The Stroke Team Concept as Implemented in the Area VIII Regional Medical Program

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Abstract:
A training program for hospital "stroke teams," consisting of physician, nurse-coordinator and physical therapist, is a unique feature of the Area VIII Regional Medical Program. Training in team concept of stroke management based on the experience of Memorial Hospital of Long Beach will be offered Area-wide. Thirty acute hospitals and 73 extended-care facilities located within Area VIII will participate.

It is stipulated that each team completing such training at Long Beach return to its own hospital to put the new approach and methods into effect, and also to train backup teams where personnel is available. Professional faculty will make follow-up visits to gauge the effectiveness of the training program both in application of the technique by the team and in influencing total approach to the care of stroke patients.

Extended-care facilities also are urged to participate, in line with their own staffing patterns. The Easter Seal Rehabilitation Center of Orange County will cooperate by providing other disciplines for the stroke team when and where needed.

While quantitative evaluation of results may be unfeasible, it is anticipated that the qualitative effects of this new program will be reflected in better care for the stroke patient, enhanced opportunities for return to self-sufficient living, and (hopefully) eventual improvement in the morbidity, mortality and residual-disability statistics for stroke.

ADDITIONAL KEY WORDS
physical medicine training rehabilitation extended care cerebral thrombosis cerebral infarct

A number of imaginative and innovative approaches to prevention, diagnosis, treatment and rehabilitation for victims of the chronic and "killer" diseases are being developed as a result of the enactment of Public Law 89-239 in 1965. Known as the Regional Medical Programs Act, this legislation authorizes "the establishment and maintenance of Regional Medical Programs [RMP] to assist the Nation's health resources in making available the best possible patient care for heart disease, cancer, stroke, and related diseases." (1)

To facilitate implementation of the law, 55 regions have been delineated, covering the entire United States. Some of the regions include combinations of several states, and others, portions of several states. Region VI, known as the California Region, includes the entire state of California plus the two major population concentrations in western Nevada. The California Committee on Regional Medical Programs has subdivided Region VI into eight areas, each having one of California's eight medical schools within its geographical boundaries.
Area VIII, whose program is discussed in this article, comprises Orange County and about half of the city of Long Beach. The University of California, Irvine-California College of Medicine is located in this area.

To deal in a concentrated fashion with the disease entities included in the RMP, the Area VIII Committee on Regional Medical Programs has established categorical subcommittees to plan programs for the three major causes of death (stroke, cancer, heart disease) and to seek measures that will improve patient care. The goals of the Stroke Categorical Committee are: (1) to encourage and aid local communities and their medical resources to assess the specific needs of stroke patients in their communities; (2) to encourage and assist in establishing coordinated programs to upgrade the quality and effectiveness of stroke care in the area; (3) to use and encourage further development of research concerned with stroke prevention, diagnosis, treatment and rehabilitation; and (4) to encourage establishment of cost-effective mechanisms in developing specific stroke programs.

According to the findings of a survey conducted by the California Heart Association in 1964, the general practitioner is the prime source of medical care for stroke patients. At the time of discharge from the acute hospital, more than half (55%) of the stroke victims were incapable of caring for themselves, and of these, 2% were nonambulatory. Thirty percent were discharged to nursing homes, and 23% had indwelling catheters (2).

Vital statistics for the combined area of Orange County and the city of Long Beach show a total of 1,111 stroke deaths in 1965. Stroke survival rates vary widely, according to reports in the current literature (3-6). Based on such reports, however, one may assume a ratio of two survivals to one fatality. On this basis, it is estimated that in 1965 at least 2,000 patients in Area VIII may have been in need of post-stroke service. In view of the area's population growth, the Regional Medical Program staff estimates that between 2,500 and 3,000 stroke survivors will be in need of stroke services in 1970.

RMP staff visits to more than 30 acute hospitals during 1968 for the purpose of determining need showed a wide variation in facilities and services available to stroke victims. Even wider variation was noted in the 73 extended-care facilities. The scope of services ranged from one part-time physical therapist in one facility to complete comprehensive rehabilitation services in another. Although daily medical visits frequently were the rule in the acute setting, physicians visited their patients in extended-care facilities on the average of once a month. In only one facility (Memorial Hospital of Long Beach) was there an organized program for care of the stroke patient.

It was difficult to obtain statistics on length of stay of stroke patients, functional status on discharge, and ultimate disposition of the patient. Subjective impressions, however, seemed to substantiate the findings of the California Heart Association's 1964 Stroke Survey, the only such survey in the past five years.

From 1965 to 1968, the Memorial Hospital of Long Beach has been conducting a "stroke team" program, utilizing the key concept of a rehabilitation nurse-coordinator, under a grant from the Long Beach Heart Association (7). This program has made available to the attending physician the coordinated services of all appropriate paramedical personnel. The nurse-coordinator is notified of the admission of each stroke patient. The physician is asked to prescribe, at his discretion, Phase 1, 2, or 3 of stroke rehabilitation, as delineated below.

Phase 1 essentially deals with passive range-of-motion exercises, use of splints, proper positioning, and early bed exercises. All of this is administered by the nursing personnel.

Upon receiving a Phase 2 prescription, the physical therapist, occupational therapist, speech pathologist, social worker, and psychologist evaluate the patient and institute a therapeutic program. Findings of the team are correlated in conferences and recommendations are conveyed to the attending physician.

Phase 3 is essentially a continuation of Phase 2, but in the post-hospital setting. Early during the patient's stay in the hospital, the physical factors are assessed and treated, and the socioeconomic factors are analyzed to uncover any problems that might affect the patient's recovery. Family members are encouraged to take part in the therapeutic programs. Before the patient is discharged from the hospital he makes trial overnight and weekend visits to his home, so that problems that might develop after discharge may be
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recognized early and resolved. Follow-up visits to ascertain appropriateness of post-hospital programs and degree of recovery are scheduled at three-month and six-month intervals.

Although, ideally, all disciplines of rehabilitation are involved in stroke care, the basic core of the stroke team concept as implemented in the Area VIII Regional Medical Program is the group consisting of physician, nurse-coordinator and physical therapist. Few of the Area's 35 acute hospitals and 73 extended-care facilities can provide more than this three-man team.

To expand capacity for effective treatment of patients with stroke, therefore, a training program has been set up at Memorial Hospital of Long Beach under the auspices of the Area VIII RMP. Each hospital in the Area is sending a three-man team of physician, nurse-coordinator and physical therapist to Long Beach Memorial to take special stroke training; backup teams also will be trained. Extended-care facilities will send teams consisting of a nurse, a licensed vocational nurse, and a physical therapist. Hospital administrators also are encouraged to attend the training sessions. The physician takes an intensive three-day course; the nurse has three weeks of training; and the physical therapist has two weeks. As of September 1969 six teams, plus selected guests, are being trained every month.

The medical faculty for this stroke team training program includes specialists in all aspects of the stroke problem. The paramedical faculty includes all standard rehabilitation disciplines, e.g., physical therapists, occupational therapists, psychologists, speech therapists, social service workers, and recreation therapists.

Having completed the training program, the core returns to its own institution prepared to utilize this approach and to train fellow workers in this methodology. As a result of the training experience, the team members have enhanced their own expertise and have become aware of the techniques of other disciplines in dealing with stroke problems.

The role of the nurse-coordinator is to see each new stroke patient at her respective institution, initiate Phase 1 at the physician's request, coordinate the help of the entire stroke team, and aid in the collection of a dynamic stroke registry for the Area.

The physician's role is to chair the meet-
ity. Hopefully, other areas of the country will participate in this educational program.

We realize that this device will be limited in its effects upon mortality, morbidity and residual disability of stroke. However, it is the skeleton upon which we hope to shape the comprehensive attack on prevention, diagnosis, treatment and long-term rehabilitation that, hopefully, may eventually result in more effective patient care.

References
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