Community Pediatrics: Past and Present

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In their classic paper "Ecology of Medical Care," White et al demonstrated that for every 1000 adults, 750 per month had a symptom of illness, 250 sought medical care, 9 entered a community hospital, and only 1 entered a university hospital. In a study we did in Boston in the early 1960s, we documented that only 8% of children's illnesses were seen by a physician and 2% were admitted to a hospital, while more than 60% of these illnesses were dealt with entirely by the mother alone. Thus, if education and research are limited to patients in teaching hospitals, there will be a great deal of bias. Community pediatrics seeks to provide a far more realistic and complete clinical picture by taking responsibility for all children in a community, providing preventive and curative services, and understanding the determinants and consequences of child health and illness, as well as the effectiveness of services provided. Thus, the unique feature of community pediatrics is its concern for all of the population—those who remain well but need preventive services, those who have symptoms but do not receive effective care, and those who do seek medical care either in a physician's office or in a hospital.

This concept traditionally has been the province of public health, but public health is best concerned with environmental health, health education of the community, health assessment, and where necessary, provision of services for those who endanger the public's health, such as those who have sexually transmitted diseases, tuberculosis, or other communicable diseases. Clinical medicine, on the other hand, generally is concerned only with patients who have entered the curative health system. Community pediatrics blends these two fields. The basic science of community pediatrics is epidemiology, literally meaning the study of disease among populations.
School health offers a special community focus because each school has a defined population of children, allowing study of and care of all children.

My own conversion to this concept came as I progressed from caring for individual children to caring for families in the Harvard Family Health Care Program in the 1950s and 1960s. In this family-focused program, we carried out a controlled trial that demonstrated the beneficial effects of a comprehensive health-care program with fragmented but technically competent ones. This was the era of so-called comprehensive medical care programs. Later, I was exposed to Dr Kerr White, who was the leading proponent of the concept of community medicine in the United States, and still later to physicians and health services research personnel in Great Britain, with whom I studied on a sabbatical leave in 1961 and 1962. One of the attractions to me of the pediatrics chair at the University of Rochester School of Medicine and Dentistry, which I was offered in 1964, was the opportunity to develop a community-based university pediatric program. The first community pediatrics initiative developed after I arrived in Rochester was the consolidation of pediatric hospital services.

CONSOLIDATION OF PEDIATRIC HOSPITAL SERVICES

The Patient Care Planning Council organized by Marian Folsom on his return to Rochester, after having been Secretary of US Department of Health, Education, and Welfare, had approximated $20,000 for a county-wide study of pediatric hospital services to be used at the discretion of the new chair of pediatrics. I engaged Dr Joseph Stokes, Jr, the distinguished recently retired chair of pediatrics at the University of Pennsylvania and the Children's Hospital of Philadelphia, as a consultant. He spent the summer of 1964 interviewing key people—pediatricians, medical school faculty, hospital administrators, health insurance officials (of which Blue Cross/Blue Shield was and is the predominant health services insurer in the Rochester region), and business leaders.

At that time, there were five general hospitals in Rochester, all having pediatric services. Only one in addition to that at the University of Rochester had a pediatric residency program. With declining pediatric bed occupancy, there was a need to consolidate, but a reluctance of any hospital to abandon pediatrics. A compromise was worked out wherein two hospitals closed their pediatric inpatient services while retaining their newborn nursery, and the other two community hospitals consolidated their pediatric services into a joint one with the University program. Each of these consolidated programs was to have a full-time chief of pediatrics appointed jointly by the hospital and the University, and each would have a subspecialty focus linked to its strength in internal medicine (hematology in one and gastroenterology in the other) as well as a general pediatric focus. There also was to be a single residency program under the University. The consolidation of all pediatric hospital beds in the county provided a more efficient system of care and provided pediatric residents with an educational experience that was representative of the entire population of hospitalized children.

LINKING PRIVATE PRACTICING PEDIATRICIANS TO THE UNIVERSITY PROGRAM

Another attraction of the University of Rochester's pediatric program was the superb group of practicing pediatricians in the community. However, not all were appointed to the university hospital. A second piece of the community pediatrics strategy, thus, was the appointment of all physicians who cared for significant numbers of children—pediatricians and family physicians—if they so wished, to the university hospital's pediatric attending staff.

With these moves, most of the children hospitalized in the county (only a few older children on surgical services were not included) were cared for by attending staff and pediatric residents in one system. From a care point of view, there was one high level of service for all children. And from an educational point of view, medical students and pediatric residents cared for the entire range of children's disorders requiring hospitalization in a county of about 700,000 and a region of 1.25 million. In addition, we coupled a practicing pediatrician and a few family physicians with full-time faculty as joint attending physicians on these pediatric inpatient services.

Research in office practice was well established in Rochester, with the examples of Drs Breese, Disney, and Townsend. Under the leadership of Dr Charney, a program of collaborative research in office practice was expanded, which eventually included nearly all of the pediatricians in the region. Research findings from these studies included landmark ones, such as understanding compliance with medication-taking, documenting the effectiveness of prophylactic sulfonamides in the prevention of recurrent otitis media, and the prevalence and natural history of problem behaviors among children. This model later was expanded under Dr Charney to a national one currently involving more than 800 pediatricians throughout the United States in the American Academy of... continued on page 661
In the current climate of health-care reform, such outside special funding and special programs are examples of what will be needed, even with universal access, to provide services to the most disadvantaged.

...in studied a representative group of preschool-age children to assess the frequency and type of behavior problems and, by following them, to understand their natural history. The study demonstrated both the high frequency and impact of these problem behaviors on children and families but also the changing nature of these problems over time. Dr. Friedman developed an adolescent clinic at the university hospital and later, in conjunction with one of our chief residents, initiated a community-based adolescent program called "Threshold" to serve the more emancipated minors in the community. Dr. Hockelman and his nurse colleagues developed a pediatric nurse practitioner training program to increase the efficiency of pediatricians.

All of these new service programs were initiated in the optimistic days of the middle and late 1960s when we were confident that better health-care services would be developed for all, that disadvantaged populations would use them, and that ultimately their health would be improved. In 1988, we surveyed these programs and reported them in the second edition of Child Health and the Community. We found that in many ways, our optimism was well founded. All of the services are still in operation, including one family counselor who still works in our pediatric arthritis clinic.

The first neighborhood health center has expanded to a network of four, the migrant health program has been transformed into a year-round health center, the community-based adolescent clinic "Threshold" has been spun off from the university but is still operating, and many of the original nurse practitioners are still active. The School Health Program and the Faculty Counselor Program, although no longer as active in Rochester as they were, have been picked up, modified, and implemented in many other communities.

RESEARCH IN COMMUNITY PEDIATRICS

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From the beginning, it was our intent to develop an academic community pediatric program, with the traditional three legs—service, education, and research. To that end, National Center for Health Services Research grants to study the prevalence of health problems in children in the defined population in Monroe County through periodic random sample household surveys and to evaluate the effectiveness of new service programs. Dr. R. Ogrin, a sociologist, led this effort and provided an example of the need for a multidisciplinary approach to research in community pediatrics. Fellows and faculty together carried out a large number of research projects in the community with Dr. R. Ogrin. Examples include Drs. M. K. and A. Hocheiser, who demonstrated the reduction in hospitalizations and emergency room use among children served by the first neighborhood health center. Dr. Ples' study of family health counselors proved their usefulness in reducing behavioral problems among children who had a chronic illness, and Drs. H. and K. Ziman, and R. Charney evaluated the effectiveness of pediatric nurse practitioners and showed the high acceptance by pediatricians and patients and the stability and economic feasibility of such nurses in private pediatric practice. In addition to individual research publications, this work was summarized in a monograph.3

EDUCATION

The final leg of the community pediatric stool must be an educational one. This aspect was never evaluated formally, but we exposed medical students, pediatric residents, fellows, and faculty to this population-based system of care. Residents came to understand the true prevalence of child health problems, both in and out of the hospital, because they were exposed to patients from all socioeconomic groups and in all settings. Fellows of high quality were recruited nationally because of our visibility, and most now hold academic positions. The fellowship program later led to the successful competition for one of only six Robert Wood Johnson General Pediatrics Academic Development Programs and, later, to federal support for general pediatrics, adolescent medicine, and behavioral pediatrics fellowships.

Most of the faculty from the original program have assumed important roles nationally and internationally and have led changes in pediatric student and residency education programs. Dr. R. Charney, now chair at the University of Massachusetts in Worcester, has expanded the concept of community pediatrics to include most of his residency education program in private office pediatric practice and to organize the care of children who have special chronic physical diseases in office practice, backed up by consultations both by subspecialty pediatricians and social and psychological services from the university.

COMMUNITY PEDIATRICS TODAY AND TOMORROW

This story of the development of one pediatric department's efforts in the community started nearly 30 years ago. Where are we today and where should our vision take us tomorrow? Sadly, relatively few pediatric departments have taken this population approach. The proliferation of pediatric subspecialties and the lack of research and educational resources for such community efforts have been deterrents. But research has demonstrated the seamless whole of childhood—namely, that one cannot separate mental and physical health problems into two separate spheres; that environmental stress in certain children does lead to disease and physical disorders and that chronic illness often leads to psychological disturbance; and that educational failure, family breakdown, and problem behaviors all are interrelated and occur in the same children.

This is especially true among disadvantaged populations. Community pediatrics has demonstrated the link between educational failure, racism, poverty, environmental stress, environmental hazards, and health. By and large, pediatrics has not been a leader in environmental health, with the exception of lead poisoning. However, the community pediatrics program at Rochester was actively engaged in this arena.

Dr. R. Charney was among the first to demonstrate that lead in dust was a major source of lead poisoning in children, and they developed simple ways to measure lead content of paint. This program is being carried on today by Dr. R. Weitzman, chief of the Division of General Pediatrics and associate chairman for Community Affairs of the pediatrics department at the University of Rochester.

There obviously are some boundaries that must be put around a community approach. Pediatrics can do relatively little to alleviate poverty and racism. Unfortunately, however, the boundaries between social, educational, and health systems are always going to be blurred. Violence, teen pregnancy, and dropping out of school all have their solutions in arenas other than medicine. However, all come back on the health-care system in one way or another. Thus, community pediatrics must become engaged with other sectors and be a partner or team member along with child advocates and community development programs. Taking such a community approach does not decrease the commitment to university-based subspe-
cially services. What is needed is a balance between the two, for they complement each other.

Kerr White says that the task of public health is to "redefine the unacceptable." He notes that we must become enraged at the current inadequacies and do something about them. Research clearly has demonstrated that some populations have needs that currently are being met only by multiple, complex, unintegrated, categorical programs. There now is considerable interest in a few centers supported by the Robert Wood Johnson Foundation to reduce categorical funding and program barriers and integrate these educational, social, and health services. This is a difficult task, given the separate funding streams and separate bureaucracies. But the needs of children and their families ultimately must drive the human services systems toward more integration. Community pediatrics clearly is one of the parents of this challenge for the future.

WHAT DOES IT TAKE TO BE A COMMUNITY PEDIATRIC DEPARTMENT?

To be a community pediatric department primarily takes a commitment from the leadership of the department, but there must be a multidisciplinary team. We certainly had this in Rochester in the 1960s, 1970s, and 1980s, with Drs. Hockelman, Charney, Pless, Friedman, Nader, Chamberlin, and Sayre, and nonpediatricians such as Drs. Roghmann and Kitman, names now familiar to most. It also takes resources. We were fortunate during these years to have adequate and flexible funding. We must become advocates for such funding today and tomorrow.

CONCLUSION

Community pediatrics is concerned with the health of all children in a defined population. Some university pediatric departments have taken this challenge seriously, including the University of Rochester. To achieve this goal, a defined population is needed, best defined geographically—that is, a county or a city—in a sense, a parish, for which the department can be responsible to know who its patients are, to study their needs (especially those of the underserved), and to initiate innovative services and study their effectiveness. In addition, they must teach their students and residents in this "real world" setting.

This does not mean that the university must provide care for all children in the community. Indeed, in Rochester, most children are cared for by private pediatricians. However, it does mean that there is a need for partnership with the university in this effort. The university possesses some but not all of the knowledge, skills, and manpower. Partnership with other institutions—hospitals, health departments, social and educational services, businesses, and community foundations—and with private practitioners as well as local citizen groups is necessary.

There are continuing difficulties in meeting these challenges. Current funding sources are too short term, faculty in community pediatrics do not get research rewards quickly enough to satisfy promotion committees, interdisciplinary work is time consuming, and health-care needs often are overwhelming; even a well-staffed university easily can become over extended. A middle course needs to be found between the current isolation of many university clinical departments from the children's health issues of the real world. Romano has called this dilemma one of involvement versus detachment. All pediatric departments must become more involved in the community, yet remain detached enough to evaluate what they are doing.

The American Academy of Pediatrics was founded to promote the welfare of all children. Pediatric departments, to help achieve this goal, must take responsibility and see that all children in their "parish" are as healthy as possible. That is community pediatrics.

REFERENCES