Model Prenatal Program of Rush Medical College at St. Basil's Free Peoples Clinic, Chicago

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Synopsis

The lack of adequate prenatal and gynecological care for indigent women has reached crisis proportions. The situation is aggravated by the diminishing supply of primary care physicians who are willing to practice obstetrics in community settings. Added to this condition is the rapidly declining number of medical students seeking careers in the primary care field. The Rush Prenatal Program at St. Basil's Free Peoples Clinic on Chicago's south side addresses these problems by (a) delivering comprehensive prenatal care to poor and disadvantaged women; (b) providing a learning environment in which medical students are taught to be humane, culturally sensitive, and competent physicians through active involvement in patient management; and (c) creating an experience that reinforces the student's self-motivation to practice community-oriented primary care.

At the clinic 24 medical students, working in teams supervised by the three program physicians, maintain continuity of excellent prenatal care that follows the expectant mother from pregnancy through delivery and beyond. The Rush Prenatal Program, which has been initiated, organized, and managed by medical students, has evolved into a model of education and service that can be emulated at other institutions.

All participants in the program—students, faculty, patients, and community representatives—are being followed longitudinally as a method of assessing program efficacy. This collaborative effort between an academic medical center and a neighborhood clinic demonstrates that such a partnership is not only feasible but potentially cost effective and socially responsible.

OF ALL THE GROUPS in our society that are affected by the lack of health care, indigent women and children suffer most acutely (*1–4*). This problem is reflected in the 1989 high infant mortality rate—9.8 per 1,000 live births (*5,6*). The rate of 18.6 deaths per 1,000 live births for blacks puts us behind some 30 nations. The situation is worse in Chicago, where in 1989 the infant mortality rate was 11.7 overall and 22.6 for nonwhites—comparable to many Third World countries (*5*). In fact, the problem is even more severe than the infant mortality rates indicate. Low birth weight is a significant factor in neonatal mortality and morbidity (*6–8*). Abraham states in the Chicago Reporter (*9*):

> For each of the nearly 1,000 Chicago babies who die each year, public health officials estimate that three others are born with mental or physical disabilities that could have been avoided if their mothers had received better medical and social support during their pregnancies.

It is simplistic to assume that financial barriers are the only obstacle to adequate prenatal care for the population at risk (*1–3,6*). Other factors include a lack of neighborhood clinics with convenient hours, a shortage of primary care obstetricians and gynecologists, and a scarcity of physicians who are willing to accept patients who are on public aid. Some women who need adequate prenatal care are unaware of their need and the potential benefits of this care (*10,11*).

The problem is further intensified as the needs of this underserved population grow, and the supply of primary care physicians diminishes (*12–15*). A

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significant factor is in the scant opportunity available during traditional medical school curricula (*a*) to train physicians in the special knowledge and skills required for community-based ambulatory care, (*b*) to make them aware of the particular health needs of these women and children, and (*c*) to teach them to deal sensitively and understandingly with the special problems of disadvantaged patients from different cultural and ethnic backgrounds.

In sum, the inadequacy of prenatal care for the disadvantaged is partially the result of the lack of committed physicians to provide the care. Community-based clinics are needed to give quality care and also to function as training grounds for future primary care physicians. The Rush Prenatal Program at St. Basil's Free Peoples Clinic is such a place.

Literature Summary

Numerous proposals incorporate ways of improving access to health care, teaching health promotion and disease prevention at the community level, and addressing the appropriateness of contemporary medical education in preparing more humane and culturally responsive physicians (*16–20*). Community-oriented primary care represents one approach (*21–23*). Recognizing the special problems facing women and children, some programs focus on the delivery of preventive health care for this population (*24–26*).

It has been demonstrated that the lack of health insurance makes it unlikely that a woman will receive appropriate prenatal care (*1*). A 1985 study showed that 26 percent of women of reproductive age did not have insurance to cover maternity care (*27*). Access to prenatal care and outcome of pregnancy have been directly correlated, that is, comprehensive, quality prenatal care results in fewer complications and better deliveries for both mother and child (*6–8,25,26,28*).

In 1988, about 1 in 14 live births was a low birth weight baby (*28*). It is estimated that one of these babies can cost as much as $40,000 in hospital care; up to 16 percent of these infants carry lifelong handicaps requiring additional care at costs ranging from $6,000 to $37,000 for each year of life (*29*).

The number of primary care physicians and students prepared to fill these positions has dropped far below the critical level. Only about one-third of today's practicing physicians describe themselves as generalists, and the numbers who are preparing for this career are declining rapidly (*30*).

Project Objectives

In 1989, Rush's medical students, recognizing the need to expand existing community-based health care delivery to Chicago's inner-city disadvantaged population, established the primary care clinics project. This project was centered at St. Basil's Free Peoples Clinic, located in the basement of the church rectory on the south side of Chicago. St. Basil's patient population consists mainly of the unemployed poor and the working poor; it is about 80 percent black and 20 percent Hispanic. The prenatal program was initiated, organized, and run by medical students from Rush Medical College.

The program objectives are

1. to develop and reinforce among medical students, early in their education, the ability to become humane, culturally sensitive, and competent physicians through practical, hands-on experiences in a community clinic;
2. to provide free, high-quality gynecological care to all female patients and the same quality prenatal care to expectant mothers, including nutrition education, awareness about the consequences of smoking, the effects of alcohol and drugs, and information about sexually transmitted diseases;
3. to create a clinical setting that allows students to work closely with physicians in an environment that promotes personal, one-to-one training that facilitates the students' personal learning and development and stimulates their interest in a career in primary care.

Methodology

The Rush Prenatal Program is staffed by 24 medical students (first-year through fourth-year students) and three physicians, and it operates every other Tuesday night. First-year medical students are informed about the program in small

group discussions during orientation. More students apply than can be accommodated, and there is always a waiting list.

Participation is voluntary and students receive no academic credit. Each student commits 3 to 4 hours a night twice a month. One junior and one senior medical student form a team which is supervised by a physician. (To qualify as a senior, the student must have finished the obstetrical-gynecological rotation.)

The responsibility of the student teams is to explain to the patient their role as student-physicians, take the patient's history, perform the physical, present the findings to the physician, and actively participate in the patient's education. Students also learn technical skills such as drawing blood and doing a Papanicolaou's (Pap) test.

In the event that the patient needs additional tests, students arrange for them at our home institution, Rush Presbyterian St. Luke's Medical Center, and if possible, attend the procedure. The students also serve as patient advocates by steering the patients through the system. This involves keeping in touch with patients by phone or mail, helping them obtain the forms for public aid and for the Special Supplemental Food Program for Women, Infants, and Children (WIC), and scheduling appointments at the hospital. As the time of birth approaches, the mother knows she will meet her patient advocate team in the labor and delivery rooms.

Currently, three attending physicians coordinate this project and another 10 subspecialists participate as unpaid consultants for medical problems that require their expertise. The clinic physicians' responsibilities include supervising patient management, reviewing students' clinical assessments, discussing and establishing patient care plans with the students, serving as a resource for knowledge and techniques, and supervising the students during the delivery.

The patients are responsible for keeping all appointments, attending informal health education sessions held in the waiting room, asking questions, following recommendations, and adhering to the prenatal care plan. The academic medical center is responsible for providing 24 free deliveries per year, absorbing the costs of all laboratory work not covered by public aid, and providing taxi vouchers for patients to use at the time of delivery.

We, the authors, recruit new students and physicians, make sure new participants are properly trained and oriented to the clinic routine, serve as a resource for recruits, gather information for the data base, negotiate policy and procedures with the program administration, select and distribute instructional materials to patients, and obtain medical equipment for the clinic.

Significance of Project

A number of women and children from Chicago's inner-city are receiving much needed health care. Most are the working uninsured for whom a long wait at the county hospital means losing a day's pay. The program offers these patients evening hours and a comfortable waiting room that is also safe for children. Moreover, women are scheduled to see a physician with minimum waiting time.

This prenatal clinic also enhances the health of the community since patients encourage friends to come. Many return because they value the personal attention they receive. The students see patients outside the sterile hospital room. Since most women bring their children with them, the students observe, first-hand, the interaction between parent and children. Since the clinic is in the community, the students develop a real sense of how the patients live.

The students acknowledge the importance of continuity of care and the obligation they will face as practicing physicians. Concern about the growth and development of the child does not end with birth. Traditional medicine separates infant and mother by specialty whereas, in this program, students are encouraged to follow the infant on Thursday clinic nights staffed by Rush pediatricians and family practitioners.

The relationship between the student team and the pregnant women is especially meaningful. The woman, often single and young, comes to trust the students and feels comfortable asking questions. Since she feels a commitment to her student-physician, she is more apt to return for scheduled appointments and follow directions. We are beginning to observe a growing sense of self-worth and now deal with a more cooperative, healthy, and adherent patient.

This environment also provides an opportunity for students to experience the critical need for responsive and highly competent physicians in the obstetrical-gynecological field and the accompanying rewards of a career choice in this specialty. The physicians serve as true role models, and careers in primary care, obstetrics, and gynecology take on new dimensions.

Finally, we believe the Rush Prenatal Program, initiated by students, has evolved into a model of

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education and service in which medical students can learn how to deliver effective and empathetic health care to poor inner-city women and children at a minimal cost.

Innovations of Project

At the 1991 American Association of Medical Colleges annual conference in Washington, DC, we presented the Rush model of medical education through community service. Representatives from a number of medical schools indicated that they believed our programs could serve as models for other schools. They were especially impressed with the following components: (*a*) the program was student generated, that is, it evolved from the students' desire for real community involvement; (*b*) it combined community service with active learning (biomedical and psychosocial); (*c*) it appealed to one of the highest traditions in medicine—volunteerism; and (*d*) there were many other skills—organizational, interpersonal, writing, presenting, and so forth—that the students acquired as part of the participatory process.

Evaluation Methods

Evaluation of programs like ours is difficult but critical for measuring its success (and to continue its funding). Program achievements can best be assessed longitudinally by tracking participants over time in terms of a specific set of outcome variables—(*a*) patients (health status, utilization, satisfaction); (*b*) students (knowledge and skills, participation, attitudes and values, satisfaction, career choice); (*c*) faculty (participation, attitudes and values, satisfaction); and (*d*) the community (awareness, acceptance, participation).

A patient data base has been started that includes such information as name and identification number, date of birth, race, height, weight, blood pressure, problem list, diagnosis, laboratory test, prescriptions, treatment plan, appointment schedule, and attending physician and student team. These data are entered into the computer program at Rush Medical College where they are categorized according to key variable sets (demographic, diagnostic, continuity of care) and prepared for analysis.

This past summer, a student fellow conducted a community diagnosis to get feedback on the neighborhood's perception of the program. The data are currently being analyzed. This spring, another fellow will interview all of the mothers in the program who have delivered their babies at Rush Presbyterian St. Luke's Medical Center. Survey data from graduating senior medical students are analyzed in terms of the impact of program participation on the students' career perspective.

Budget Estimate

The Rush Prenatal Program is a self-supporting endeavor because of the volunteer services of local community representatives, a dedicated staff, and Rush medical students and faculty. Clinic supplies and medications are donated by several pharmaceutical companies and major laboratories. Every effort is made to use available funds provided by public assistance, Medicaid, WIC, and private grant money to give care to our patients. Despite the use of all of these "free" assets, there is always a need for supplies, materials, equipment, and the like.

Although the prenatal program is self-supporting, it is still possible to estimate the actual costs and in-kind contributions. The following estimates are based on a commitment by the medical center of 24 deliveries per year:

Expense	*Actual cost*	*Reimbursement*	*In-kind*
Average fee of obstetrician....	$2,800	...	$2,800
Delivery at Rush Presbyterian St. Luke's Medical Center ...	2,500	$600	1,900
Ultrasound.....	223	...	223
Program administration	100	...	100
Average per patient	$5,623	$600	$5,023
1-year total	$134,952	$14,400	$120,552

As of December 15, 1992, a total of 28 deliveries had taken place at Rush Presbyterian St. Luke's Medical Center. It is estimated that in its first 18 months, the Rush Prenatal Program provided, at a minimum, approximately $157,444 of basic prenatal care of which the program was reimbursed by the Illinois Department of Public Aid about $16,800. In other words, Rush provided more than

$140,644 of "free care," and this excludes students' time, transportation to and from the clinic, photocopying, and so forth.

What has been demonstrated by our efforts is that collaboration between an academic medical center (Rush), a neighborhood clinic (St. Basil's), and existing agencies (public and private) is not only possible but cost effective and socially responsible.

References

1. U.S. General Accounting Office: Medicaid recipients and uninsured women obtain insufficient care. Washington, DC, September 1987.
2. Piper, J. M., Ray, W. A., and Griffin, M. R.: Effects of Medicaid eligibility expansion on prenatal care and pregnancy outcome in Tennessee. JAMA 264: 2219–2223, Nov. 7, 1990.
3. Guyer, B.: Medicaid and prenatal care: necessary but not sufficient. JAMA 264: 2264–2265, Nov. 7, 1990.
4. Erdman, K., and Wolfe, S. M.: Poor health care for poor Americans: a ranking of state Medicaid Programs. Public Citizen Health Research Group, Washington, DC, 1988.
5. Kids count data book—1992 state profiles of child well being. Center for the Study of Social Policy, Washington, DC, 1992.
6. Brown S., editor: Prenatal care: reaching mothers, reaching infants. Division of Health Promotion and Disease Prevention, Institute of Medicine. National Academy Press, Washington, DC, 1988.
7. Institute of Medicine: Preventing low birth weight. National Academy Press, Washington, DC, 1985.
8. Access to prenatal care: key to preventing low birth weight. Report of Consensus Conferences, American Nurses Association, Kansas City, MO, 1987.
9. Abraham, L.: Good intentions gone awry: state's infant mortality program falling short of "9 to 90" goal. The Chicago Reporter 5: 1–11, 1985.
10. Gold, R. B., Kenny, A. M., and Singh, S.: Blessed events and the bottom line: financing maternity care in the United States. Alan Guttmacher Institute, New York, NY, 1987.
11. Brooks-Gunn, J., et al.: Outreach as case finding the process of locating low-income pregnant women. Med Care 2: 95–102, February 1989.
12. Chiles, L.: Malpractice and liability: an obstetrical crisis. National Commission to Prevent Infant Mortality, Washington, DC, 1988.
13. Nesbitt, T., Connell, F. A., Hart, L. G., and Rosenblatt, R. A.: Access to obstetric care in rural areas: effect on birth outcomes. Am J Public Health 80: 814–818, July 1990.
14. Robertson, W. O.: Access to obstetric care: a growing crisis. J Fam Pract 4: 361–362 (1988).
15. 1989 graduation questionnaire. Association of American Medical Colleges, Washington, DC, 1989.
16. Gastel, B., and Rogers, D. E., editors: Clinical education and the doctor of tomorrow. New York Academy of Medicine, New York City, 1989.
17. Physicians for the twenty-first century: The GPEP Report. Report of the Panel on the General Professional Education of the Physician and College Preparation for Medicine. Association of American Medical Colleges, Washington, DC, 1984.
18. Grardal, J., and Glassner, M.: The integration of the student into ambulatory patient care: a decade of experiences: Fam Med 19: 457–467 (1987).
19. Woolliscroft, J. O.: Enhancing attention to prevention, a new strategy. Acad Med 64: 74–75, February 1989.
20. Woolliscroft, J. O., and Schwenk, T. L.: Teaching and learning in an ambulatory setting. Acad Med 64: 644–648, November 1989.
21. Kark, S. L.: Community-oriented primary health care. Appleton-Century-Crofts, New York City, 1981.
22. Institute of Medicine, The Committee Report: Community oriented primary care: a practical assessment, vol. 1. National Academy Press, Washington DC, 1984.
23. Osborn, E., Hearst, N., Lashoff, J. C., and Smith, M.: Teaching community-oriented primary care (COPC): a practical approach. J Community Health 11: 165–171 (1986).
24. Mayster, V., Waitzkin, H., Hubbell, A., and Rucker, L.: Local advocacy for medically indigent: strategies and accomplishments in one country: JAMA 263: 262–268, Jan. 12, 1990.
25. Machala, M., and Miner, M.: Piecing together the crazy quilt of prenatal care. Public Health Rep 106: 353–359, July–August 1991.
26. Nguyen, H. N., O'Sullivan, M. J., and Fournier, A.: The impact of National Health Service Corps physicians in the lowering perinatal mortality rate in Dade County, Florida. Obstet Gynecol 3: 385–390 (1991).
27. Davidson, E. C., Gibbs, C. E., and Chapin, J.: The challenge of care for the poor and underserved in the United States. An American College of Obstetricians and Gynecologists perspective on access to care for underserved women. Am J Dis Child 145: 546–549, May 1991.
28. National Center for Health Statistics: Advanced report on final natality statistics, 1988. Monthly Vital Statistics Report, vol. 39, No. 4 supp. Hyattsville, MD, 1990.
29. Neonatal intensive care for low birth weight infants, cost and effectiveness. Health technology case study 38. Congress of the United States, Office of Technology Assessment, Washington, DC, December 1987.
30. Colwill, J. M.: Where have all the primary care applicants gone? N Engl J Med 326: 387–393, Feb. 6, 1992.