A Study of Child Health Station Referrals to Treatment Facilities to Determine Continuity in Health Services

KAREN R. DICKINSON, MPH, LLOYD F. NOVICK, MD, MPH, and RUSSELL S. ASNES, MD

ONE OUTGROWTH of the incipient concern in the early 1950s for continuous and unfragmented health care has been the debate among health analysts regarding the separation of preventive and treatment services (*1–4*). Issues and problems associated with this dichotomous arrangement have come to the forefront in the delivery of care provided by child health stations or well-baby conferences.

The continuation of child health stations in their present form in New York City or elsewhere is predicated on the assumption that children predominantly of inner-city, low-income families are in particular need of free preventive health care. Children requiring treatment or further evaluation are referred to backup hospitals or other health agencies. As a means of transferring patients and information from one facility to another, the referral process is intended to expedite continuity in health care delivery.

Mindlin and Densen defined continuous care to be that received from a single source or if from more than one source, subsequent care was to be obtained only by referral from earlier sources (*5*). They went on to hypothesize that continuity of care is overestimated in that the process of referral assumes communication between providers. We examine this assumption by analysis of the outcome of referrals between two geographically juxtaposed but independently administered health facilities and explore the extent to which continuity of care between preventive and treatment facilities is effected by the process of referral.

Methodology

The outcome of referrals was investigated for two facilities: the Washington Heights Child Health Station, a New York City Health Department facility providing well-baby care, and Babies Hospital of Columbia-Presbyterian Medical Center, a large urban treatment facility.

For the purposes of this study, a successful referral was defined as one in which the patient made contact with a treatment facility for the indicated problem, and information concerning evaluation and management of the referred patient was transmitted to the referring facility. To identify the patients referred during the period under investigation, January 1 through February 14, 1973, names of children seen during the study period were obtained from child health station appointment sheets. The charts of 1,089 children were reviewed. For each child referred, patient information, medical indications necessitating the referral, and the facility intended for further medical attention were recorded on an abstract form. Also recorded were the treating physician's impression and disposition plans obtained from referral forms returned to the child health station.

If there was no evidence of the return of the referral form by the time of the study in July 1973, tracking of the patient's progress through the referral process was initiated by chart review at the facility indicated by the parent as his intended source of care for the child's problem. For those patients making contact with a medical facility, diagnosis and disposition plans noted in the facility's chart were recorded on the child's abstract form. For the remaining patients for whom there was no indication of a returned referral form or contact with the intended facility, followup efforts included mailings to the parents in Spanish and English with return response postcards. Telephone calls were made to contact nonrespondents.

By the described methods, information concerning referral outcome was obtained for 80 percent of the study sample. Although the outcome of referrals for 20 percent of the patients could not be determined, even after repeated attempts to contact parents, this loss is consistent with other studies of inner-city populations characterized by mobility and anonymity (*6*).

Findings

The review of the 1,089 charts revealed that 104 children had been referred to treatment facilities—a 9.6 percent referral rate.

☐ *Ms. Dickinson, assistant director of planning, Durham County Hospital Corporation, Durham, N.C., and Dr. Novick, associate commissioner, New York City Department of Health, were with the Columbia University Center for Community Health Systems when this paper was prepared. Dr. Asnes is assistant professor of pediatrics and public health and director of the Division of Pediatric Ambulatory Care, Columbia-Presbyterian Medical Center, New York City.*

Tearsheet requests to Lloyd F. Novick, MD, Associate Commissioner, New York City Department of Health, 311 Broadway, New York, N.Y., 10007.

Intended medical facility. The distribution of medical facilities to which the parents of the 104 referred children intended to take them was as follows:

Facility	Children	
	Number	Percent
Columbia-Presbyterian Medical Center	62	59.5
Mt. Sinai Hospital	3	2.9
St. Luke's Hospital	2	1.9
Harlem Hospital	1	0.9
Dental clinic (New York City Department of Health)	1	3.8
Tropical Disease Clinic (New York City Department of Health)	4	0.9
Private practitioners (including group practices)	2	2.9
Intended facility not recorded	29	27.8

At the time of referral, the parents of 75 children listed a specific medical facility for further evaluation or treatment of their children, and the clinics of Columbia Medical Center were named for 62 of these children. For the remaining 29 children, an intended facility was not recorded on their charts.

Types of referrals. The distribution of referrals by types of medical conditions was as follows:

Condition	Number (N=113)	Percent
Orthopedic	27	23.9
Upper respiratory infection	23	20.4
Pallor	14	12.4
Skin	10	8.8
Eye	10	8.8
Dental	9	8.0
Developmental	5	4.4
Gastrointestinal	5	4.4
Speech	4	3.5
Urology	4	3.5
Cardiac	1	0.9
Ear	1	0.9

The 104 patients had 113 conditions that required further evaluation or treatment. Almost a fourth of the referrals were classified as common orthopedic problems such as "bowleggedness" and "flat feet." Upper respiratory infections accounted for a fifth of the referrals and pallor and skin problems for a fifth.

Followup telephone conversations with parents revealed areas of misunderstanding associated with noncompliance of referral requests. Four of 16 parents contacted by telephone believed that the medical condition resulting in referral was a normal state. Bowleg and strabismus were most frequently cited as accepted conditions either "running in the family" or to be outgrown in time.

Information transfer. By July 1973, 19 of the 104 referral forms issued between January 1 and February 14, 1973, had been received by the child health station; a return rate of 18 percent. Furthermore, only three of the six medical abstracts requested by the child health station concerning patients being treated at other facilities had been received 5 months after the abstract was requested. When the Columbia-Presbyterian Medical Center charts of referred children were reviewed, 7 of the 104 referral forms were discovered attached to the hospital charts.

Due to illegible handwriting or inadequate and incomplete entries on the returned referral forms, information received by the child health station was, on occasion, inappropriately used. Two of the patients referred during the study period were already under treatment for the same medical problem.

Facility contacted. Followup of the outcome of referred patients revealed a change in 14 percent of the cases in which parents indicated that they intended to seek further medical attention for their referred children and where services were actually obtained. The facilities actually contacted are shown in the following table.

Facility or other outcome	Children	
	Number	Percent
Columbia-Presbyterian Medical Center	52	50.0
Mt. Sinai Hospital	2	2.0
Jewish Memorial Hospital	1	1.0
Harlem Hospital	2	2.0
Morrisania Hospital	1	1.0
Group practices (including HIP)	2	1.9
Health department facility	1	1.0
Private physician	6	5.8
Private dentist	3	2.9
Care not sought	13	12.5
Outcome unknown	21	20.2

Chart review and followup by postcards and telephone revealed that for 70 of the 104 patients referred, care was obtained from a physician or dentist. For 13 patients, further medical attention was not sought; for the remaining 21, the outcome could not be determined even after repeated attempts to contact the parents.

For the 70 referred patients who received attention, three-fourths were cared for at Columbia-Presbyterian Medical Center, and one-fourth were evaluated or treated by other facilities, as shown in the preceding table.

Discussion

As medical care and its technology have become markedly complex, so have fragmentation of services and discontinuity of care increased. The existence of a fragmented health care system is reflected in consumer reliance on multiple health facilities (*7*). Specialty clinics within hospitals, as well as public health programs oriented toward generic diseases or specific populations, contribute further to the phenomenon of fragmentation.

A popular approach to reducing fragmentation of health services to children has been to support the integration of preventive and treatment services within the

same facility (*8*). A study of child health stations recently converted to pediatric treatment centers revealed that almost a third of the parents using these centers regarded them as their usual source of care for their children (*9*). The use of fragmented health facilities by these consumers is reportedly reduced.

Gratifying as the results of conversion appear to be at present, particularly in reducing fragmentation, one should not assume that mere elimination of the dichotomy between preventive and treatment services will improve continuity. As reported by Mindlin and Densen (*5*), discontinuity of care resulting from illegible or inadequate records obviously exists even within a single facility. Although discontinuity is associated with fragmentation, the terms are not synonymous; nor will measures to improve the one necessarily be transferred to improvement of the other.

Realistic pursuit of continuity in pediatric health care must acknowledge a present delivery system comprised of a host of providers and independent health facilities. Central to continuity of care, particularly in the given fragmented delivery structure, is the need for more effective transmittal of patient information between providers both in terms of intra-facility medical records and inter-facility referrals.

Results of this study revealed that poor communication or information exchange between health facilities compromises continuity in patient care which is dependent on satisfactory referrals. A majority of parents were accepting responsibility for the continuous care of their children. Sixty-seven percent of the patients referred from the child health station were known to have received further evaluation or treatment. However, only 18 percent of the referral slips or any other form of communique from the treatment facility concerning the particular referral was received at the child health station. Moreover, there was only a 50 percent return rate from the treatment facility of medical abstracts specifically requested by the child health station. Results of this study suggest that continuity can be ameliorated more appropriately by addressing administrative factors contributing to the breakdown in information transfer, rather than by assigning culpability of unsuccessful referrals to poor patient compliance (*10*).

A first step in improving continuity between facilities is to improve their capability to monitor the progress of referred patients. In the child health station, no method of tagging charts of referred patients existed. No referral log was maintained. Followup of referred patients was haphazard and arbitrary. An elementary change would be the introduction of a referral log, carbon copy referral forms, or record tagging (*11*).

A more sophisticated and comprehensive—yet exceedingly complex—innovation to implement is a computerized management model or health information system described by Miller and others (*12–14*). Such a system would serve to monitor the progression of preventive and treatment care a child receives and is expected to receive from a variety of providers. To be effective, the system would need to link multiple providers, transfer relevant medical information, and alert staff to disruptions in continuity of care.

Obviously there are no simple solutions for the complexity of problems besetting the delivery of pediatric health care. Nonetheless, it is particularly disturbing to those concerned with the quality of pediatric care that continuity has been shown to be grossly inadequate even between two physically contiguous medical facilities. A promising conclusion of this study is that significant improvement in continuity need not depend on complex behavioral modification of the consumer but on more readily implemented administrative and technological changes.

References

1. Bleiberg, N., Jacobziner, H., and Mahoney, I.: Health supervision of young children in New York City. NY State J Med 63: 3255–3260, November 1963.
2. Wishik, S. M.: Current practices and trends in the child health conference. Am J Public Health 41: 57–65, January 1951.
3. Shall the well child conference wither away? [Editorial] Am J Public Health 40: 1557–1560, December 1950.
4. Baumgartner, L.: Medical care of children in public programs. Am J Public Health 51: 1491–1499, October 1961.
5. Mindlin, R., and Densen, P.: Medical care of urban infants: Continuity of care. Am J Public Health 59: 1294–1301, August 1969.
6. Wethers, D., and Cousens, K.: Child health in a Harlem elementary school. J Sch Health 46: 466–471, November 1970.
7. Denerstein, D., Loewenstein, R., Cohen, S., and Novick, L.: Sources of medical care used by patients of a child health station in Washington Heights. Columbia University Center for Community Health Systems, September 1973. Processed.
8. Jacobziner, H.: A pediatric treatment clinic in a health department. Bull NY Acad Med 41: 107–116, January 1965.
9. Denerstein, D., Novick, L., Loewenstein, R., and Bianco, J.: Converting child health stations to pediatric treatment centers: Utilization patterns of children using three upper Manhattan facilities offering treatment services. Columbia University Center for Community Health Systems, November 1974. Processed.
10. Cauffman, J.: Health care of school children: Effective referral patterns. Am J Public Health 59: 86–91, January 1969.
11. Grunberg, E.: Four-pronged efforts result in successful follow-up. J Sch Health 41: 429–432, October 1970.
12. Miller, A.: Remodeling the municipal health services for a unified system of ambulatory medical care in the central city. Med Care 10: 395–401, September 1972.
13. White, K., Murnaghan, J., and Gaus, C.: Technology and health care. N Engl J Med 287: 1223–1226, Dec. 14, 1972.
14. McFarlane, A., and Norman, G.: A medical care information system: Evaluation of changing patterns of primary care. Med Care 10: 481–487, November 1972.