

A Proposal for Strengthening Medical School Training in STD Prevention Techniques

JANE K. STEINBERG, MPH
JOANNE WELLMAN, MPH
JOAN MELROD, MPH

Ms. Steinberg is the program coordinator for health education and training at the Los Angeles Homeless Health Care Project. Ms. Wellman is a health educator for the Los Angeles County Department of Health Services' Child Health Disability Prevention Program. Ms. Melrod is a health educator and media specialist for the Los Angeles County Department of Health Services' STD Education Program.

Their proposal won the 1990 Secretary's Award for Innovations in Health Promotion and Disease Prevention third prize. The contest is sponsored by the Department of Health and Human Services and administered by the Health Resources and Services Administration, in cooperation with the Federation of Associations of Schools of the Health Professions. The entry was submitted by the University of California at Los Angeles, School of Public Health.

Tearsheet requests to Jane K. Steinberg, MPH, Los Angeles Homeless Health Care Project, 1010 S. Flower St., No. 500, Los Angeles, CA 90015.

Synopsis

Despite increases in national rates of sexually transmitted disease (STD), surveys indicate that medical students generally lack programs to train them in STD prevention techniques and in counsel-

ing patients about STD. The authors of this proposal investigated STD education for medical students at the University of California at Los Angeles and propose a project to involve third-year medical students in STD prevention techniques during their STD-clinic rotation. The long-term goal is to decrease the incidence and prevalence of STD. The immediate aims are to increase medical students' knowledge of STD prevention and to help them develop the communication skills necessary to effectively counsel patients about STD.

Interventions would consist of a series of lectures and workshops using audiovisual aids, small group discussions, and role playing, and would be conducted by health educators and guest lecturers. A quasi-experimental research design would be used in testing the effectiveness of the project in two experimental and two control groups involving a total of 80 third-year medical students. The first intervention would be a 1-week lecture series. Written tests would be given before and after the first intervention to measure the baseline of the students' knowledge of STD prevention methods. The second intervention would be a 1-week workshop series. Students' interviews with patients would be videotaped before and after the second intervention so that the interviewer's communication skills may be assessed and compared. Sets of interventions would be scheduled for the fall of 1990 and the spring of 1991. Six months after the completion of the project, a followup questionnaire would be given to evaluate the project's overall effectiveness.

ONE OF THE MAJOR PUBLIC HEALTH OBJECTIVES is the prevention and control of sexually transmitted disease (STD) (1, 2). However, despite the attention and resources directed to the problem, the incidence and prevalence of STD are steadily increasing in the United States, spreading rapidly in cities and rural areas, and they show no signs of slackening. STD falls hardest on the young and the poor, especially urban teenagers and young adults, who engage in sex earlier and with more partners than in the past (3).

The magnitude of the problem in Los Angeles County, CA, is evidenced by the fact that reported cases of all stages of syphilis increased from 24 per 100,000 persons in 1985 to an estimated 55 per 100,000 in 1989. By 1994, an estimated 100,000

women will become infertile because of untreated syphilis infection, and thousands of infants will become infected through birth (4). The incidence of 140 cases of penicillinase-producing *Neisseria gonorrhoeae* (PPNG), strains resistant to penicillin, in 1982 increased to 2,200 in 1988 (4). Untreated PPNG often results in pelvic inflammatory disease and sterility. The number of physician visits for genital warts has increased sevenfold since 1966. About 750,000 cases are diagnosed annually (4). Untreated genital warts are known to increase a woman's risk for cervical cancer. The rates of STD in Los Angeles County indicate that a growing number of infants, youth, and women are contributing to overall STD morbidity.

Nationwide, about 12 million persons are likely

to develop new cases of STD within a year, all preventable, as a result of the disease not having been detected or simply for lack of treatment (5).

Nearly half of all physicians will encounter STD-infected patients in the course of their practice, most likely in the fields of dermatology, emergency medicine, family medicine, general medicine, infectious diseases, obstetrics and gynecology, adolescent pediatrics, proctology, and urology (6).

According to one Los Angeles County physician, programs to train medical students and physicians in STD prevention and counseling are crucial to reducing the incidence of STD among their patients (personal communication, Deborah Cohen, MD, Los Angeles County-University of Southern California Hospital, December 20, 1990). Nearly 44 percent of all medical schools in the United States have no clinical training program in STD prevention and counseling (7), however. Of 127 medical schools surveyed in 1982, 54 percent had no hospital or health department-based STD clinic for training students, and 70 percent offered no STD clinical training, leaving 62,000 students without such specialized clinical training. Where available, clinical training programs involved a minority of the class, a mean of 30 students, and tended to be brief, a mean of 6 hours duration (8).

Medical school instruction in venereology has declined during the last 15 years largely because of decreases in the incidence of syphilis during the 1970s (8). When an increase in syphilis occurred during the late 1980s, many physicians were inadequately trained in effective diagnosis, treatment, and counseling of STD patients (personal communication, Deborah Cohen, MD, Los Angeles County-University of Southern California Hospital, December 20, 1990).

At the same time, Federal and State funds for STD control have been shifted to projects involving HIV infection and the acquired immunodeficiency syndrome (AIDS) epidemic. Many health workers and researchers who were trained in and working in the area of STD were redirected to the AIDS effort (4), resulting in increasing numbers of cases of STD going undetected or untreated (personal communication, Deborah Cohen, MD, Los Angeles County-University of Southern California Hospital, December 20, 1990).

A major deficiency in medical education involving STD is a lack of training in communication skills necessary for physicians to teach prevention techniques to patients and counsel them on problems arising from infection (9). Medical students

'A major deficiency in medical education involving STD is a lack of training in communication skills necessary for physicians to teach prevention techniques to patients and counsel them on problems arising from infection.'

commonly demonstrate in their interviewing practices a reluctance to inquire into relevant psychosocial aspects of the patient's condition (9). The physician treating the STD patient needs to be able to communicate effectively to elicit responses that enable him or her to determine the patient's disease risk factors. Effective communication skills are important in providing information about prevention methods to reduce the spread of disease. Korsch and coworkers discussed how a patient's perception of the physician as having good communication skills was consistently associated with increased satisfaction and compliance with prescribed regimens (10).

Objectives

The project is designed to enhance the STD prevention and counseling techniques of medical students in their third year at the University of California at Los Angeles (UCLA) School of Medicine. Immediate objectives are for

- 90 percent of program participants to achieve a 75 percent or higher score on an assessment of their communication skills during a videotaped interview held after the 1-week workshop series.
- 90 percent of the program participants to achieve a 75 percent or higher score on a posttest questionnaire given 3 days after the final intervention. The questionnaire would measure their knowledge of STD preventive measures.

Methodology

Interventions would be held at the Los Angeles Free Clinic during the fall and spring semesters. The interventions are to consist of a 1-week lecture series and a 1-week workshop series, each with two health educators as facilitators. The workshop series would be 2 hours in length each morning. The planned sequence of activities is

Lecture 1: *Overview of STDs*. Incidence, preva-

Test Administered Before and After the Medical Student's STD Clinic Rotation

1. Name four safer sex measures that sexually active persons can engage in.
2. List three advantages of condoms.
3. Name four features to look for when purchasing a condom.
4. Why is it better to use a lubricated condom?
5. Where should condoms not be stored and why?
6. What is the function of nonoxynol-9?
7. True or false: It is essential that patients attending STD clinics understand that the information they offer will be kept confidential.
8. List four steps you would take to encourage a patient to use a condom.
9. If a patient tells you that he or she has anonymous contacts, one night stands, group sex, or multiple partners with inconsistent use of condoms, how often should he or she be screened for STD, (a) every 1 to 3 months, (b) every 3 to 6 months, or (c) every 6 to 12 months?
10. Which of the following condom features are the more effective in preventing STD, (a) latex, (b) lubricated, (c) lambskin, and (d) nonoxynol-9?
11. Which of the following are low-risk sex practices, (a) dry kissing without having open sores, (b) masturbation alone or with partner, (c) caressing, (d) massage, or (e) all of the above?
12. Studies have found that when counseling a patient certain words or phrases are more appropriate to use than others. Which words and phrases are most appropriate, (a) are you homosexual, (b) are you bisexual, (c) do you engage in sexual activity with men, (d) do you engage in sexual activity with women, (e) do you engage in sexual activity with both men and women, (f) are you gay, (g) do you have a sexual contact, (h) partner, (i) boyfriend, (j) girlfriend, (k) husband, (l) wife?
13. List eight sexually transmitted diseases and give their symptoms for men and for women.

Correct answers:

1. Partner communication, reduce number of partners, low-risk sex (mutual masturbation, caressing, massage, dry kissing without open sores), avoid exchange of body fluids, regular checkups, inspect partner's genitals, wash genitals before and after sexual contact, use spermicide, condom usage
2. Available without prescription, no harmful side effects, tidy because semen is contained
3. Lubricated (as opposed to nonlubricated), reservoir tip, latex rather than lambskin, contains spermicide
4. Less of chance of breaking the condom when it is lubricated
5. Condoms should not be stored in hot places because they deteriorate faster
6. Nonoxynol-9 kills the AIDS virus
7. True
8. Desensitize the patient, offer limited amount of specific information, explicitly endorse the use of condoms, rehearse specific scenarios with the patient, provide behavioral scripts, suggest gradual practice, identify alternatives to unprotected intercourse
9. A
10. A, B, D
11. E
12. C, D, E, G, H
13. Syphilis, gonorrhea, AIDS, herpes simplex II, chlamydia, genital warts, trichomoniasis, gardnerella vaginalis, moniliasis, nongonococcal urethritis, viral hepatitis, pubic lice

lence, modes of transmission, symptoms, complications, diagnosis, and treatment of 13 diseases, briefly discussed

Lecture 2: *Prevention of STD through safer sex practices.* In-depth discussion of safer sex methods, including proper condom use, communication with partner, and reduced number of partners

Lecture 3: *Everything you want to know about condoms.* Discussion of advantages and disadvantages, seven steps to encourage a partner to use a condom, demonstration of how to teach patients to use a condom properly, and an informational videotape on principles of condom use

Lecture 4: *Basic communication variables and facts to consider when interviewing a patient.* Consideration of 16 communication variables (11) in the clinical interview, such as seating arrange-

ments, eye contact, and use of silence. Two guest speakers from the Los Angeles County Health Department discuss methods for communicating about sexuality with patients from different cultures. Facts to consider when taking a sexual history are discussed, such as level of sexual activity, history of STD, patient's knowledge of STD and how the disease was acquired, risky behaviors, and knowledge about condom use.

Lecture 5: *The patient-physician relationship in the management of STD.* Discussion of patient's sexual preferences and behaviors, failure of treatment, case reporting, confidentiality issues, counseling partners, and review of the previous four lectures.

Workshop 1: *Values clarification exercise.* Focuses on identifying students' feelings about their

own sexuality and identifying discrepancies between intellectual and subjective reactions that may impact upon effective communication with patients. Students are placed in groups and instructed to react to a set of topics related to sexuality, such as homosexuality and abortion. Each person is asked to react or pass.

Workshop 2: *Brainstorming exercise.* The exercise tries to make students comfortable with sex-related language that is initially foreign or uncomfortable that they may encounter when working with STD patients. Students are divided into groups and with the assistance of the facilitators discuss a list of terms related to sex, such as street language terms referring to sexual activity or anatomy.

Workshop 3: *Videotaped session and critique.* Students watch a videotape of a physician counseling a patient with STD using an appropriate communication style and discussing preventive measures. After viewing the tape, each student appears in a video in which one role-plays the patient and another the physician. The student acting the part of the physician uses the communication skills discussed in lecture 4 in taking a STD history, discussing a diagnosis, and explaining preventive measures. The students exchange roles. Students view the videotapes, which are critiqued by other students and the facilitator for feedback and reinforcement.

Project Implementation

Because of the high incidence and prevalence of STD in Los Angeles County, we investigated the extent of STD education at the UCLA School of Medicine to determine whether communication or prevention skills were taught and to examine students' communication skills and their ability to discuss prevention methods with patients. All first-year medical students take a behavioral science course focusing on issues of communication about sexuality as it relates to sexual dysfunctions. Communication with patients about STD was not emphasized in the curriculum (personal observation, 1989). Microbiology, pathology and immunology are required courses for all second year students. Diagnosis and treatment aspects of STD are emphasized, with little instruction on the prevention or communication skills used in counseling STD patients (personal communication, Lydia Lopez, Clinic Coordinator and UCLA Liaison, STD Clinic, Los Angeles Free Clinic, November 1989).

During their third year, about half of the students take an elective medical course that can,

Evaluator's Scale for Rating 16 Communication Variables on a Scale of 1 to 4

1. Beginning of interview: poor to positive and smooth
 2. Seating arrangement: closed to open
 3. Body posture: bad to good
 4. Eye contact: inappropriate or excessive to appropriate
 5. Interruptions: frequent to none
 6. Use of facilitation: did not use to frequent use
 7. Maintaining relevance: none to kept patient to relevant matter
 8. Psychosocial and cultural concerns: did not cover to covered concerns
 9. Empathy: no empathic statements to frequent use of empathic statements
 10. Use of silence: inappropriate to appropriate use of silence
 11. Personal and social: avoided personal issues to did not avoid personal issues
 12. Verbal or nonverbal leads: failed to pick up leads to picked up leads
 13. Warmth: did not accept patient as a person to accepted patient as a person
 14. Question style: inappropriate question style to good question style
 15. Clarity: lack of clarification to good clarification
 16. End of interview: abrupt or imprecise to smooth and definite
-

depending on clinic rotations that involve STD, such as dermatology and obstetrics and gynecology, cover STD diagnosis and treatment (personal communication, Lydia Lopez, Clinic Coordinator and UCLA Liaison, STD Clinic, Los Angeles Free Clinic, November 1989). An STD clinic elective at the Los Angeles Free Clinic gave students an opportunity to work exclusively the clinic's STD patients.

Our project would be directed to 40 third-year students. The intervention would be a pilot project implemented and evaluated at the STD clinic at the Los Angeles Free Clinic, which serves predominantly a low-income, multi-ethnic population residing in Los Angeles County. The clinic is an appropriate site because health clinics are often the only place where those at highest risk for STD can get sex education (12).

The clinic environment is important because the students can immediately apply the communication skills that they have learned. Depending on the number of clinic patients and constraints on students' time, each student will be involved in STD counseling with about 50 patients. We have permis-

Checklist for Course Content, Lectures 1 Through 5

Lecture 1, overview: Time began, time ended, number of students. Syphilis, gonorrhea, AIDS, herpes simplex II, chlamydia, genital warts, trichomoniasis, gardnerella vaginalis, moniliasis, nongonococcal urethritis, viral hepatitis, and pubic lice

Lecture 2, safer-sex practices: Time began, time ended, number of students. Knowing the partner's sex history, reducing the number of sex partners, using low-risk sex practices, avoiding exchange of body fluids, knowing the importance of regular check-ups, inspecting the partner's genitals, washing genitals before and after sex, using spermicide, using condoms

Lecture 3, condoms: Time began, time ended, number of students. History, how condoms prevent transmission of sperm, advantages, disadvantages, shared responsibility, film "How to Be a Better Lover," use of model penis, seven steps to encourage condom use (desensitizing the patient, offering a limited amount of specific information, explicitly endorsing the use, rehearsing specific scenarios, providing behavioral scripts, suggesting gradual practice, and alternatives to unprotected intercourse)

Lecture 4, basic communication variables: Time began, time ended, number of students. Beginning of interview, seating arrangements, body posture, eye contact, interruptions, use of facilitation, maintaining relevance, psychosocial and cultural sensitivity, empathy, use of silence, personal and social issues, verbal and nonverbal cues, warmth, question style, clarity, end of interview, and facts to consider when taking a STD history (baseline level of sexual activity, history of specific STDs, knowledge of specific STDs and how acquired, participation in sexual activities that increase risk, and knowledge about condoms)

Lecture 5, patient-physician relationship: Time began, time ended, number of students. Patient's sexual preferences and behaviors, treatment failure, recidivism, case reporting, confidentiality, dealing with partners, and review

'The mounting incidence of STD in Los Angeles County, coupled with deficiencies in teaching communication skills and prevention methods to medical students, justifies the proposal to increase STD education.'

sion from a medical school administrator and the director of the free clinic to implement the project on a 1-year trial basis as a component of the STD clinic elective. A 12-month project budget of \$80,130 is shown.

<i>Category</i>	<i>Cost</i>
Full time principal investigator.....	\$32,000
Health educators, 2 part time at \$16,000	32,000
Consultants and support: 1 graduate student (video), 1 clerical, 2 evaluators, 1 biostatistician	7,000
Equipment and supplies:	
Computer and software.....	3,500
Video supplies: VCR, video camera, tripod, tapes, monitor.....	1,775
File cabinet	200
Offices supplies.....	300
Photocopying, syllabus, evaluation forms, tests	500
Rental, sex education films	30
Program supplies	75
Postage.....	50
Incentives for patients completing evaluations	2,000
Telephone.....	700
Total.....	<u>\$80,130</u>

Summary of Evaluation Methods

A pretest-posttest, nonequivalent control group design will be used. The experimental group would receive written and video pretests, 1 week of lectures, a written posttest, 1 week of workshops, a video posttest, and 2 weeks with patients and laboratory work. The control group would receive laboratory and pharmacology rotations in place of the STD lectures and workshops.

A written pretest and videotape will be issued to each of 80 students on the first day of the rotation to assess the baseline of their knowledge of STD prevention methods and communication skills. The written test to be given to both the experimental and the control groups during their respective orientations is shown in the box on page 000. After completing the pretest, the students will be videotaped for 10 minutes while they counsel another student who plays the role of a patient with STD.

At the end of the 1-week lecture series, the experimental group will repeat the pretest to assess changes in their knowledge of STD prevention methods. The control group will repeat the pretest after their first 2 weeks of the rotation. Their time will be spent in full-time laboratory work with no patient contact to control for bias that could result from control group exposure to patients. The experimental group will devote half-time to seeing patients and the other half to laboratory work.

A videotaped posttest will be used to assess change in students' communication skills. The

experimental group will be videotaped on the Monday following the last workshop (the beginning of the third week of rotation). The control group will be videotaped on the Monday of their third week.

In order to evaluate the videotapes, two evaluators will be trained to assess each communication variable that was discussed in lecture 4. The evaluator's rating scale is shown in the box on page 000. Each variable will be rated on a four-point scale that will be tabulated by a biostatistician. Lecture, workshop, and teacher evaluations will be completed by the experimental group after the program to assess their effectiveness and student satisfaction with the program. The results will be tabulated by the biostatistician and used by the health educators to improve the curriculum.

Based on discussions with professors in the School of Medicine, the researchers expect that 90 percent of the students will attend four out of five lectures and 90 percent will attend four out of five workshops. Because of this, attendance will be taken for each lecture and workshop session.

At the beginning of each lecture, students will be given an outline of the day's activities. The outline will be returned after the lecture to minimize contamination among the second experimental group. To ensure that the lectures and workshops are delivered according to the plan, the checklist will be provided for the health educator for each activity as it is conducted in class. The checklist for the content of the course is shown in the box on page 000.

A patient evaluation form will be given each clinic patient before being seen by a student who participated in the intervention. One side of the form is in English and the other in Spanish. Patients will be asked to rate the student's effectiveness in communication and in discussing preventive measures. Six months after the rotation, a followup evaluation form will be sent asking the students to assess the usefulness of the methods they learned about preventive and communication skills in their other rotations.

Because almost half of all physicians will encounter STD patients in their practices (5), the proposed intervention to expected to have high relevance for medical students. Selection bias may be a factor in the program because it will involve students who want to work with STD patients and in a clinic setting, rather than those who do not. Medical students' time restraints may be a limiting factor as the program would be an addition to the curriculum. This may be partly offset by offering

only components of the lecture and workshop series.

The demanding schedules of medical students may lower the response rate for the questionnaires, but followup telephone calls will be made to nonrespondents. Based on a discussion with the medical school registrar's office, we expect to reach 90 percent of all program participants by mail or telephone using an updated medical student directory.

Performance on the posttest video would be rated using the interaction scale described by Verbi and coworkers (13), which measures communication skills. Each component to be measured, such as body posture, will be scored between 1 and 4, with a total of 64 possible points. Student performance on the posttest questionnaire that assesses knowledge of prevention methods will be measured by the number of correct responses on each questionnaire, with one point for each correct answer.

The mounting incidence of STD in Los Angeles County, coupled with deficiencies in teaching communication skills and prevention methods to medical students, justifies the proposal to strengthen STD education. An innovative program that combines these two important but undervalued skills does not exist elsewhere in the UCLA School of Medicine. Since training in communication skills and preventive techniques is valuable to physicians in all fields of medicine, the program could lead to formal integration into the curriculum. The benefits of such a program could help reduce the incidence of STD, enabling many people to improve the quality of their lives and be more productive members of society.

References

1. Public Health Service: Promoting health/preventing disease: objectives for the nation. Office of the Assistant Secretary for Health. U.S. Government Printing Office, Washington, DC, 1980, pp. 25-29.
2. Public Health Service: Healthy people 2000: national health promotion and disease prevention objectives. Conference edition. Office of the Assistant Secretary for Health. U.S. Government Printing Office, Washington, DC, 1990, pp. 493-508.
3. Scott, J.: Young, poor suffer silent epidemic. Los Angeles Times, Sept. 4, 1989, p. 1.
4. County of Los Angeles (CA): STD fact sheet. Department of Health Services, 1988.
5. Blount, J.: Compilation from CDC statistics, 1987. Centers for Disease Control, Center for Prevention Services, STD. Atlanta, GA, 1989.
6. Margolis, S.: Initiation of the sexually transmitted diseases prevention training program. Sex Transm Dis 8: 87-88 (1981).

7. Centers for Disease Control: Project to increase STD education in schools of medicine. Associated schools of public health cooperative agreement internship proposal to Center for Prevention Services, Division of Sexually Transmitted Diseases, 1988.
8. Stamm, W. E., Kaetz, S. K., and Holmes, K. K.: Clinical training in venereology in the United States and Canada. *JAMA* 248: 2020-2024, Oct. 22/29, 1982.
9. Evans, B. J., and Stanley, R. O.: Lectures and skills workshops as teaching formats in a history-taking skills course for medical students. *Med Educ* 23: 364-370 (1989).
10. Roter, D. C.: Participation in the patient/provider interaction: effects of patient question-asking on the quality of interaction, satisfaction, and compliance. *Health Educ Monogr*: 281-315 (1977).
11. Andrist, L. C.: Taking a sex history and educating clients about safe sex. *Nurs Clin North Am* 23: 959-973 (1988).
12. Garcia, K. J.: Experts see disaster in family planning cutbacks. *Los Angeles Times*, Nov. 29, 1989, p. 1-B.
13. Verby, J. E., Holden, P., and Davis, R. H.: Peer review of consultations in primary care: the use of audiovisual recordings. *BMJ* 1: 1686-1688 (1979).

ABSTRACTS OF SEMIFINALISTS' PAPERS

Prevention of Violence Among Elementary and High School Students

Michelle J. Staples-Horne, MD

This proposal focuses on the prevention of interpersonal assaultive violence, specifically fighting, among students from kindergarten through 12th grade, and it excludes sexual assault, child abuse, and self-inflicted injuries.

Early fight behavior may be a predictor of future violent behavior, even homicide, which is the second leading cause of mortality in the overall 15-34 age group and the leading cause of death among black men in that same age group.

The purpose of the project is to determine the fight prevalence among this school age study group and to introduce intervention strategies to reduce the prevalence of fighting. These strategies include a behavior modification and peer review program and violence counseling at a school-based clinic. Long-range followup of student participants is also recommended to determine future violence-related law violations.

School suspension records and incidence reports by school staff members would be used to determine fight prevalence at each school and to identify those students involved. Questionnaires would be completed by all students to determine the prevalence of fighting that occurs outside school. The location, circumstances, outcome of the fight, relationship of the participants, the involvement of weapons or drugs, the availability of weapons, and weapon carrying practices would be identified in each instance.

In a pilot study of a small school system, it was found that high school students receiving free or reduced-price lunches (as an indicator of low income status) had significantly higher fight prevalence than the general student population. And there was as much as 10 times the fight prevalence among students enrolled in remedial study programs as among those in regular classes. There were also notable fight peaks in grades six and nine that correlated with entry into what is variously called middle, intermediate, or junior high school and high school.

Behavior modification would be initiated with even the youngest students attending kindergarten. Role playing to introduce the child to alternative methods of dealing with confrontation would be utilized at all grade levels. The role playing model would be incorporated into time assigned for health or physical education. The goal would be to introduce students not only to alternatives to fighting but to reinforce the value that fighting is unacceptable behavior.

Students in fifth grade and above would establish peer review boards in a mock judicial system to hear cases of disputes between students, whether they occur at school or in the community. These peer review boards would also hear cases in which an actual fight had occurred. In this way, students involved in fights would risk peer disapproval and placement on peer isolation. Students would be relied upon to enforce this isolation which would reemphasize that fighting is unacceptable behavior. School administrative action for fighting would still be enforceable in whatever form school policy commands.

In addition to providing sports physi-

cals, information on sexually transmitted diseases, family planning, and drug awareness, the school clinic would provide violence counseling and activities to increase student self-esteem. Clinics would be staffed by health department employees or through university affiliations.

Cost of the project is estimated to be \$125,320—\$30,000 for a full-time staff psychologist to develop and implement behavior modification, violence counseling, and self-esteem, train school staff members in violence intervention, and organize and supervise the peer review program; \$10,320 for a part time clerical worker to maintain files and data collection from school suspensions and questionnaires and review court and police records for long range followup; and \$85,000 for the renovation of existing classrooms or portable trailers into a school-based health clinic. The cost of the clinic could be covered by grants, universities, or public health departments, or all three.

Entry submitted by the Department of Community Health and Preventive Medicine, Morehouse School of Medicine. Dr. Staples-Horne's address is College of Physicians and Surgeons, Columbia University, Department of Pediatrics, P.O. Box 20, 630 West 168th Street, New York, NY 10032.

The Hug of Life: Children Saving Children

Gregory G. Hall
Sheila M. Patterson

Children are often the victims of the unintentional injuries that account for