions about their health.[10] Several studies have found that patient education can lead to positive health outcomes. These studies address the relevance of education by physicians across all patient age groups including adolescents.[11-16]

Several studies suggest that despite the proven benefits of education, primary care physicians may not be adequately educating adolescent patients in areas of sexuality.[17,18] According to one particular study, while physicians in the United States indicated that they discuss contraception with their adolescent
patients on a regular basis (86.3% of the time for females patients; 64.7% of the time for male patients), they do not believe that their efforts are effective in producing healthy outcomes. Another study in the United States also found that the percentage of physicians who “usually or always” inquired of their patients about sexually transmitted diseases was much lower (56%) than the nearly 90% of primary care physicians who stated they were comfortable discussing the topic with their patients.\footnote{29}

One of the main reasons cited for this oversight by physicians is a lack of training and confidence.\footnote{21} In a study of 192 family practice residency programs in the United States, only 15% indicated they had a formal patient education curriculum.\footnote{17} In a similar study investigating how medical school prepared physicians to diagnose and treat sexual problems, human sexuality was taught as a course in approximately one in three (30%) of the medical schools.\footnote{19}

There is consistent evidence that individuals change their behavior in response to information about HIV and other STDs through public education and medical encounters.\footnote{22,23} Physicians play an important role in reducing adolescents’ sexual risks.\footnote{24} Guidelines for Adolescent Preventive Services (GAPS) recommends that “All adolescents should receive health guidance annually to promote a better understanding of their physical growth, psychosocial and psychosexual development, and the importance of becoming actively involved in decisions regarding their health care regarding responsible sexual behaviors”\footnote{25} However, guidelines and recommendations do not necessarily ensure compliance. Research suggests that primary care physicians frequently fail to take sexual histories of new patients and fail to complete a sexual history detailed enough to educate patients about HIV risk behaviors.\footnote{20,27} Millstein and colleagues found that less than one in three (31%) of physicians reported educating their adolescent patients about STD/HIV transmission, and 80% of the physicians reported that they never provided condoms to their sexually active adolescent patients.\footnote{28} According to another study, topics the adolescents identified as seldom addressed by physicians included masturbation, non-penetrative sexual activities, correct condom use, and limiting the number of sexual partners.\footnote{29}

Keeping in view, the aforementioned issues in patient sexuality education, this study focused specifically on family practice resident physicians. In order to improve patient education so that it will allow physicians to advise teenagers on sexual issues, it is important to understand current practices of family medicine practitioners. The purpose of this study was to assess the knowledge and attitudes of family practice residents about patient sexuality education and to assess the relationship between their knowledge and the provision of sexuality-related patient education.

Materials and Methods

Applications to conduct the study were submitted to the Institutional Review Boards (IRB) at Ball State University, Indiana, USA. Twenty-four family practice resident physicians (eight in each year of the 3-year residency program) were solicited to participate in the study. Before data collection began, each researcher completed confidentiality training and signed the appropriate paperwork required by the institute.

Data were solicited from two sources. First, a battery of tests assessing sexual knowledge and attitudes were administered to family medicine resident physicians using a pre- and post-test design. The pretest was administered during the first month of the academic year (June). The post test was administered during the last month of the academic year (July). Second, the progress notes of each adolescent (12 to 18 years) patient visit were reviewed to determine whether sexuality-related patient education was provided. The review was conducted on all adolescent patient visits that occurred between the administration of the pre- and post-tests.

The battery included the sex knowledge and attitude test (SKAT)\footnote{29} and patient education belief scale.\footnote{15} The SKAT test consisted of four sections. The first section included 35 attitude items, comprising four subscales for sexual myths, heterosexual relations, abortion, and autoeroticism. The second section was a 72-item true-false knowledge test. The third section consists of 12 demographic items.\footnote{29} Internal consistency and reliability were established for each of the scales by Lief.\footnote{34} The reliability for the knowledge test (K-R 21) was established to be \( r=0.87 \).

To assess the provision of sexuality-related patient education to adolescent patients, a patient chart review form was constructed by the research team and piloted. Patient education was coded to have occurred if the physician’s notes on the patient chart made reference to specific topics were presented to the patient, procedures for taking medication and/or directions were given on how to continue therapy. The pilot test established consistency between the researchers’ interpretations of the patient chart information. Inter-rater reliability (Pi) was calculated and the Pi values ranged from 0.87 to 0.96, and were considered acceptable for this study. The final version of the patient chart review form matched the patient with the resident physician, and included the date of visit, reason for the office visit, and the type of patient education provided. Following the pre-test, a brief 1 h presentation on the role of the family physician in sexuality education was made to all the residents. The intervention addressed the risks related to adolescent sexual behavior, how to initiate conversations about sexuality issues with adolescents, and educational methods for the physician.

In order to collect data from the patients’ charts, office staff identified all adolescent (age 12–18 years) patient charts for visits occurring in a 12 month period. Identifying information was concealed and the charts were photocopied prior to their review. After the data were collected, all photocopied charts were destroyed.

Data analysis

The physicians’ data were entered manually. The data from the
chart reviews were tabulated on scan sheets and were scanned into the computer. The Statistical Package for Social Science (SPSS-PC v 16.0) was utilized to analyze the data. In addition to descriptive statistics, multi-analysis of variance (MANOVA) and chi-square analysis were conducted. Instrument reliability was established in a pilot study using test re-test.

**Results**

**Family practice resident physicians**

Pre- and post-test results were collected from 21 physicians. The age of the physicians ranged from 24 years to 36 years of age, 19 indicated that they were married, and 11 were males.

As part of the pre- and post-tests, the physicians responded to items that measured their opinions concerning patient education, level of sexual comfort, sexual attitudes, and knowledge. To analyze the scores for each of the measures, a MANOVA was used. There was a statistically significant difference found between the pre-test and post-test regarding the percent of time physicians plan to spend educating their patients about sexual health concerns. At the pre-test, physicians indicated a mean percent of time of 4.2% and at the post-test the mean time was 9.7% (F=11.39; P<.002). In addition, a significant difference in the physician’s level of sexual comfort was found between the pre-test (M=68.1, SD=±4.13) and post-test scores (M=65.26; SD=± 4.24) (F=6.215; P<.023). The difference in the physicians’ sex knowledge, attitudes, and attitudes toward patient education were found not to be statistically significant.

**Patients**

During the year, 644 adolescent patient charts that met the study’s criteria were reviewed. A majority (73%) of the patients were females. The female physicians attended to 54% of the patient visits. The patients’ age ranged from 12 years to 19 years of age. The mean age of patients was 14.7 years of age.

Of the 644 office visits made by the patients, a little less than one in three (n=190, 30%) were considered to be sexuality-related visits. The primary reason for the majority (50%) of office visits made by the adolescents was for acute medical conditions (e.g., flu, respiratory infections). Other primary reasons for an office visit included pregnancy-related visits (22%), chronic medical conditions (13.5%), Pap tests (3%), contraception (1.1%), and sexually transmitted diseases (0.8%) [Table 1].

While patient education was provided to nearly half of all patients (50.3%, n=324), sexuality-related patient education was provided to fewer than 20% of the patients. The physician initiated sexuality-related patient education in 11% (n=67) of all visits, while patients initiated the topic in 8.5% (n=52) of all visits. Adolescent patients were significantly more likely to initiate sexuality topic conversations with female physicians as compared to male physicians even after adjusting for the patient gender (OR=2.08, 95%CI=1.11–3.91, P=0.02). Similarly, as compared to males, female adolescent patients were significantly more likely to initiate sexuality topic conversation with physicians irrespective of physician gender (OR=6.46, 95%CI=1.98–18.01, P=0.001). The topics most frequently addressed in patient education sessions were general sexual information (6%), pregnancy prevention (6%), and sexually transmitted disease prevention (4.2%). Of the 190 patient visits that were primarily for sexuality-related concerns, only half of the charts indicated that the patient received any patient education [Table 2].

Further analyses were conducted to determine predictors of the physician’s initiation of sexuality-related patient education. A logistic regression was conducted on the variables that were considered predictive of the physician’s initiation of a discussion on sexual matters. The variables included the physician’s sexual knowledge, sexual attitudes, sex, and level of sexual comfort. The physician’s gender (female), patient’s gender (female), and attitude toward abortion were found to be predictive of initiating a discussion on sexual matters.

**Discussion**

Adolescents have identified a variety of sources for sexual information and have stated that family physicians are among their most trusted sources of information.28 Yet, as our results indicate, family practice resident physicians do not regularly provide adequate information to young people about sexual matters. In addition, the results did not find any reliable predictive characteristics of physicians who routinely provide patient education.

The results of our investigation indicated that patient education, at best, is not sufficiently recorded on patients’ charts. At

| Table 1: Description of office visits by adolescent patients |
|-------------------------------------------------------------|
| Reason for visit                                           | Primary n (%) | Secondary n (%) | Neither n (%) |
| Routine physical exam                                      | 54 (8.4%)     | 2 (0.3%)        | 564 (87.6)    |
| Acute medical condition                                    | 326 (50.6)    | 51 (7.9%)       | 253 (39.3)    |
| Chronic medical condition                                 | 84 (13)       | 34 (5.3%)       | 502 (78)      |
| Pap test                                                   | 20 (3.1%)     | 10 (1.6%)       | 585 (90.8)    |
| STD/STI                                                    | 5 (0.8%)      | 10 (1.6%)       | 606 (94)      |
| Pregnancy related                                         | 141 (21.9%)   | 3 (0.5%)        | 478 (74.2)    |
| Contraception                                             | 7 (1.1%)      | 12 (1.9%)       | 594 (92.2)    |
| Other                                                      | 4 (0.6%)      | 5 (0.8%)        | 592 (91.9)    |

Primary: Primary reason for visit; secondary: Secondary reason for visit

| Table 2: Description of sexuality education topic covered by physician |
|------------------------------------------------------------------------|
| Topic                     | n (%)                     |
| General sexual health     | 38 (5.9)                  |
| STD prevention            | 27 (4.2)                  |
| Pregnancy prevention      | 38 (5.9)                  |
| Communication skills      | 1 (0.2)                   |
| Sexual relationships      | 7 (1.1)                   |
| Sexual assault            | 1 (0.2)                   |
| Other sexuality topics    | 9 (1.4)                   |
| Other non-sexuality topics| 324 (50.3)                |
the worst, patient education is not routinely practiced by family practice residents. Even when the reason for the visit is sex-related, educational follow up is not initiated any more frequently. Patient education can play an important role in the support of responsible sexual behaviors. Physicians have a responsibility to their adolescent patients to provide timely and supportive sexuality education. Fortenbery[23] states that “clinic-based programs can successfully increase responsible sexual behaviors.” Successful programs have a clear theoretical base and are grounded in research, are tailored to the individual, and include skill building exercise as well as educational and counseling components.

Clearly, periodic discussions and patient interactions had little influence on family practice residents’ sexual comfort, knowledge, attitudes and the delivery of patient education during the 12 months of the study. It may mean that transformation of knowledge to behavior change may require additional interventions.

Few variables were found to be predictive of physicians who provided sexuality-related patient education. The short-term interventions had little influence on practice and attitudes related to patient education. If improving the patient education skills of family practice residents is to occur, a more comprehensive and organized effort within the curriculum is needed. Curriculum modifications should include clearly stated objectives related to patient education skill development, and include opportunities for the resident to observe, practice and discuss their skills. Methods such as case studies, role-play, and observation with follow-up discussions would be important to include in the curriculum.

**Limitations**

Our survey was an initial attempt to describe sexuality-related patient education by family practice residents to adolescents. This study is limited by the non-probability sample and its confinement to one community. Because all patient identifications were removed from the charts, validating or further descriptors beyond the residents’ note could not be validated. Therefore, the results may reflect a shortcoming of the records and not the patient education follow-up. However, the results are consistent with other studies. Finally, this was an observational study and suffers from the peculiar limitations of cross-sectional studies (e.g., inability to establish cause and effect, threats to internal and external validity, and bias due to recall and social desirability, etc.).

**Recommendations**

Our study results did not reveal any particular characteristics of family practice resident physicians that impacted their delivery of sexuality-related patient education to adolescent patients. Consequently, we propose generic recommendations related to physicians and healthcare professionals:

**Recommendations for practice**

1. Professional societies like the American Academy of Family Physicians and the Academy of Family Physicians of India should play a leadership role in guiding the development of a formalized comprehensive resident family physician curriculum on adolescent sexuality education. To provide effective sexuality-related patient education, resident physicians need to have good patient education modeled. Various strategies of gaining adolescent patient trust, building rapport, and encouraging dialogue are particularly important in the field of adolescent sexuality education.

2. Female adolescent patients may see a resident family physician for sexuality-related issues, such as a Pap smear and pelvic exam; menstrual irregularities; contraception, sexually transmitted infections, etc. One of these “chief complaints” leads more easily to the provision of sexuality-related patient education. For male patients, the routine physical exam or other medical visit may be the only opportunity for a resident physician to provide sexuality-related patient education. Physicians should consider allowing more time for the exam to discuss sexual issues.

3. Trust building and confidence in the resident physician as a source of sexuality-related patient education begins long before the adolescent patient arrives in the examination room. At a minimum, anticipatory guidance may be put into action by providing flow sheets in adolescent patient charts to address age-appropriate sexuality issues.

4. Family practice clinics should also work to improve the clinic culture to be adolescent-friendly. Adolescent patients need to feel comfortable with every encounter with every staff member, including physician, nurse, and office staff, in order to encourage repeated visits. In addition, strategies for community and clinic outreach, including bulletin boards, flyers, reminders to parents, grandparents, and other caregivers, may encourage adolescent patient visits on sexuality-related issues.

5. A team approach is necessary to improve both the delivery and quality of sexuality-related patient education to adolescent patients by family physicians. Teachers of family medicine, resident physicians, nurses, clinic staff, and families should pool their resources and expertise to provide much needed sexuality information to adolescent patients. Many decisions of adolescent patients will be influenced by the discussions they have with their peers, parents, and physicians. It is critical that they have accurate information in order to make informed decisions about their sexual behavior.

**Recommendations for research**

1. This exploratory study was conducted with a small (n=24) number of resident physicians. Obviously, this study needs to be replicated on a larger scale, in different settings, and with a diverse patient and resident physician population.

2. Researcher interpretation of the documentation of adolescent patient office visits alone was used to determine the provision of sexuality-related patient education. Further research could address better ways to document patient education in patient charts and other ways to assess the provision of such patient education (beyond chart reviews).

3. The topics covered by our study were not all inclusive. Future
studies should focus on more in-depth and comprehensive assessment of adolescent sexuality education by physicians.

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