Experience With an Adolescent Health Care Program

The program of the University of Rochester School of Medicine and Dentistry began in 1962 as a clinic for adolescents and was later expanded to include a maternity project and a community drop-in center

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THE ADOLESCENT PROGRAM of the University of Rochester School of Medicine and Dentistry was started in late 1962. It is now sponsored by the departments of pediatrics, psychiatry, medicine, and obstetrics and gynecology, and it is directed by a pediatrician who is administratively responsible to the chairman of each of these departments. Two major activities of the program are the Adolescent Clinic and the Rochester Adolescent Maternity Project (RAMP), both located at the Strong Memorial Hospital.

The major goal of the Adolescent Program is to teach adolescent medicine to trainees in various health professions—postresidency fellows, house staff, and medical, nursing, psychology, and health education students—in a setting where diagnostic, medical, psychological, and social services are provided to teenagers and their families.

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The Adolescent Clinic

The philosophy of the clinic is that teenagers have unique health needs and, ideally, they should be seen in facilities that are separate from those serving adults or children and staffed by persons trained to work with adolescents.

Financing and staff. The clinic is a semi-autonomous, private group practice. Fees for service are collected from patients or directly from third-party agencies by a financial coordinator. These fees provide an annual average income of $10,000. Additionally, since 1965 a Federal grant for maternal and child health services adds about $60,000 a year to the operating budget. The grant money pays the salaries of four full-time staff members of the Adolescent Program—director, project nurse, project social worker, and secretary. The faculty from the sponsoring departments, except pediatrics, are paid for their teaching time by their departments. Thus, it is difficult to determine the cost per patient visit but, based on actual professional time spent with a patient, it is estimated at $40 for an average visit of 45 minutes.

The four full-time staff members plan the trainees' activities each week, and 10 full-time faculty members from the departments of pediatrics, psychiatry, and medicine assist with supervision of the trainees. Senior house officers from pediatrics supervise the less-experienced trainees, and these officers in turn receive consultation from the faculty.

Medical trainees participating in the clinic include fourth-year medical students who elect the clinic for their experience with ambulatory patients, one-half day a week for the academic year; house staff and fellows of the sponsoring departments; and graduate nursing students. Nonmedical trainees include students working for advanced degrees in counseling, social work, and psychology. The numbers of students and their extent of participation at the clinic during the academic year 1971-72 were as follows:

High participation (weekly)—5 fellows, 2 residents, 7 medical students, 4 nursing students, 2 counseling students, 1 psychology graduate student, 1 health aide, 3 medical students (elective);
Moderate participation (bimonthly)—3 residents, 4 interns;
Limited participation (on assignment), 4 times a year—8 interns.

Clinic services and operation. Requests for appointments for patients referred to the clinic are handled first by the clinic secretary and then by the senior social worker. The social worker arranges an appointment in the clinic and maintains contact with the family until a referral can be made to another source. The time between a telephone call to the clinic and the first visit ranges from several days to 3 weeks. Before the initial appointment, information describing the clinic and its operation is sent to the patients and their parents. The parents are requested to sign release forms that allow the clinic to send information to a patient's school, if necessary, and to return the forms before the teenager comes to the clinic.

Teenagers with acute psychiatric crises are referred directly to the psychiatric emergency department at the hospital, and those with severe, but nonacute, psychiatric symptoms are transferred directly to the Adolescent Psychiatry Clinic at the hospital. Patients with acute medical problems are sent to the hospital's pediatric emergency department. Some patients with immediate needs that are not acutely psychiatric or medical are seen by one of the full-time members of the Adolescent Clinic, often the fellow in adolescent medicine, or they are worked into the clinic schedule for that week. Patients with chronic conditions are given appointments for the clinic. Other sources of care to which patients might be referred are private physicians and community agencies such as community mental health centers. Thus, in addition to providing direct services, the Adolescent Clinic carries out a significant triage function.

An example of one type of patient seen is JP, a 14-year-old girl, who had experienced tachycardia. Examination, including a cardiac evaluation, revealed no organic basis for her symptoms. When questioned, JP stated that her symptoms occurred only when her stepfather's children visited the family; when the children left, so did her symptoms. JP also expressed concern about marital difficulties at home.

The names of the patient, parents, and siblings, age of the patient, address, school, reason for referral to the clinic, and referring source are entered on an intake card. Each patient is assigned to a trainee and a faculty member by the social worker and the secretary. Assignment of staff is determined by the patient's problem and the staff member's specialty. For example, a patient who is an underachiever in school may be initially evaluated by a trainee and a staff psychologist, whereas an adolescent complaining of abdominal pain may be evaluated by a trainee and a pediatrician.

The Adolescent Clinic is held weekly, on Monday from 5 to 8 pm. These sessions are well attended, partly because students and working papents are free in the evening. Teenagers usually come with parents on the first visit and then often return alone for followup visits. Some adolescents request an appointment for their first visit without their parents' knowledge, but the staff encourages them early in their therapy to at least inform their parents of their contact with the clinic.

Within a day after a teenager is seen at the Adolescent Clinic, the referring professional is informed that the patient had attended, and 3 months after initial visit, the director and social worker review that patient's chart and send a followup letter to the referring source.

Review of Clinic Data

A comparison was made of the information on the intake cards, including age, residence, reason for referral, and source of referral, of all patients admitted to the Adolescent Clinic from 1963 to 1966 and during 1973. The objectives of this comparison were to document the expansion of the clinic and to determine whether there were significant changes in geographic residences of patients as well as sources of referral.

During the first 3 years of the clinic, 247 new patients were seen. In 1963 there were only 17 new patients; by 1965 the number had increased to 111, and by 1973 it was 242. The breakdowns by age groups follow:

Age group (years)	*1963 to 1966*		*1973*	
	Number	*Percent*	*Number*	*Percent*
10 or under	32	13	2	1
11–14	113	46	94	39
15–18	100	40	131	54
19 or over	2	1	15	6
Total	247	100	242	100

From 1963 to 1966, 82 percent of the patients lived in the city of Rochester, N.Y., in contrast to 57 percent in 1973; this difference reflects a change in sources of referral. As shown in the following table, the major referral sources were the Monroe County Department of Social Services and the clinics at Strong Memorial Hospital during the earlier period. By 1973, however,

the number of referrals from schools in both the city and the county increased markedly, most probably as a result of the greater awareness among school personnel of resources for troubled adolescents. Community awareness of the Adolescent Program has also been enhanced through the efforts of staff members of the Adolescent Clinic and members of the School Health Program of the Department of Pediatrics *(1);* this is evidenced by a broader base of referrals to the program.

Source of referral	1963 to 1966		1973	
	Number	Percent	Number	Percent
Physicians	29	12	38	16
Clinics, Strong Memorial Hospital	132	54	82	34
Clinics, other hospitals	—	—	6	2
County department of social service	24	10	10	4
Agencies	12	5	28	11
Schools	6	2	48	20
Family	12	5	19	8
Other (peers, clergy)	31	13	9	4
Undetermined	11	4	2	1
Total	257	105	242	100

From 1963 to 1966, 2 referral sources were noted for 10 patients; in 1973, only 1 referral source was noted for each patient.

From 1963 to 1966, approximately 37 percent of the 247 patients had psychological problems compared with 70 percent of the 242 patients seen in 1973. The increased numbers of adolescents referred to our facility for psychological evaluation in 1973 indicates either *(a)* a change in the types of referral sources as a result of greater sensitivity among adults working with adolescents to what constitutes behavioral disturbance in this age group or *(b)* the availability of more local health centers for the physical care of teenagers. According to communications from referring sources, the Adolescent Clinic is sought by the community for evaluation of adolescents with primarily emotional concerns.

In 1973, of 1,717 appointments made for patients in the Adolescent Clinic, 1,183 were kept, 238 or 14 percent were canceled, and 296 or 17 percent were "no shows." Of the no shows, 57 or 20 percent were for the first appointment. The "show" rate (appointments kept and appointments canceled per total appointments made) seems reasonable, since adolescents generally are reluctant, for many reasons, to seek medical or psychological services.

At the Boston Children's Hospital Adolescent Clinic, from January 1956 to August 1958, 750 teenagers were seen consecutively by Williams *(2);* 57 percent had "organic" conditions and 43 percent had emotional problems. In a survey, reported in 1965, of 24 adolescent clinics, the 19 clinic directors who responded reported that 60 to 75 percent of all diagnoses were organic and 25 to 40 percent were emotional *(3).* In our Adolescent Program, however, the trend has been toward increasing numbers of patients with primarily emotional concerns and fewer patients with primarily organic conditions.

The Maternity Project

The second major activity of the program is the Rochester Adolescent Maternity Project (RAMP) which was started in 1969 by Marilyn Aten, RN, the project nurse for the Adolescent Clinic, and Harold Gabel, MD, a third-year resident in obstetrics-gynecology. RAMP provides comprehensive medical, psychological, and social services for pregnant teenagers and focuses on the preventive aspects of care. Each year an estimated 1,500 children are born to unwed teenagers in Monroe County, and currently RAMP is reaching fewer than 10 percent of these mothers.

RAMP-like programs are based on the recognition that pregnant teenagers experience more medical and psychosocial problems than do pregnant women in their twenties *(4–7).* Pregnant adolescents also have more academic and emotional problems than their nonpregnant peers *(4–6),* and they are frequently rejected by traditional social and educational institutions.

Pregnant youngsters who have low socioeconomic status and are nonwhite have more problems during pregnancy than do white women of higher socioeconomic levels. The incidence of toxemia in young mothers has been reported to range from 8 to 28 percent *(8).* Other medical complications of the adolescent mother are anemia, cephalopelvic disproportion, and excessive weight gain *(9).*

Prematurity rates of babies born to teenagers vary. One study indicated a prematurity rate of 23.4 percent in a series of 291 children born to nonwhite mothers under 14 years old *(10).* A prematurity rate (by weight) of 11.5 percent was reported from a special program for adolescent mothers in Syracuse, N.Y. *(4).* Prematurity incidence is approximately 7.2 percent of white newborns and 14 percent of nonwhite newborns in the general U.S. population *(11).* Respiratory distress syndrome and neonatal death are two other complications among children born to young mothers.

RAMP receives its major funding from the Rochester-Monroe County Youth Board, a Federal maternal-child health services grant, and third-party payments. Special funding helps to defray expenses for the program's psychological and social services. The 1973 operating budget was $120,000. The total cost per patient visit was approximately $39–$26 for medical care and $13 for social and psychological care.

RAMP has 3 full- and 12 part-time professional staff, including physicians, nurses, psychologists, and social workers. Volunteers also provide essential services, such as secretarial duties and counseling under the direct supervision of the project nurse.

In 1973, 48 percent of the referrals to RAMP were from clinics within the hospital, and the remainder from community-based groups (Family Planning and

Pregnancy Information, Planned Parenthood) and friends, and some patients were self-referred.

Teenagers are encouraged to ask someone to accompany them to the clinic for their first visit. Younger patients usually come with a parent or a worker from the Monroe County Department of Social Services, while older adolescents often are accompanied by their boyfriends. Some patients prefer to attend the clinic alone.

Each girl entering the RAMP program is evaluated initially by the nurse, the obstetrician, and the social worker. She discusses with either the nurse or social worker her decision to continue her pregnancy or to have an abortion. If she decides to have an abortion, she is helped in making the arrangements and receives supportive care during and after her hospitalization. If she wishes to continue her pregnancy, she is counseled about keeping the baby or adoption.

The pregnant adolescent is seen at the clinic twice a month, once by an obstetrician and once by a nurse. Each girl participates in group counseling during the first trimester. Individual counseling is given by the social worker when necessary. Structured classes, held by staff nurses, focus on pregnancy, labor, delivery, and pediatric care; all girls are required to attend in their last trimester.

The obstetrician focuses on the medical evaluation of the patient. The nurse functions a a health educator and evaluates the teenager for medical and psychological concerns. The nurse is the girl's one constant health provider, because the obstetrician who sees the girl in the clinic may not be present when she delivers.

When a teenager in labor is admitted to the hospital, personnel in the labor and delivery area call a RAMP nurse, who usually remains with the patient until she is delivered. A RAMP obstetrician delivers the baby. When neonatal problems are anticipated, a staff pediatrician is also present at delivery. Postpartum care in the hospital includes daily contact with the patient by one or more RAMP staff members, and contraception is discussed during this time. After the patient is discharged, a staff member visits her home to evaluate the status of both the mother and her newborn. The mother returns to RAMP for postpartum care, and she selects one of a number of health centers in the city for her infant's pediatric care.

RAMP Data

From October 1, 1972, to September 30, 1973, 2,413 appointments were made for RAMP patients. The "show" rate was 76 percent or 1,834 patients (1,665 or 69 percent of the appointments were kept, and 169 or 17 percent were canceled). During the same time period, 62 patients were delivered; 28 were 13 through 15 years old, and 34 were 16 through 18.

The average length of labor was 9 hours and 25 minutes. No neonatal deaths occurred among the 62 births. Fifty-nine of the infants were full term, and 3 were premature; 8 had fetal distress, but none had congenital defects. The average weight per infant was 6 pounds, 11 ounces (3,068 grams).

At Yale-New Haven Hospital, the average clinic labor of general-admission teenagers was 14 hours, but for teenagers in Yale's special program it was 6 hours *(8)*. In a special program for adolescents in Syracuse, the prematurity incidence was 11.5 percent (by weight), and the average birthweight was 6 pounds, 6 ounces *(4)*. Thus, for length of labor, prematurity rates, and birthweights, RAMP patients compare favorably with teenagers in other special programs.

A total of 171 patients received care in RAMP from the beginning of the program in 1969 to September 1, 1973. Among the 171 patients, 23 or 13 percent had repeat pregnancies within 2 to 30 months after delivery; 10 stated that they wanted another baby, 4 were married, 4 had experienced a previous spontaneous abortion or neonatal death, 8 had not used birth control measures, and 5 had experienced contraceptive failure. Three of the five girls who had contraceptive failure were using "loops" when they became pregnant, and two reported that they were taking birth control pills, but this was not documented. Seventeen of the 23 girls with repeat pregnancies carried them to term, and 6 had abortions.

RAMP has been providing gynecologic evaluation and contraceptive advice for nonpregnant patients since January 1973. This part of the program stresses preventive health care for teenagers and education of adolescents about their sexuality. Between January 1 and December 30, 1973, 46 patients received contraceptive counseling and gynecologic care in RAMP.

New Programs

The establishment of general medical services for teenagers is helpful in defining other areas of need for health care. In actually providing services for youth, the physician becomes aware of needs for specific services. For example, in our particular setting, we found that services for pregnant teenagers were inadequate, and out of this recognition grew RAMP.

We also found that there was a need for a community-based drop-in health center for teenagers. In addition, the staff was concerned about the care of drug-using youth in the Monroe County area. A request for a grant was submitted by the Adolescent Program and the Monroe County Mental Health Division to the New York State Narcotics' Addiction Control Commission (NACC), and the NACC granted support for a general medical-psychological community-based health center. The center, located near public transportation, is easily accessible to both suburban and city youth. Medical or psychological services, or both, are provided free of charge for teenagers.

Another program that is being developed is an adolescent inpatient unit in the new Strong Memorial Hospital, which will provide medical and psychological evaluations of in-hospital teenagers. Since the needs of hospitalized adolescents are different from those of

children and adults, teenagers need special facilities and staff for their care (*12*).

Plans for the future of the Adolescent Program include the formation of a community advisory group, including young people, to work with the Adolescent Program staff to define the health care needs of tenagers in the Rochester-Monroe County area. Meetings are being held with community agencies working with youth to explore delivery of services countywide to sexually active teenagers. Preliminary findings from these discussions reveal fragmentation of services, isolation of individual agencies, and little communication among existing groups about what individual programs are doing and what direction they are pursuing. Preliminary meetings of these health providers have highlighted the need for communitywide planning in providing services to youth to avoid duplication of services to certain groups and lack of care for others.

Discussion and Conclusion

A criticism of our Adolescent Program has been that our experiences in teaching and patient care have not been systematically evaluated. While student and faculty evaluations of the Adolescent Clinic have placed us high in teaching competence, nevertheless we have not specifically assessed on a "before-and-after" or controlled trial basis the effect of the clinic upon students. Concerning the clinical service, the staff believes that the program is succeeding in helping adolescents and their families by providing them with professional consultation. We realize, however, that such impressions often are grossly misleading.

As to why this program has placed little emphasis on research activities, we offer several reasons, not as excuses, but as possible explanations common to most such programs. First, many patients seen in the Adolescent Clinic have primarily social, school, or emotional problems. Evaluation of effectiveness of therapy and management is therefore particularly difficult since criteria for change are difficult to develop, and in this sense we share many of the evaluation problems characteristic of a psychiatry program. For instance, if a particular 16-year-old girl leaves home, do we look upon this as a breakdown of family communication and therefore a "therapeutic failure?" Or, has the girl finally reached the point of becoming independent enough to leave an intolerable family situation and is thus a "therapeutic success"? Second, the development of our Adolescent Program has been, at least to the staff, a series of administrative and clinical crises. The nuclear members of the staff never seem to be free, time-wise or emotionally, to devote themselves to long-term commitments to research. Third, the staff of the Adolescent Program have diverse professional backgrounds and philosophies of management. Although in theory such diversity would allow opportunities to compare clinical approaches, it also means that there is no single clinical approach to such problems as obesity, school phobia, or chronic physical illness. Finally, because the users of the clinic are an extremely heterogeneous group, there are not enough patients in any one category for study.

Nevertheless, these explanations do not detract from the need to study our health care delivery system for adolescents and their families. It is our conclusion that it is difficult for those deeply involved and committed in a program of health care to evaluate the effectiveness of that program. Therefore, we believe that evaluation should be conducted by personnel not engaged in the direct delivery of service.

The Adolescent Program at Rochester is in its 12th year of operation. It began as an Adolescent Clinic delivering general medical care and has developed additional programs for pregnant and sexually active teenagers, nonpregnant youth seeking contraceptive or gynecologic services, drug-using youth, and hospitalized teenagers. The major goal of the program is to train medical and paramedical professionals to provide direct care to teenagers. It is further hoped that professionals trained in the program will recognize where deficits currently exist in health care systems in providing service for teenagers and that they will take leadership in developing specific programs for adolescents in their communities.

The future of the program is directed toward the growth of its educational program, evaluation of current operations, definition of health care needs of teenagers locally and nationally, development of new facilities for youth, and consolidation of services where duplication exists.

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