



West Meets East: A Kaiser Permanente Mid-Atlantic Experience in Providing Adolescent Health Care

Introduction

Morbidity and mortality among adolescents during the past two decades have changed so much that the teenage youth of today face a major health crisis. This crisis requires that services designed for adolescents undergo a fundamental change in emphasis to direct more services toward primary and secondary prevention of major health threats.

The Guidelines for Adolescent Preventive Services (GAPS)¹ outlines a comprehensive set of recommendations that provides a framework for organization and content of these preventive services. Unfortunately, despite an alarming collection of public health statistics and cautionary recommendations, comprehensive adolescent programs are not always easy to develop and operate successfully. Moreover, these programs require continuous monitoring and support and sometimes must be customized to the teens served.

The need for intervention is underscored by these recent statistics:

- Eighteen percent of all US youth 12 to 17 years of age consume nicotine products;²
- Use of steroid drugs among eighth- and tenth-grade students rose from 1.8% (in 1996) to 2.9% (in 1999);³
- Suicide is the third highest cause of death among young people aged 15 to 24 years;⁴
- In 1999, almost half of high school teens reported being sexually active;⁵
- Despite an increase in intervention programs implemented during the past five

years, the pregnancy rate among teens in Northern Virginia, in 1999, remained virtually unchanged at 24.1 per 1000 females.⁶

On the basis of these statistics, health care plans and health care providers have been seeking ways to develop a better care model to address these needs.

This article discusses development of specialized health care services for adolescents served by Kaiser Permanente (KP) in its Mid-Atlantic Region (KPMA). The article discusses prerequisites and barriers to effective implementation of these services and includes suggestions for ongoing improvement of care. (This review describes only one KP Region's experience and does not attempt to provide a comprehensive review of the literature; nonetheless, a suggested reading list is included in addition to the references cited in the text.)

Development of KP Services for Adolescents

In 1955, KP San Francisco opened one of the first teen clinics in the country (Charles Wibbelsman, MD, personal communication).³ In 1986, KP expanded that care by opening a comprehensive teen center in Panorama City, California. The center is staffed by a multidisciplinary team that includes nurses, physicians specializing in adolescent medicine, a health educator, and a social worker. The center maintains a collaborative relationship with the department of obstetrics and gynecology and monitors pregnant and high-risk teens to

assure compliance with established standards of health care delivery and confidentiality.

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The KP Panorama City teen clinic is a separate waiting and treatment area within the pediatrics department (C Daniel Fuster, MD, personal communication).^b The clinic has its own health care practitioners and staff as well as examination rooms decorated and stocked to accommodate adolescent patients. Clinicians are trained in adolescent medicine and have panels that support this age group. The adolescent clinic has a schedule dedicated routinely to teen patients but will also accommodate overflow pediatric patients when warranted. Development of the teen clinic was inspired by previously existing clinics.

Because of differences in facility size, patient demographics, available resources and other budgetary considerations, each center must develop its own model for delivery of adolescent health care. Currently, the KP Medical Care Program operates more than 20 adolescent health clinics in California. These teen clinics include freestanding or separate facilities with their own space and resources as well as clinicians who serve adolescent patients within a pediatric department. These clinicians may offer teen services during specified sessions.

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Table 1. Proportion (%) of available adolescent medicine appointments used in selected years in KPMA during development of teen program

Year	Number of used/available appointments (%) at center [no. of providers available]			
	1	2	3	4
1994	179/228 (78%) [1]	166/193 (86%) [1]	77/111 (69%) [1]	N/A [0]
1997	21/65 (32%) [0.5]	279/370 (75%) [2]	369/438(84%)[1.5]	132/152 (86%) [1]
2000	N/A [0]	42/52 (80%) [0.5]	373/730(51%)[0.5]	220/278 (79%) [1]

N/A = not applicable; no clinical specialist in adolescent medicine available at center

In the early 1990s, KP staff measured adolescents' satisfaction with both the health care delivered by physicians and the health care delivered at the teen clinic.⁷ These teens were compared with teens who had primary care providers and received care in a primary care department. Teens seen in a teen clinic were found substantially more likely to be satisfied with the care they received, and they also stated that they were more comfortable discussing sensitive issues.⁷

Before 1992, KPMA delivered health care to adolescents sporadically and informally: a few dedicated providers attempted to offer services to adolescents within an otherwise pediatric environment. In 1992, after working for several years in the KP Southern California Imperial Clinic of the Bellflower area, author Carol Forster, MD, identified a need for teen services within the KPMA Region and began to develop a teen clinic at her home center in Woodbridge, Virginia.

Translating the KP Bellflower model to KPMA was not easy: the patient demographics of the region indicated that a teen clinic located exclusively in one medical center would not serve a large portion of KPMA's teen population. Unless these teens lived near the medical center that contained the teen clinic, street traffic congestion and lack of adequate public transportation would prevent most teens from accessing the services. The scarcity

of trained, highly motivated clinicians interested in adolescent medicine also contributed to the decision to develop adolescent-oriented sessions within each medical center instead of providing care only at a central teen clinic.

Moreover, only five clinicians in the entire Northern Virginia area were identified as having sufficient motivation or training to provide specialized health care for adolescents, and these clinicians were already considered full-time staff of the department of pediatrics. Moving to a central location would also have required clinicians either to move or to endure a long commute to work. In addition, it would have left their home center short of staff. For these reasons, adolescent sessions were incorporated into the clinicians' schedules at their home medical centers so as to use existing examination rooms and clinical staff.

Dr Forster ensured that the teen clinic in Woodbridge closely mirrored those in California so that, like the other centers, the Woodbridge teen center would incorporate components essential to proper functioning of any teen clinic. These components include confidentiality, privacy, a "teen-friendly" environment, and availability of educational materials geared to the needs of adolescents. A dedicated staff nurse was able to monitor patients, contact them for follow-up care, and manage appointment requests. The close relationship between

nurse, doctor, and patient—and addition of a teen-only phone line—greatly assisted maintenance of confidentiality.

Within three years, the teen program at Woodbridge was expanded to several other centers and included organized sessions run by specialists in adolescent medicine. The expansion process was slowed by three factors: the need for sufficiently motivated adolescent medicine clinicians, the need to train staff, and the need to advertise the service to prospective patients. In 1995, KPMA had 250,000 Health Plan members and five clinicians trained in adolescent medicine; the region currently has 500,000 members—13% to 15% of whom are teens—and ten specialists in adolescent medicine.

Roadblocks to Success

When the KPMA teen program began, all appointments were booked by the staff and nurses at each clinical site. That procedure changed in 1995, when a central call center opened. Although intended to increase efficiency in providing services to teens, this structure did not consider several operational facts. An efficient, confidential teen program must include an easy, uncomplicated process of obtaining appointments with practitioners of adolescent medicine. The staff at the patient's home medical center is much more familiar with both the practitioners



and the patients and can quickly direct a teen patient to his or her adolescent medicine clinician. In addition, teen patients scheduling an appointment are more comfortable talking to someone they know. In a centralized appointment structure, the patient and scheduler are strangers. And the scheduler cannot personally know every clinician and his or her special skills, especially if staff turnover is high.

Percentage of appointments booked by adolescent patients at each teen center depends on number of appointments available and on availability of a clinician who practices adolescent medicine. As Table 1 shows, percentage of booked appointments dropped at each center when the provider of adolescent services was unavailable or had insufficient staff hours scheduled. This situation occurred in centers one and three in the year 2000, where both clinicians either left or had too few work hours scheduled. In addition, typical adolescent behavioral characteristics cause many booked appointments to be not kept, either because the problem has resolved or something the teen considered more pressing arose. Owing to the confidential nature of teen appointments, reminder notices or phone calls are rarely used, and this necessary situation increases the likelihood of missed appointments. Clinicians and other staff of teen clinics must therefore be vigilant with the appointment process, maintain availability of access, and devise creative ways to maintain confidentiality while ensuring that appointments are kept. For instance, cell phone numbers of teenaged patients can be used to remind them of their appointments or for other reasons (ie, instead of contacting them at the patient's residence number or ad-

dress). In a few rare cases, clinicians have called the teenaged patient's friend to notify the patient of laboratory results or to remind the patient about his or her follow-up appointments. These numbers are recorded in the computer callback system instead of in the permanent record.

Currently, providers of adolescent services within KPMA are also pediatric clinicians and hold teen clinics once, twice, or three times per week within the pediatrics department. Because most teen centers have only one clinician dedicated to providing services for teens, any pediatric staffing shortage may cause a need for increased pediatric coverage and thus result in cancellation of the adolescent clinics. Teen clinics may lack coverage also when their clinicians go on leave. In addition, because only one or two clinics can be offered each week, the teen clinic schedule may not fit the needs of individual patients for appointments. The KP California model allows for an adolescent medicine division, or subdepartment, that operates within the pediatrics department to treat teens continuously on a set schedule (Richard Boise, MD, personal communication).^c As in those KP California clinics that mainly serve pediatric patients, limitations on adolescent medicine scheduling in KPMA limit teens' access to specialized adolescent services. In the ideal scenario, the teen and pediatric schedules would be flexible and allow cross-coverage for each. Structuring the adolescent medicine subdepartment as a separate entity enables specially designated teen clinics and focuses advocacy for better teen care.

Another difficulty in developing teen clinics is that many estab-

lished pediatricians are not highly motivated to practice adolescent medicine. This resistance may result from lack of support or education in this specialty or to discomfort interacting with this age group. Pediatricians need more expertise in adolescent health care if adolescent medicine services are to be provided and the GAPS recommendations are to be realized. Medical and nursing schools are striving to increase their students' exposure to issues of adolescent health. We would like physicians and nurse practitioners to be actively recruited for participation in teen clinics as is done at some KP California facilities.

Essential Components of a Successful Adolescent Clinic

Developing a successful adolescent clinic requires a thorough understanding of the "generation gap" between pediatric and teenaged patients: teens are not interested in Humpty Dumpty; instead, they like Eminem. They do not watch Barney the Purple Dinosaur; they watch MTV. And herpes rash—not diaper rash—is likely to be one of their concerns.

Many basic components of a successful, effective teen clinic (eg, confidentiality, privacy, a "teen-friendly" environment, and availability of accurate health information) have been reviewed elsewhere and are outlined in detail in the GAPS guidelines.¹ In addition to these components, the KPMA team has found that other aspects are essential to success.

First, the local administration at each clinical site must support the project by providing space and materials as necessary and by allowing the practitioners of adolescent services to craft the teen pro-

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gram. Second, clinician schedules must include sufficient time to provide adolescent care, including adequate time per patient. This time must be reserved for care of teenaged patients and must not be available for use by the general pediatrics department for its nonteen patients. Indeed, conflicts regarding access are inevitable when pediatric and adolescent medicine departments share resources and one department asserts that its needs are greater than those of the other department.

In most situations—and especially during emergencies and traditionally busy times—clinicians are most willing to be flexible to meet the needs of patients, regardless of their age. The teen clinic could be filled prior to the day of the clinic, for example, by pediatric physical examinations. Having specially designated teen appointments may help with unused teen appointment slots becoming available to other pediatric patients on the day of the clinic. An adolescent medicine division (subdepartment within pediatrics) would strongly support and promote these appointments.

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Third, individual team members, nurses, aides, and clerical staff must promote the clinic, adhere to confidentiality and privacy guidelines, and expedite service to patients. Clerical and nursing staff at the clinic can also promote it by referring patients to the team primarily responsible for delivering adolescent health care.

In many respects, clinics in a pre-

paid medical care program are perfect sites for delivering adolescent health care. Because patients are not billed directly for services, the adolescent's care remains confidential. Private callback lines allow questions and results to be discussed privately between clinician and teen.

West Meets East: Resultant Modifications

After successfully identifying barriers to successful operation of a teen clinic, KPMA practitioners of adolescent medicine have modified their operational structure to improve access to adolescent care as well as attendance at scheduled appointments.

At each teen center, clinicians monitor the teen clinic schedule weekly. They refer teen patients whom they have seen during pediatric sessions to the teen clinic by word of mouth as well as by distributing and displaying flyers and brochures. Other office and clinical staff are also encouraged to refer teens to the clinic. Reminders are posted in clinical areas. Clinician schedules may sometimes be prospectively reviewed to identify prospective patients who were not aware of the clinic. Local school nurses are annually notified by phone and are sent flyers advertising the clinics. In addition, any teen who seeks a pregnancy test from the laboratory is quickly referred to a practitioner of adolescent medicine or to the staff nurse in the adolescent medicine department for advice and counseling—whether the test result is positive or not.

Using a computer tracking system, adolescent medicine practitioners and their nursing staffs keep a callback file to remind teens of the need for follow-up appoint-

ments, health assessment visits, immunization, Pap smears, and prescription refills.

Because most of the clinic rooms in KPMA are used primarily for pediatric patients, they are decorated accordingly. Staff in the adolescent medicine team “convert” those rooms before each teen session by swapping wall posters and by ensuring that appropriate teen health information is displayed for ready access. Unfortunately, no separate waiting rooms are available for our teens at this time.

The call center staff modified the appointment screen to add a pop-up message identifying the adolescent medicine clinic and available clinicians. Thus, whenever a teen calls for a medical appointment at that medical center, the call center staff is reminded of the availability of the adolescent appointments. Despite this reminder, adolescent patients are still not offered available teen appointments. Our task remains to educate the call center staff, as well as other KPMA clinicians about the importance of referring teens to the adolescent medicine clinic.

To improve access to the teen clinics, the adolescent medicine staff try to schedule adolescent sessions during hours when most teens are out of school (ie, late afternoon and evening). Adolescents over age 15 years can schedule their own appointments without parental permission.

Confidentiality is maintained by offering teens access to a separate “teen-only” callback line or callback nurse for obtaining laboratory results and further advice. Pap smear specimens and laboratory requests are specially marked to ensure that calls reporting results are not placed to the teen patient's residence if the patient has requested that the test



result be reported confidentially. All questionnaires are boldly marked as confidential, and the clinician reiterates this guarantee to the patient before beginning any interview with him or her.

Teens who seek birth control supplies (ie, condoms) are eligible to obtain special discounts, depending upon their insurance. Condom coupons are readily available in the examination rooms during all teen sessions and offer a discount rate on condoms purchased at the KP pharmacy. Depo-Provera may be prescribed so that the teen only has to pay the copay for the visit and medicine instead of the full prescription price. A three-month supply of oral contraceptives is filled to decrease overall cost to the teen. Unfortunately, the cost of contraceptives can be adversely affected by the member's benefit plan and can thus cause the teen to be less than fully compliant with the prescribed drug regimen.

In addition, because obstetric and gynecologic services are not available within the pediatric department, an obstetrician has been recruited at each medical center that conducts adolescent sessions.

This clinician serves as a resource person for the adolescent medicine practitioner. A nurse from the obstetrics and gynecology department also is used as a resource for pregnancy test counseling when no adolescent medicine practitioner is available.

In the past three years, the KPMA adolescent medicine team has become the largest group of teen moderators on KP's Web site, KPOnline. KPOnline moderators are trained clinicians who monitor the KPOnline discussion groups and answer questions from members about health care and behavioral issues. The KPMA team is seeking ways to improve the teen portion of the Web site to make it more "teen-friendly." Recently, the team surveyed teens to learn their perspective on how to improve the Web site.

In addition, many teens soon recognize the adolescent medicine practitioner as a resource. Despite the lack of available time scheduled for the teen clinic, once a relationship is established or teens become aware of the adolescent-directed services, the teens will seek out the adolescent medicine

practitioner during "pediatric" sessions. For this reason, many adolescents may find more satisfaction in the special skills of adolescent medicine practitioners than in any special decor or clinic.

Successes Achieved

One goal of improving health care for adolescents is to decrease unnecessary illness or injury as well as to improve overall physical and mental health via regular health checkups. Table 2 summarizes nonmedical hospitalization for a six-month period during 1995-1996. These hospital admissions included admission for pregnancy, delivery, or psychiatric inpatient treatment (eg, for drug abuse, suicidal inclination, depression). Of KP medical centers in Northern Virginia, center 2—site of the first formal adolescent program—had the lowest mean number of hospital admissions. Two other centers (one and three) also showed a slight decrease in this number after early 1995, when they began to offer teen sessions. We cannot explain the low incidence of nonmedical admissions among teenagers at center 5 at that

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Table 2. Monthly percentage^a of nonmedical hospital admissions among adolescent KPMA members at each of six KP teen centers during a six-month period spanning 1995-1996

Month	Teen centers					
	1 ^b	2 ^b	3 ^b	4	5	6
November 1995	50	64	100	100	71	100
December 1995	100	60	100	100	40	100
January 1996	57	33	80	100	50	100
February 1997	50	78	66	100	33	0
March 1998	100	58	76	50	63	78
April 1998	78	75	75	75	75	86
Mean for six months	72	61	83	87	55	77

Nonmedical hospital admissions include admission for pregnancy, delivery, antepartum care, depression, suicide, eating disorders, and drug abuse.

^aof all patients admitted to same hospital during same month

^bhad active adolescent teen services during this period

Barriers to effective delivery of adolescent care will probably always be present ...

Source of care primary/postpartum	No. with first pregnancy	No. with repeat pregnancy	No. (%) used postpartum birth control	No. (%) used postpartum birth control for ≥1 yr
Pediatric only	36	2	27 (75)	2 (5)
Combination/combination ^a	12	0	12 (100)	5 (41)
No primary/obstetrics	8	0	8 (100)	8 (100)
Teen clinic only	3	0	3 (100)	3 (100)
Total	59	2	44 (75)	18 (30)

^aCombination = patient seen by specialists in pediatric as well as teen care.

time (ie, when no adolescent sessions were offered at that center).

Another goal of adolescent health services is to decrease incidence of adolescent pregnancy. Although the birthrate among US teenagers dropped by about 13% during the past few years, the rate in Virginia dropped only by about 14%,⁸ and the rate in Northern Virginia was unchanged.⁶ Table 3 compares the pregnancy rate among teens seen in Northern Virginia KPMA clinics from January 2000 through December 2000. (During that period, 59 teen pregnancies were documented in the Northern Virginia area.) Across-column comparisons show types of primary care received by these teens before and after pregnancy. Not all patients completed pregnancy. Table 3 also shows percentage of patients who received some form of medically prescribed birth control after delivery and those who were continuing birth control at follow-up one year later. Obstetric care was not included as primary care unless that patient was seen only in the obstetrics and gynecology department after delivery and received no other health care from primary care resources.

Most adolescent KPMA members who became pregnant were seen

only by pediatric primary practitioners or received no primary care in the years before pregnancy. In addition, follow-up (which included visits for either obstetrics and gynecology or adolescent medicine care) also enhanced patients' compliance with continued use of prescribed oral contraceptives and affected the incidence of repeat pregnancy.

Conclusion

To address the increasing rate of high-risk behavior among our adolescent patients, to meet the GAPS guidelines, and to meet the Healthy

People 2010 goals, pediatric clinics must efficiently provide confidential health care for teenagers. Adolescent health care is a necessary service and can prevent unnecessary health care costs from injury, pregnancy, addiction, and other causes. However, caring for adolescents is not easy and requires ongoing commitment. Barriers to effective delivery of adolescent care will probably always be present, and each clinic must find ways to circumvent these barriers.

In addition, additional specialized training must be offered—and perhaps mandated—for other pe-

Practice Tips

Basic components of a successful, effective teen clinic include confidentiality, privacy, a "teen-friendly" environment, and availability of accurate health information.

Local administration at each clinical site must support the project by providing space and materials.

Clinician schedules must include sufficient time to provide adolescent care, including adequate time per patient.

Convert rooms before each teen session by swapping wall posters and by ensuring that appropriate teen health information is displayed.

Staff try to schedule adolescent sessions during hours when most teens are out of school.

Condom coupons are readily available in the examination rooms during all teen sessions.

Improve the teen portion of the Web site to make it more "teen-friendly."

Additional specialized training must be offered for other pediatric providers.



diatric providers so that cross-coverage is available when a practitioner of adolescent medicine is not available. Each region and clinic within KP will have to make additional changes in the structure and operation of their clinics on the basis of their own resources and needs.

High-quality adolescent health care can be provided within a busy pediatric clinic as a division, or subdepartment, within the pediatrics department. Indeed, the cost of constructing a special teen facility with its own space and trained staff would be prohibitive. By using existing space and interested staff, a medical center can add one or more adolescent sessions to its operations. Even in strictly economic terms, the money saved by preventing one unintended teen pregnancy, one suicide, or one trauma resulting from high-risk behavior would far exceed the work involved. Although incorporating an adolescent clinical session requires little money, restructuring does require work, thoughtful planning, and a substantial amount of ongoing support from medical center administration.

The KPMA adolescent medicine team is continually working to recruit additional adolescent medicine specialists and to retain existing teen services. Our efforts are evidently worthwhile, and we have enjoyed some success. We know that both vigilance and ongoing responsible planning will be necessary if we are to continue providing specialized services to our adolescent patients. But with the success we have realized and with an ongoing commitment to provide adolescent care, we plan to continue improving and expanding that care. ♦

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