



E00061B



Justification

Regional Medical Programs

| | <u>1971 Estimate</u> | | <u>1972 Estimate</u> | | <u>Increase or Decrease</u> | |
|--|----------------------|---------------|----------------------|---------------|---------------------------------|---------------|
| | <u>Pos.</u> | <u>Amount</u> | <u>Pos.</u> | <u>Amount</u> | <u>Pos.</u> | <u>Amount</u> |
| Personnel compensation and benefits | 275 | \$4,436,000 | 275 | \$4,756,000 | -- | +\$ 320,000 |
| Other expenses . . . | -- | 77,970,000 | -- | 82,515,000 | -- | +\$4,545,000 |
| Total | 275 | \$82,406,000 | 275 | \$87,271,000 | -- | +\$4,865,000 |

General Statement

The Regional Medical Programs Service provides a major mechanism and supports activities required to enhance the capacity of the health care system to furnish services of satisfactory quality to all Americans.

Regional Medical Programs Service: (1) supports grants and contracts which on a regional basis bring together in a common effort the local medical centers, hospitals, and other health care facilities, health care providers and other resources to systematically identify health problems, commitments, and undertake the solutions; (2) furnishes professional and technical assistance and advice to the Regional Medical Programs, States, local communities and other relevant health agencies; (3) conducts programs through voluntary commitment of regional resources to bring about an increased, effective use of medical knowledge, make more efficient use of physical and human medical care resources and help remove barriers which impede entry of patients into the health care system, maintaining major focus on those diseases which are the greatest causes of morbidity, disability, and death in the United States; (4) facilitates and provides professional guidance at the regional level to other governmental and private efforts aimed at improving the organization and delivery of health care; (5) administers specialized pilot or educational or monitoring programs in the field of kidney disease and smoking and health, which have significant importance in improving personal health care and in contributing toward the accomplishments of Regional Medical Program goals.

Regional Medical Programs:

| | <u>1971 Estimate</u> | <u>1972 Estimate</u> | <u>Increase or Decrease</u> |
|--------------------|----------------------|----------------------|---------------------------------|
| (a) Grants | \$70,298,000 | \$75,000,000 | +\$4,702,000 |

Grants are awarded to assist in the planning, establishment and operation of Regional Medical Programs for research, training and demonstrations of patient care.

It is the objective of the Regional Medical Programs to improve availability of and access to high quality health care to all Americans through improvements in the development and more efficient utilization of health manpower and other resources. Approximately 2,700 institutions including all medical schools, 1,900 hospitals and a variety of State and voluntary health organizations are now participating in this effort to improve the quality of care and the adoption of the latest techniques in the delivery of health services.

The Regional Medical Programs Service seeks to assist the established Regional Medical Programs to develop a framework of cooperative relationships for improving the organization and delivery of services to people. This framework is structured by developing the voluntary cooperation of the various providers of service, both public and private, in identifying the patients' needs. When these have been determined, the local groups and institutions develop projects and programs to meet these needs. The activities of Regional Medical Programs include the full spectrum of health care: prevention, primary care, specialized care using the latest scientific techniques, and rehabilitation. Regional Medical Programs provide funds for organizing a system of health care locally acceptable and responsive, but linked to regional resources not available locally.

Program for 1971 and 1972

Fifty-five Regional Medical Programs are now conducting operational activities.

During the past year, events in the various regions have provided significant directions for the future. The newly emerging cooperative arrangements within the regions have demonstrated the role the Regional Medical Programs can play as a recognizable and locally acceptable force not only for health planning but for improving the organization and delivery of health care as well. These changing patterns in the health care system brought about through operational activities are affording the consumer immediate and direct benefits.

The movement toward operational status is reflected by the fact that currently more than 50 percent of funds are now awarded for projects which demonstrate improved patient care methods, a significant increase from previous years when planning was the predominant activity. The fields of disease prevention and screening for early detection of disease are receiving increasing emphasis. The special problems of the poor in both rural and urban populations are being studied intensively.

The effort of Regional Medical Programs to promote the regionalization of health resources and enhance the capabilities of providers of care at the community level involves a number of different approaches.

One important approach involves all of the regions in developing a base for regional planning and decision-making through broad representation and participation of health institutions, organizations and individuals on the planning committees and the Regional Advisory Group of each Region.

The legislative extension of 1970 emphasized the development of such local planning capability, especially in relationships with Comprehensive Health Planning agencies. To promote such cooperation, the new law requires reciprocal membership on Regional Medical Program and Comprehensive Health Planning advisory groups. It also provides the Areawide Comprehensive Health Planning Agencies with the opportunity to review Regional Medical Program grant proposals to ensure conformance to community-established priorities.

Recognizing that the programs need to complement and support one another as they work with the health institutions in their area, close cooperation will be encouraged in the form of joint planning and data collection efforts and common definition of subregional areas.

Community planning assistance is being promoted in California where, for example, the California Regional Medical Program recently provided both financial and staff assistance to the Welfare Planning Council of the Los Angeles Region for a community report on health problems and priorities in East Los Angeles. This community approach is a recognition of the fact that health needs originate in people. This recognition is especially important when looking at a "barrio" such as East Los Angeles.

Regionalization and new organizational arrangements are major themes of Regional Medical Programs. Working relationships and linkages among community hospitals and between such hospitals and medical centers are among the primary concerns of the program. The linking of less specialized health resources and facilities such as small community hospitals with more specialized ones is an important way of overcoming the maldistribution of certain resources, and thereby increasing their availability and enhancing their accessibility.

The development of regionalized professional and institutional linkages aids in linking patient care with health research and education within an entire region to provide a mutually beneficial interaction. It also helps to emphasize the delivery of primary care at the local or community level, while promoting specialty care as the province of the medical center and larger community hospitals.

In North Carolina, community development of comprehensive stroke programs has been initiated, with a central coordinating unit at the Bowman Gray School of Medicine. A broad range of activities is being undertaken, including publication of guidelines for community stroke programs, educational activities such as training programs for nurses, annual stroke workshops, stroke consultation

service for physicians through the cooperation of the neurological staffs of the three medical centers, and a family-patient education unit, designed to help patients and their families learn to cope with the long-term effects of stroke disability.

A broad array of manpower activities is being developed to impact on the health care delivery system. Estimated numbers of health professionals who will be trained in 1971 as a result of Regional Medical Program activities are as follows:

| | |
|----------------------------|---------------|
| <u>Doctors</u> | 31,628 |
| <u>Nurses</u> | 55,295 |
| <u>Allied/Other Health</u> | <u>39,000</u> |
| Total | 125,923 |

In addition, over 25,000 emergency health personnel (firemen, ambulance drivers, policemen, etc.) will receive training. These programs will include both the teaching of new skills and also the upgrading of existing skills as well as training new people in the allied and other health areas.

Many Regional Medical Programs have conducted studies to determine the need for, willingness to accept and feasibility of training categories of manpower to extend the services of physicians. Most of these are related to the physicians' assistant concept. Some Regional Medical Programs are designing such projects and several have funded operational projects in this area.

In Alabama, the Regional Medical Program is sponsoring a program to formulate and implement training programs for allied health technicians through the cooperative use of funds, manpower, and facilities already in existence at the junior college and vocational technical training schools level. By linking the resources of the University of Alabama, Regional Technical Institute, the Appalachian Development Commission, and 17 state supported junior colleges, Alabama is taking a giant step toward solution of its health manpower shortage.

A Guest Residency Program, started two years ago with Regional Medical Program funds, has helped pave the way for what is a significant innovation in medical education (WAMI) by demonstrating the practicality of its decentralization. The new medical education plan, taking its name from the four States involved (Washington, Alaska, Montana, Idaho), recently received a \$1 million grant from the Commonwealth Fund. Alaska was selected as the first State to implement the new plan because of the close ties already created by the Washington/Alaska Regional Medical Program between the University of Washington Medical School and Alaska academic and medical communities.

Virtually all Regional Medical Programs have projects designed to augment the knowledge and level of performance of health professionals and paraprofessionals. Many of these projects lead to the utilization of personnel in new ways. Perhaps the greatest Regional Medical Program thrust in this area is the training of coronary care unit nurses; over 7,000 registered nurses and licensed practical nurses have been trained to date.

Although Regional Medical Programs does not provide for patient services directly, it often gets involved in planning for and helping to establish those health care components which will deliver service. This includes a broad range

Currently demonstrations are being funded for activities such as:

| | |
|--|------------------|
| <u>Coronary and other intensive care</u> - 114 coronary care units and 8 mobile units | \$13,800,000 |
| <u>Ambulatory care</u> - 24 neighborhood health centers, clinics and out-patient departments | 3,900,000 |
| <u>Extended and home care</u> | 2,200,000 |
| <u>Other</u> - such as emergency and transportation services | <u>1,300,000</u> |
| Total | \$21,200,000 |

As a result of these demonstrations, communities and hospitals not directly involved in these projects have been spurred to make much needed improvements. For example, in 1966 there were only 375-425 coronary care units and 1,100 other intensive care units in the United States. By 1969 these had increased to 2,101 coronary care units and 2,556 other intensive care units, corresponding to 500 percent and 150 percent increases, respectively.

This range of activity and the types of operational components being carried on varies from region to region. In providing a mechanism for planning, decision-making, and sharing limited health manpower and facilities, the stress has been on local initiative and control to match local needs, problems, and available resources.

It is expected that an increasing portion of available funds during 1972 will be directed toward the following general areas:

- Activities which lead to more effective and efficient utilization of health manpower, especially in patient care settings. Training for new types of health manpower (e.g., physician assistants) will be emphasized, as will new organizational patterns which make greater use of paramedical personnel.
- Operational activities with increased emphasis on regionalization of health resources and services, with the focus on strengthening linkages between those institutions providing specialized care, such as the medical centers and affiliated hospitals, and primary care, being provided by smaller community hospitals, neighborhood health centers, and other community health facilities.
- Conjoint and collaborative efforts with Areawide Comprehensive Health Planning agencies and similar agencies which foster community-based planning and programs that can begin to materially effect resource allocations/distribution for health at the local level.
- Projects which emphasize disease prevention and early detection, including early and easy access to care.
- Activities which encourage and support the development, operation and success of the emerging Health Maintenance Organizations.

The increase in total funds available for obligation of \$4,702,000 would provide \$75,000,000 in 1972. Of this amount, \$5,000,000 is earmarked for construction of a regional cancer center in the Northwestern part of the United States. The balance will be used to meet the continuation costs of grants for selected programs based on relative merit.

In exercising the current authority to use funds for the purpose of program planning and evaluation, in addition to exercising this authority through grants and contracts, these funds will also be used to finance consultative and other services required to prepare, monitor, and review various forms of evaluation. Such consultative services would be performed under contract or through the use of part-time or intermittent consultants.

SELECTED DATA
REGIONAL MEDICAL PROGRAMS

| | |
|---|---|
| Overview | 1 |
| Regional Advisory Groups | 3 |
| Planning Committees and Task Forces. | 4 |
| Local and Area Advisory Groups | 5 |
| RMP Staff. | 6 |
| CHP - RMP Relationships. | 6 |
| Hospital Involvement | 7 |
| Operational Programs by: | |
| - Program Emphasis | |
| - Disease | |
| - Health Care Organization and Delivery | 8 |
| Health Professionals Trained | 9 |

OVERVIEWREGIONS* THERE ARE 56 REGIONAL MEDICAL PROGRAMS

- . 54 are operational
- . Of these:
 - 5 are in their fourth operational program period
 - 18 are in their third
 - 21 are in their second
 - 10 are in their first

* LARGEST REGION

- . In population: California (20 million)
- . In size: Washington-Alaska (638,000 square miles)

* SMALLEST REGION

- . In population: Northern New England (445,000)
- . In size: Metropolitan Washington D.C. (1,500 square miles)

* BOUNDARIES: NUMBER OF REGIONS WHICH

- . Encompass single states 32
- . Encompass two or more states. 4
- . Are parts of single states. 12
- . Are parts of two or more states 8

* POPULATION: NUMBER OF REGIONS WHICH HAVE

- . Less than 1 million persons 5
- . 1 million to 2 million 11
- . 2 million to 3 million 14
- . 3 million to 4 million 8
- . 4 million to 5 million 7
- . Over 5 million 11

* HEADQUARTERS:

| | <u>Grantees</u> | <u>Coordinating Headquarters</u> |
|-------------------------|-----------------|----------------------------------|
| . Universities | 36 | 31 |
| State | (29) | (26) |
| Private | (7) | (5) |
| . Non-profit Agencies | 20 | 25 |
| State Medical Societies | (5) | (4) |
| Non-profit corporation | (15) | (21) |

INVOLVEMENT

- * PERSONNEL: PEOPLE INVOLVED IN THE RMPs TOTAL 16,500:
 - . 1550 FTE core staff members
 - . 2040 FTE project staff members
 - . 2700 on Regional Advisory Groups
 - . 10,200 on task forces and local advisory groups.

- * HOSPITALS: A TOTAL OF OVER 2,200 OF THE NATION'S 7,000 HOSPITALS ARE NOW INVOLVED IN RMP PLANNING AND OPERATIONAL ACTIVITIES:
 - . Over 200 short-term, non-federal hospitals represented on Regional Advisory Groups
 - . Almost 700 STNF represented on other regional and subregional planning bodies
 - . 2,000 STNF involved in operational activities.

FUNDING

- * \$223 MILLION HAD BEEN AWARDED TO THE PROGRAMS THROUGH FY70. NET GRANT AWARDS IN FY70 TOTALLED 78,202 MILLION

REGIONAL ADVISORY GROUPS* SIZE

- . 1967 $\frac{1600}{30}$ total membership
 average group size
- . 1969 $\frac{2500}{45}$ total membership
 average group size
- . 1970 $\frac{2680}{48}$ total membership
 average group size

- . 10-19 members: 3 RAGs
- . 20-29 members: 11 RAGs
- . 30-59 members: 34 RAGs
- . 60-99 members: 5 RAGs
- . 100-199 members: 2 RAGs
- . over 200 members: 1 RAG

- . Largest: Western New York (329)
- . Smallest: Missouri (12)

* COMPOSITION - total 2680 members

- . 728 (27%) practicing physicians
- . 387 (14%) medical center officials
- . 347 (13%) hospital administrators
- . 231 (9%) voluntary health organization representatives
- . 204 (8%) public health officials
- . 255 (10%) other health workers
- . 516 (19%) members of the public
- . 12 (---) RMP staff members

PLANNING COMMITTEES AND TASK FORCES

* NUMBER AND SIZE: 500 COMMITTEES IN 56 REGIONS: 5300 TOTAL MEMBERSHIP

* COMPOSITION:

By Profession

| | <u>Number</u> | <u>Percent</u> |
|--|---------------|----------------|
| TOTAL | 5320 | 100 |
| Physicians | 3273 | 62 |
| Registered Nurses | 486 | 9 |
| Hospital & Nursing Home Administrators | 326 | 7 |
| Other Health | 346 | 6 |
| Business or Managerial | 312 | 6 |
| Other | 577 | 10 |

By Affiliation

| | <u>Number</u> | <u>Percent</u> |
|--------------------------------|---------------|----------------|
| TOTAL | 5320 | 100 |
| Medical School | 872 | 16 |
| Affiliated Hospitals | 508 | 10 |
| Other Hospital Interests | 879 | 17 |
| Medical Society | 212 | 4 |
| Public & Other Health Agencies | 290 | 5 |
| Voluntary Health Agencies | 355 | 7 |
| Health Practitioners | 1180 | 22 |
| Public or Consumers | 198 | 4 |
| Other | 826 | 15 |

Almost half of these committees are organized according to categorical diseases; the remaining are in areas such as manpower, training, data collection, hospital planning, and evaluation.

LOCAL AREA AND ADVISORY GROUPS

- * PURPOSE: TO STUDY AND PROPOSE ACTIVITIES TO MEET COMMUNITY NEEDS AND TO STRENGTHEN RELATIONSHIPS AMONG LOCAL INSTITUTIONS AND WITH THE MEDICAL CENTER.

- . 27 Regions have 335 such groups (4800 persons)
- . 129 of these are located in the Georgia Region
- . Most include representatives of local hospitals, local health professionals and other community leaders.
- . Many do cooperative planning with CHP (b) agencies
- . Composition is primarily consumer and hospital oriented.

* COMPOSITION

| <u>By Profession</u> | <u>Number</u> | <u>Percent</u> |
|--------------------------------|---------------|----------------|
| TOTAL | 4843 | 100 |
| Physicians | 2001 | 41 |
| Registered Nurses | 445 | 9 |
| Hospital Administrators | 672 | 14 |
| Other Health | 227 | 5 |
| Business or Managerial | 522 | 11 |
| Other | 996 | 20 |
| | | |
| <u>By Affiliation</u> | <u>Number</u> | <u>Percent</u> |
| TOTAL | 4843 | 100 |
| Medical Schools | 75 | 2 |
| Affiliated Hospitals | 452 | 9 |
| Other Hospital Interests | 954 | 20 |
| Medical Society | 401 | 8 |
| Public & Other Health Agencies | 500 | 10 |
| Voluntary Health Agencies | 349 | 7 |
| Health Practitioners | 904 | 19 |
| Public or Consumer | 723 | 15 |
| All Other | 485 | 10 |

REGIONAL MEDICAL PROGRAMS STAFF

TOTAL: 3590 FULL-TIME EQUIVALENTS

- . 1547 on CORE STAFFS
- . 2043 staffing OPERATIONAL PROJECTS

| | <u>FTE's</u> <u>CORE</u> | <u>FTE's</u> <u>OPERATIONAL ACTIVITIES</u> |
|------------------------------|-----------------------------|---|
| TOTAL | 1546 | 2043 |
| Physicians | 226 | 293 |
| Registered Nurses | 53 | 369 |
| Allied Health | 45 | 262 |
| Other Professional/Technical | 708 | 703 |
| Secretarial | 514 | 416 |

CHP - RMP RELATIONSHIPS

- * 53 regions have overlapping advisory group membership with state and areawide agencies:
 - . 18 CHP "A" staff members are on Regional Advisory Groups (18 regions)
 - . 25 CHP "B" staff members are on Regional Advisory Groups (16 regions)
- * 23 regions have common data collection activities with state agencies and 7 areawide agencies
- * 16 regions report that their local advisory groups have defined relationships (staff sharing, joint review, etc.) with CHP areawide agencies.

HOSPITALS

| | | |
|--|------|-------|
| * TOTAL NUMBER INVOLVED IN REGIONAL MEDICAL PROGRAMS: | 2210 | |
| . Short-term, non-federal | 2080 | (94%) |
| . Long-term, non-federal | 60 | (3%) |
| . Federal | 70 | (3%) |
| | | |
| * SHORT-TERM, NON-FEDERAL HOSPITALS INVOLVED: | 2080 | |
| . By bed Size | | |
| Under 200 beds | 1310 | (63%) |
| 200-399 beds | 480 | (23%) |
| Over 400 beds | 290 | (14%) |
| . By Affiliation | | |
| Medical school affiliated | 1370 | (66%) |
| Non-affiliated | 710 | (34%) |
| | | |
| * TOTAL NUMBER INVOLVED IN RMP OPERATIONAL ACTIVITIES: | 1600 | |
| | | |
| * TOTAL NUMBER SPONSORING RMP OPERATIONAL ACTIVITIES: | 190 | |

OPERATIONAL PROGRAMS

The CURRENT LEVEL OF FUNDING is \$95 million, which includes approximately \$39.8 (42%) for core and \$55.2 (58%) for projects. Operational activities reflect the following program emphases:

| | | |
|--|------|-----------|
| Activity | 100% | |
| Continuing Education | 22% | |
| Manpower Development and Utilization | 31% | (General) |
| Patient Care Demonstrations | 31% | |
| Coordination for Health Services | 8% | |
| Research and Development | 8% | |
| Disease | 100% | |
| Heart disease | 26% | |
| Cancer | 12% | |
| Stroke | 13% | |
| Kidney disease | 3% | |
| Related diseases | 9% | |
| Multicategorical and/or non-specific | 38% | |
| Organization and Health Care Delivery | 100% | |
| Ambulatory care services (e.g., outpatient depts., neighborhood health centers) | 7% | |
| Other out-of-hospital services (e.g., home health, extended care, patient education) | 7% | |
| Intensive care (e.g., coronary care units, stroke units) | 23% | |
| Support services (e.g., laboratory services, registries, medical records) | 8% | |
| Electronic monitoring networks and other consultation services | 16% | |
| Community faculty for subregional programs | 5% | |
| Integrating services of several hospitals and other agencies | 15% | |
| Other | 19% | |

HEALTH PROFESSIONALS REACHED THROUGH EDUCATION AND TRAINING PROGRAMS

| | <u>Grand Totals</u> | <u>FY68</u> | | <u>FY69</u> | | <u>FY70</u> | | <u>FY71</u> | |
|------------------------|-------------------------|--------------|------|---------------|------|---------------|------|---------------|------|
| | | | | | | | | 6/1/70-2/1/71 | |
| <u>TOTAL</u> | <u>193,708</u> | <u>1,139</u> | 100% | <u>52,396</u> | 100% | <u>63,973</u> | 100% | <u>76,200</u> | 100% |
| Physicians | 46,352 | 319 | 28 | 15,719 | 30 | 14,714 | 23 | 15,600 | 20 |
| RN's | 68,440 | 729 | 64 | 24,102 | 46 | 19,832 | 31 | 23,777 | 31 |
| Allied Health | *•56,438 | 80 | 7 | 6,288 | 12 | 21,750 | 34 | 28,320 | 38 |
| Multidis- ciplinary | 22,478 | 11 | 1 | 6,287 | 12 | 7,677 | 12 | 8,503 | 11 |

* Includes approximately 20,000 emergency health personnel such as ambulance drivers, firemen, etc.

February 15, 1971

Distribution of Grants Awarded
by Primary Activity Emphasis and Categorical Disease
(Net to Date and Available Current Period)

| <u>Net Operational Grants Awarded to Date</u> | | <u>Funds Available Current Program Period</u> | <u>(Level as of 12/31/70)</u> |
|--|----------------|--|-------------------------------|
| Total Net | \$254.2 | Total Available | \$95.0 |
| Program Direction - Project Development, Planning | \$ 91.5 | Program Direction - Project Development, Planning | \$39.8 |
| Operational Projects | \$162.7 | Operational Projects | \$55.2 |
| <u>Activity Emphasis - Projects</u> | <u>\$162.7</u> | <u>Activity Emphasis - Projects total</u> | <u>\$55.2</u> |
| Education & Training | 88.1 | Education & Training | 29.1 |
| Demonstration of Care | 53.1 | Demonstration of Care | 21.7 |
| Research & Development | 21.5 | Research & Development | 4.4 |
| <u>Disease</u> | <u>162.7</u> | <u>Disease</u> | <u>55.2</u> |
| Heart | 45.9 | Heart | 14.1 |
| Cancer | 17.1 | Cancer | 6.5 |
| Stroke | 17.4 | Stroke | 7.1 |
| Related (Diabetes, Kidney, Pulmonary) | 16.4 | Related (Diabetes, Kidney, Pulmonary) | 6.5 |
| Multicategorical | 65.9 | Multicategorical | 21.0 |

February 11, 1971
OPPE

Status of
OPERATIONAL GRANTS

| | <u>1967</u> <u>Awarded</u> | <u>1968</u> <u>Awarded</u> | <u>1969</u> <u>Awarded</u> | <u>1970</u> <u>Awarded</u> | <u>1971</u> <u>Awarded</u> |
|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| 28 Alabama..... | ... | ... | 903,105 | 1,148,226 | 32,507 |
| 04 Albany..... | 914,627 | 1,140,015 | 139,617 | 1,534,208 | 1,094,930 |
| 52 Arkansas..... | ... | ... | 579,924 | 983,127 | ... |
| 56 Bi-State..... | ... | ... | ... | 1,012,307 | ... |
| 19 California..... | ... | 2,232,864 | 9,602,090 | 2,376,152 | 9,256,963 |
| 50 Central N.Y..... | ... | 460,314 | 1,237,940 | 45,039 | 618,002 |
| 40 Colorado-Wyoming..... | ... | ... | 1,146,824 | 1,336,738 | ... |
| 08 Connecticut..... | ... | ... | 1,548,257 | 1,197,354 | ... |
| 31 D.C. Metropolitan..... | ... | 418,318 | 1,427,008 | 1,189,486 | 508,893 |
| 24 Florida..... | ... | ... | 779,085 | 1,757,031 | 68,933 |
| 46 Georgia..... | ... | 1,416,777 | 2,635,789 | 68,660 | 2,167,534 |
| 26 Greater Delaware..... | ... | ... | 2,862,484 | 2,500,033 | ... |
| 58 Greater New York..... | 967,010 | 1,127,282 | 371,532 | 3,093,923 | ... |
| 01 Hawaii..... | ... | ... | 903,301 | 914,701 | 1,047,774 |
| 43 Indiana..... | ... | ... | 1,572,396 | 1,632,990 | 1,191,212 |
| 15 Intermountain..... | 1,790,603 | 1,789,792 | 3,113,706 | 3,553,599 | 28,444 |
| 27 Iowa..... | ... | 412,841 | 73,979 | 1,208,683 | ... |
| 02 Kansas..... | 1,076,600 | 1,576,304 | 1,727,063 | 58,516 | ... |
| 54 Maine..... | ... | 318,239 | 862,529 | 453,406 | 895,756 |
| 44 Maryland..... | ... | ... | 2,236,520 | 2,124,469 | ... |
| 51 Memphis..... | 173,119 | 749,448 | 890,107 | 1,301,111 | 1,027,301 |
| 53 Michigan..... | ... | 852,241 | 989,229 | 2,725,658 | ... |
| 57 Mississippi..... | ... | ... | 731,406 | 1,754,474 | 125,834 |
| 09 Missouri..... | 2,887,903 | 4,490,607 | 5,227,008 | 4,996,201 | 129,985 |
| 32 Mountain States..... | ... | 206,913 | 1,997,283 | 1,959,224 | ... |
| 47 Nebraska - South Dakota... | 350,339 | 214,987 | 501,206 | 1,162,224 | 395,441 |
| 42 New Jersey..... | ... | ... | 1,030,563 | 1,412,366 | ... |
| 34 New Mexico..... | ... | 475,798 | 1,959,119 | ... | 1,189,341 |

February 9, 1971

Status of
OPERATIONAL GRANTS

| | <u>1967</u> <u>Awarded</u> | <u>1968</u> <u>Awarded</u> | <u>1969</u> <u>Awarded</u> | <u>1970</u> <u>Awarded</u> | <u>1971</u> <u>Awarded</u> |
|------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| 03 Northern New England..... | ... | ... | 955,086 | 313,788 | 660,571 |
| 21 Northlands..... | ... | ... | 1,308,058 | 1,470,765 | ... |
| 06 North Carolina..... | ... | 1,799,654 | 2,168,829 | 2,275,014 | 52,166 |
| 63 Northwestern Ohio..... | ... | ... | ... | 1,545,276 | 26,651 |
| 22 Ohio State..... | ... | ... | 964,367 | 204,175 | 809,686 |
| 48 Ohio Valley..... | ... | ... | 855,317 | 1,269,711 | ... |
| 23 Oklahoma..... | ... | ... | 1,121,457 | 1,408,097 | ... |
| 12 Oregon..... | ... | 598,879 | 831,888 | 888,385 | 14,872 |
| 65 Puerto Rico..... | ... | 238,027 | 253,065 | 1,058,789 | ... |
| 25 Rochester..... | ... | 724,664 | 1,018,675 | 939,674 | ... |
| 35 South Carolina..... | ... | ... | 931,507 | 1,234,457 | 1,333,301 |
| 59 Susquehanna Valley..... | ... | ... | 546,067 | 719,427 | ... |
| 18 Tennessee Mid. South..... | ... | 2,088,598 | 2,712,154 | 2,668,969 | (21,813) |
| 07 Texas..... | ... | 1,943,569 | ... | 2,764,538 | 1,821,674 |
| 62 Tri-State..... | ... | ... | 436,122 | 1,642,162 | 48,620 |
| 38 Wash. - Alaska..... | ... | 1,086,764 | 1,090,197 | 2,035,610 | ... |
| 13 Western N.Y..... | ... | 357,761 | 1,647,796 | 1,413,701 | 226,720 |
| 31 Western Pennsylvania..... | ... | ... | ... | 2,359,490 | ... |
| 37 Wisconsin..... | ... | 643,008 | 1,209,914 | 1,841,718 | 1,200,949 |
| | 8,160,201 | 27,363,664 | 65,099,569 | 71,553,652 | 25,952,247 |

REGIONAL MEDICAL PROGRAMS SERVICE

Applications Approved to Date by the National Advisory Council

on Regional Medical Programs but Not Funded

| | |
|-----------------------------------|--------------|
| Alabama | \$ 1,576,462 |
| Albany | 92,920 |
| Arizona | 177,501 |
| Arkansas. | 1,207,486 |
| Bi-State. | 141,800 |
| California. | 2,359,803 |
| Central New York. | 280,558 |
| Colorado/Wyoming. | 62,482 |
| Connecticut | 567,094 |
| Florida | 639,681 |
| Georgia | 706,570 |
| Greater Delaware Valley | 668,320 |
| Hawaii. | 756,191 |
| Illinois. | 1,667,027 |
| Indiana | 684,627 |
| Intermountain | 703,248 |
| Iowa. | 425,013 |
| Kansas. | 716,622 |
| Louisiana | 547,532 |
| Maine | 751,761 |
| Maryland. | 562,404 |
| Memphis | 661,405 |
| Metro. New York | 687,547 |
| Metro. D.C. | 1,949,005 |
| Michigan. | 1,713,674 |
| Missouri. | 828,719 |
| Mountain States | 565,748 |
| Mississippi | 35,420 |
| North Dakota. | 145,383 |
| Nebraska. | 349,632 |
| South Dakota. | 379,000 |
| New Jersey. | 2,165,069 |
| New Mexico. | 171,215 |
| North Carolina. | 466,156 |
| Northeastern Ohio | 48,233 |
| Northern New England. | 58,050 |
| Northlands. | 1,180,657 |
| Northwestern Ohio | 266,768 |

| | |
|--------------------------------|----------------|
| Ohio State | \$ 284,938 |
| Ohio Valley. | 854,874 |
| Oklahoma | 205,978 |
| Oregon | 901,738 |
| Puerto Rico. | 903,426 |
| Rochester. | 437,891 |
| South Carolina | 69,281 |
| Susquehanna Valley | 223,273 |
| Tennessee Mid-South. | 405,290 |
| Texas. | 830,230 |
| Tri-State. | 996,530 |
| Virginia | 705,724 |
| Washington/Alaska. | 652,438 |
| Wisconsin. | 1,156,355 |
| Western New York | 1,106,242 |
| Western Pennsylvania | 43,911 |
| West Virginia. | <u>483,047</u> |

| | |
|------------------------------------|------------------|
| Total Direct Costs | .\$37,227,949 |
| Estimated Indirect Costs | <u>8,004,009</u> |
| Subtotal | .\$45,231,958 |

Reduction on Awards for Continuation
and Renewal Activities

| | |
|------------------------------------|----------------|
| Total Direct Costs | .\$ 1,878,149 |
| Estimated Indirect Costs | <u>412,732</u> |

\$ 2,290,881

Total.\$47,522,839

2

| (1) REGION | (2) COMMITMENT | (3) REDUCTION | (4) NEW LEVEL | (5) CARRYOVER | (6) TOTAL |
|-----------------------|-------------------|------------------|------------------|------------------|--------------|
| 1. Alabama | \$ 870,771 | \$104,493 | \$ 766,278 | -0- | \$ 766,278 |
| 2. Albany | 915,910 | 109,909 | 806,001 | 30,000 | 836,001 |
| 3. Arkansas | 1,315,752 * | 106,501 | 1,209,251 | -0- | 1,209,251 |
| 4. Arizona | 811,191 | 97,343 | 713,848 | -0- | 713,848 |
| 5. Bi-State | 709,587 | 85,150 | 624,437 | 235,646 | 860,083 |
| 6. California | 7,068,289 | 848,195 | 6,220,094 | 480,168 | 6,700,262 |
| 7. Central New York | 700,091 | 84,011 | 616,080 | 29,000 | 645,080 |
| 8. Colorado/Wyoming | 1,094,572 | 131,348 | 963,224 | 34,774 | 997,998 |
| 9. Connecticut | 1,370,565 | 164,468 | 1,206,097 | -0- | 1,206,097 |
| 0. Florida | 1,535,568 | 184,268 | 1,351,300 | -0- | 1,351,300 |
| 1. Georgia | 2,022,571 | 242,709 | 1,779,862 | -0- | 1,779,862 |
| 2. Greater Del. V. | 2,109,357 | 253,123 | 1,856,234 | -0- | 1,856,234 |
| 3. Hawaii | 923,143 | 110,777 | 812,366 | 23,396 | 835,762 |
| 4. Illinois | 1,532,333 | 183,880 | 1,348,453 | -0- | 1,348,453 |
| 5. Indiana | 1,121,411 | 134,569 | 986,842 | -0- | 986,842 |
| 6. Intermountain | 2,446,230 | 293,548 | 2,152,682 | -0- | 2,152,682 |
| 7. Iowa | 651,417 | 78,170 | 573,247 | -0- | 573,247 |
| 8. Kansas | 1,404,795 | 168,575 | 1,236,220 | 228,805 | 1,465,025 |
| 9. Louisiana | 628,369 | 75,404 | 552,965 | -0- | 552,965 |
| 0. Maine | 893,780 | 107,254 | 786,526 | 10,693 | 797,219 |
| 1. Maryland | 2,077,883 | 249,346 | 1,828,537 | -0- | 1,828,537 |
| 2. Memphis | 1,086,048 | 130,326 | 955,722 | -0- | 955,722 |
| 3. Metro. D.C. | 1,008,728 | 121,047 | 887,681 | -0- | 887,681 |
| 4. Metro. New York | 2,539,887 | 304,786 | 2,235,101 | -0- | 2,235,101 |
| 5. Michigan | 1,601,367 | 192,164 | 1,409,203 | -0- | 1,409,203 |
| 6. Mississippi | 966,160 | 115,939 | 850,221 | -0- | 850,221 |
| 7. Missouri | 2,047,610 * | 222,193 | 1,825,417 | -0- | 1,825,417 |
| 8. Mountain States | 1,611,764 | 193,412 | 1,418,352 | -0- | 1,418,352 |
| 9. Nassau/Suffolk | 838,061 * | 43,567 | 794,494 | -0- | 794,494 |
| 0. Nebraska/S. Dakota | 500,250 | 60,030 | 440,220 | -0- | 440,220 |
| 1. New Jersey | 1,236,255 | 148,351 | 1,087,904 | -0- | 1,087,904 |
| 2. New Mexico | 1,036,719 | 124,406 | 912,313 | 133,452 | 1,045,765 |
| 3. North Carolina | 1,545,105 * | 125,413 | 1,419,692 | -0- | 1,419,692 |
| 4. North Dakota | 310,683 | 37,282 | 273,401 | 19,900 | 293,301 |
| 5. Northeastern Ohio | 786,187 | 94,342 | 691,845 | -0- | 691,845 |
| 6. N. New England | 670,677 | 80,481 | 590,196 | -0- | 590,196 |
| 7. Northlands | 1,315,368 | 157,844 | 1,157,524 | -0- | 1,157,524 |
| 8. Northwest Ohio | 781,027 | 93,723 | 687,304 | -0- | 687,304 |
| 9. Ohio State | 714,075 | 85,689 | 628,386 | -0- | 628,386 |
| 0. Ohio Valley | 1,039,195 | 124,703 | 914,492 | 25,000 | 939,492 |
| 1. Oklahoma | 839,205 | 100,705 | 738,500 | -0- | 738,500 |
| 2. Oregon | 761,268 * | 38,382 | 722,886 | -0- | 722,886 |
| 3. Puerto Rico | 958,163 | 114,980 | 843,183 | -0- | 843,183 |
| 4. Rochester | 508,667 | 61,040 | 447,627 | -0- | 447,627 |
| 5. South Carolina | 1,089,023 | 130,683 | 958,340 | 203,768 | 1,162,108 |
| 6. Susquehanna V. | 545,915 | 65,510 | 480,405 | -0- | 480,405 |
| 7. Tennessee Mid-S. | 1,985,627 | 238,275 | 1,747,352 | -0- | 1,747,352 |
| 8. Texas | 1,316,700 | 158,004 | 1,158,696 | 549,344 | 1,708,040 |
| 9. Tri-State | 1,882,485 | 225,898 | 1,656,587 | -0- | 1,656,587 |
| 0. Virginia | 764,826 | 91,779 | 673,047 | -0- | 673,047 |

| <u>REGION</u> | <u>COMMITMENT</u> | <u>REDUCTION</u> | <u>NEW LEVEL</u> | <u>CARRYOVER</u> | <u>TOTAL</u> |
|----------------------|-------------------|------------------|------------------|------------------|--------------|
| 1. Washington/Alaska | \$1,617,379 * | \$181,485 | \$1,435,894 | -0- | \$1,435,894 |
| 2. West Virginia | 516,567 | 61,988 | 454,579 | -0- | 454,579 |
| 3. Western New York | 1,029,459 | 123,535 | 905,924 | -0- | 905,924 |
| 4. Western Penna. | 944,257 | 113,311 | 830,946 | -0- | 830,946 |
| 5. Wisconsin | 1,081,569 | 129,788 | 951,781 | 60,704 | 1,012,485 |
| Total | \$69,679,861 | \$8,104,102 | \$61,575,759 | \$2,064,650 | \$63,640,409 |

1/ Level for 11 month budget period

2/ Level for 10 month budget period

3/ 6 month extension with funds

* Includes additional support over previous commitment. The source of these funds are from the balance created by the 12% reduction of the initial commitment of program support for FY 1971. The regions and amounts are as follows:

1. \$ 105,000 Washington/Alaska
2. 428,246 Arkansas
3. 196,000 Missouri
4. 500,000 North Carolina
5. 441,414 Oregon
6. 475,000 Nassau/Suffolk
- \$2,145,660 Total

Additional funds to be awarded in FY 1971 are:

1. \$500,000 Nebraska 7/1/71-6/30/72
2. \$379,500 South Dakota 7/1/71-6/30/72

The grant periods beginning 7/1/71 for Kansas and South Carolina will be funded from FY 1972 appropriations.

GMB/RMPS
4/13/71

| REGION | COMMITMENT | NEW REDUCTION | PREVIOUS REDUCTION | CHANGE IN REDUCTION | PREVIOUS LEVEL | NEW LEVEL | CARRYOVER | TOTAL |
|-----------------------|-------------|------------------|-----------------------|------------------------|-------------------|------------|-----------|-----------|
| Alabama | \$ 870,771 | \$104,493 | \$ 74,016 | -\$ 30,477 | \$ 796,755 | \$ 766,278 | -0- | \$ 766,27 |
| Albany | 915,910 | 109,909 | 91,591 | -18,318 | 824,319 | 806,001 | 30,000 | 836,00 |
| Arkansas | 1,315,752 * | 106,501 | 75,438 | -31,063 | 812,068 | 1,209,251 | -0- | 1,209,25 |
| Arizona | 811,191 | 97,343 | 68,951 | -28,392 | 742,240 | 713,848 | -0- | 713,84 |
| Bi-State // | 709,587 | 85,150 | 60,314 | -24,836 | 649,273 | 624,646 | 235,646 | 860,08 |
| California | 7,068,289 | 848,195 | 600,804 | -247,391 | 6,467,485 | 6,220,094 | 480,168 | 6,700,26 |
| Central New York | 700,091 | 84,011 | 59,507 | -24,504 | 640,584 | 616,080 | 29,000 | 645,08 |
| Colorado/Wyoming | 1,094,572 | 131,348 | 93,038 | -38,310 | 1,001,534 | 963,224 | 34,774 | 997,95 |
| Connecticut | 1,370,565 | 164,468 | 116,498 | -47,970 | 1,254,067 | 1,206,097 | -0- | 1,206,09 |
| Florida | 1,535,568 | 184,268 | 130,523 | -53,745 | 1,405,045 | 1,351,300 | -0- | 1,351,30 |
| Georgia | 2,022,571 | 242,709 | 171,918 | -70,791 | 1,850,653 | 1,779,862 | -0- | 1,779,86 |
| Greater Del. V. | 2,109,357 | 253,123 | 700,000 | +446,877 | 1,409,357 | 1,856,234 | -0- | 1,856,23 |
| Hawaii | 923,143 | 110,777 | 78,467 | -32,310 | 844,676 | 812,366 | 23,396 | 835,76 |
| Illinois | 1,532,333 | 183,880 | 130,248 | -53,632 | 1,402,085 | 1,348,453 | -0- | 1,348,45 |
| Indiana | 1,121,411 | 134,569 | 95,319 | -39,250 | 1,026,092 | 986,842 | -0- | 986,84 |
| Intermountain | 2,446,230 | 293,548 | 207,929 | -85,619 | 2,238,301 | 2,152,682 | -0- | 2,152,68 |
| Iowa // | 651,417 | 78,170 | 55,370 | -22,800 | 596,047 | 573,247 | -0- | 573,24 |
| Kansas // | 1,404,795 | 168,575 | 119,407 | -49,168 | 1,285,388 | 1,236,220 | 228,805 | 1,465,02 |
| Louisiana | 628,369 | 75,404 | 53,411 | -21,993 | 574,958 | 552,965 | -0- | 552,96 |
| Maine | 893,780 | 107,254 | 75,971 | -31,283 | 817,809 | 786,526 | 10,693 | 797,21 |
| Maryland | 2,077,883 | 249,346 | 500,000 | +250,654 | 1,577,883 | 1,828,537 | -0- | 1,828,53 |
| Memphis | 1,086,048 | 130,326 | 108,605 | -21,721 | 977,443 | 955,722 | -0- | 955,72 |
| Metro. D.C. | 1,008,728 | 121,047 | 100,873 | -20,174 | 907,855 | 887,681 | -0- | 887,68 |
| Metro. New York | 2,539,887 | 304,786 | 500,000 | +195,214 | 2,039,887 | 2,235,101 | -0- | 2,235,10 |
| Michigan | 1,601,367 | 192,164 | 136,116 | -56,048 | 1,465,251 | 1,409,203 | -0- | 1,409,20 |
| Mississippi | 966,160 | 115,939 | 82,123 | -33,816 | 884,037 | 850,221 | -0- | 850,22 |
| Missouri | 2,047,610 * | 222,193 | 157,386 | -64,807 | 1,694,224 | 1,825,417 | -0- | 1,825,41 |
| Mountain States | 1,611,764 | 193,412 | 136,999 | -59,413 | 1,474,765 | 1,418,352 | -0- | 1,418,35 |
| Nassau/Suffolk | 838,061 * | 43,567 | 30,860 | -12,707 | 332,201 | 794,494 | -0- | 794,49 |
| Nebraska/S. Dakota 3/ | 500,250 | 60,030 | 42,521 | -17,509 | 457,729 | 440,220 | -0- | 440,22 |
| New Jersey | 1,236,255 | 148,351 | 105,081 | -43,270 | 1,131,174 | 1,087,904 | -0- | 1,087,90 |
| New Mexico | 1,036,719 | 124,406 | 103,672 | -20,734 | 933,047 | 912,313 | 133,452 | 1,045,76 |
| North Carolina | 1,545,105 * | 125,413 | 88,833 | -36,580 | 956,272 | 1,419,692 | -0- | 1,419,69 |
| North Dakota | 310,683 | 37,282 | 26,408 | -10,874 | 284,275 | 273,401 | 19,900 | 293,30 |
| Northeastern Ohio | 786,187 | 94,342 | 78,619 | -15,723 | 707,568 | 691,845 | -0- | 691,84 |

| <u>REGION</u> | <u>COMMITMENT</u> | <u>NEW REDUCTION</u> | <u>PREVIOUS REDUCTION</u> | <u>CHANGE IN REDUCTION</u> | <u>PREVIOUS LEVEL</u> | <u>NEW LEVEL</u> | <u>CARRYOVER</u> | <u>TOTAL</u> |
|-----------------------|-------------------|--------------------------|-------------------------------|--------------------------------|---------------------------|------------------|------------------|--------------|
| N. New England | \$ 670,677 | \$ 80,481 | \$ 57,007 | -\$ 23,474 | \$ 613,670 | \$ 590,196 | -0- | \$ 590,196 |
| Northlands | 1,315,368 | 157,844 | 111,806 | -46,038 | 1,203,562 | 1,157,524 | -0- | 1,157,524 |
| Northwest Ohio | 781,027 | 93,723 | 78,103 | -15,620 | 702,924 | 687,304 | -0- | 687,304 |
| Ohio State | 714,075 | 85,689 | 71,408 | -14,281 | 642,667 | 628,386 | -0- | 628,386 |
| Ohio Valley | 1,039,195 | 124,703 | 88,331 | -36,372 | 950,864 | 914,492 | 25,000 | 939,492 |
| Oklahoma | 839,205 | 100,705 | 71,332 | -29,373 | 767,873 | 738,500 | -0- | 738,500 |
| Oregon | 761,268 * | 38,382 | 27,187 | -11,195 | 292,667 | 722,886 | -0- | 722,886 |
| Puerto Rico | 958,163 | 114,980 | 81,443 | -33,537 | 876,720 | 843,183 | -0- | 843,183 |
| Rochester 3/ | 508,667 | 61,040 | 43,236 | -17,804 | 465,431 | 447,627 | -0- | 447,627 |
| South Carolina ✓ | 1,089,023 | 130,683 | 92,566 | -38,117 | 996,457 | 958,340 | 203,768 | 1,162,108 |
| Susquehanna Valley | 545,915 | 65,510 | 46,402 | -19,108 | 499,513 | 480,405 | -0- | 480,405 |
| Tennessee Mid-South ✓ | 1,985,627 | 238,275 | 168,778 | -69,497 | 1,816,849 | 1,747,352 | -0- | 1,747,352 |
| Texas | 1,316,700 | 158,004 | 111,919 | -46,085 | 1,204,781 | 1,158,696 | 549,344 | 1,708,040 |
| Tri-State | 1,882,485 | 225,898 | 160,011 | -65,887 | 1,722,474 | 1,656,587 | -0- | 1,656,587 |
| Virginia 2/ | 764,826 | 91,779 | 65,010 | -26,769 | 699,816 | 673,047 | -0- | 673,047 |
| Washington/Alaska ✓ | 1,617,379 * | 181,485 | 128,552 | -52,933 | 1,383,827 | 1,435,894 | -0- | 1,435,894 |
| West Virginia | 516,567 | 61,988 | 43,908 | -18,080 | 472,659 | 454,579 | -0- | 454,579 |
| Western New York | 1,029,459 | 123,535 | 87,504 | -36,031 | 941,955 | 905,924 | -0- | 905,924 |
| Western Penna. | 944,257 | 113,311 | 80,261 | -33,050 | 863,996 | 830,946 | -0- | 830,946 |
| Wisconsin | 1,081,569 | 129,788 | 91,933 | -37,855 | 989,636 | 951,781 | 60,704 | 1,012,485 |
| Total | \$69,679,861 | \$8,104,102 | \$6,963,513 | \$1,143,589 | \$60,570,688 | \$61,575,759 | \$2,064,650 | \$63,640,409 |

Level for 11 month budget period
Level for 10 month budget period
6 month extension with funds

Includes additional support over previous commitment. The source of these funds are from the balance created by the 12% reduction of the initial commitment of program support for FY 1971. The regions and amounts are as follows:

1. \$ 105,000 Washington/Alaska
2. 428,246 Arkansas
3. 196,000 Missouri
4. 500,000 North Carolina
5. 441,414 Oregon
6. 475,000 Nassau/Suffolk
- \$2,145,660 Total

GMB/RMPS
4/13/71

Regional Medical Programs

Obligations to States for Grants

| | <u>1970 Actual</u> Grants | <u>1971 Estimate</u> Grants | <u>1972 Estimate</u> Grants |
|--------------------------------|------------------------------|--------------------------------|--------------------------------|
| Alabama..... | \$1,148,266 | \$ 855,228 | \$ 855,228 |
| Alaska (See Wash.)..... | --- | --- | --- |
| Arkansas..... | 983,127 | 986,663 | 986,663 |
| Arizona..... | 1,079,200 | 901,822 | 901,822 |
| California..... | 1,742,652 | 7,857,994 | 7,857,994 |
| Colorado..... | 3,295,962 | 3,008,703 | 3,008,703 |
| Mountain States RMP-WICHE... | (1,959,224) | (1,791,839) | (1,791,839) |
| Colorado-Wyoming RMP | (1,336,738) | (1,216,864) | (1,216,864) |
| Connecticut..... | 1,197,354 | 1,523,691 | 1,523,691 |
| Delaware (See Pa.)..... | --- | --- | --- |
| District of Columbia..... | 1,431,784 | 1,103,044 | 1,103,044 |
| Florida..... | 1,756,986 | 1,707,130 | 1,707,130 |
| Georgia..... | 87,270 | 2,248,543 | 2,248,543 |
| Hawaii..... | 914,701 | 1,026,281 | 1,026,281 |
| Idaho (See Colo.)..... | --- | --- | --- |
| Illinois..... | 2,216,969 | 1,703,533 | 1,703,533 |
| Indiana..... | 1,632,990 | 1,246,702 | 1,246,702 |
| Iowa..... | 1,144,663 | 724,197 | 724,197 |
| Kansas..... | 58,516 | 1,561,746 | 1,561,746 |
| Kentucky (Ohio Valley)..... | 1,141,193 | 1,155,300 | 1,155,300 |
| Louisiana..... | 1,144,180 | 698,574 | 698,574 |
| Maine..... | 453,406 | 993,516 | 993,516 |
| Maryland..... | 2,325,944 | 1,917,127 | 1,917,127 |
| Massachusetts (Tri-State)..... | 1,587,046 | 2,092,806 | 2,092,806 |
| Michigan..... | 2,737,658 | 1,780,280 | 1,780,280 |
| Minnesota (Northlands)..... | 1,492,265 | 1,462,328 | 1,462,328 |
| Mississippi..... | 1,811,387 | 1,074,105 | 1,074,105 |
| Missouri..... | 5,726,953 | 2,847,349 | 2,847,349 |
| Missouri RMP | (4,714,646) | (2,058,482) | (2,058,482) |
| Bi-State | (1,012,307) | (788,867) | (788,867) |
| Montana (See Colo.)..... | --- | --- | --- |
| Nebraska..... | 1,162,224 | 556,141 | 556,141 |
| Nevada (See Colo.)..... | --- | --- | --- |
| New Hampshire (See Mass.)..... | --- | --- | --- |
| New Jersey..... | 1,362,417 | 1,374,376 | 1,374,376 |
| New Mexico..... | --- | 1,133,652 | 1,133,652 |
| New York..... | 7,379,835 | 6,371,918 | 6,371,918 |
| Albany..... | (1,534,208) | (1,001,548) | (1,001,548) |
| Western N.Y. | (1,271,728) | (1,144,475) | (1,144,475) |
| Rochester | (939,674) | (565,499) | (565,499) |
| Central N.Y. | (45,039) | (778,310) | (778,310) |
| Greater N.Y. | (3,210,923) | (2,478,462) | (2,478,462) |
| Nassau-Suffolk | (378,263) | (403,624) | (403,624) |
| North Carolina..... | 2,275,014 | 2,430,000 | 2,430,000 |
| North Dakota..... | 361,371 | 345,394 | 345,394 |

Regional Medical Programs

Obligations to States for Grants (Continued)

| | <u>1970 Actual</u> Grants | <u>1971 Estimate</u> Grants | <u>1972 Estimate</u> Grants |
|------------------------------|------------------------------|--------------------------------|--------------------------------|
| Ohio..... | \$2,705,489 | \$2,494,588 | \$2,494,588 |
| Ohio State | (422,606) | (780,840) | (780,840) |
| N.W. Ohio | (1,545,276) | (854,053) | (854,053) |
| N.E. Ohio | (737,607) | (859,695) | (859,695) |
| Oklahoma..... | 1,413,974 | 932,966 | 932,966 |
| Oregon..... | 888,385 | 355,590 | 355,590 |
| Pennsylvania..... | 5,561,803 | 3,369,032 | 3,369,032 |
| Delaware Valley | (2,500,033) | (1,712,369) | (1,712,369) |
| Western Pennsylvania | (2,359,490) | (1,049,755) | (1,049,755) |
| Susquehanna Valley | (702,280) | (606,908) | (606,908) |
| Puerto Rico..... | 1,070,577 | 1,065,215 | 1,065,215 |
| Rhode Island (See Mass.).... | --- | --- | --- |
| South Carolina..... | 1,234,457 | 1,210,695 | 1,210,695 |
| South Dakota (See Nebraska). | --- | --- | --- |
| Tennessee..... | 3,970,080 | 3,395,065 | 3,395,065 |
| Tennessee Mid-South | (2,668,969) | (2,207,472) | (2,207,472) |
| Memphis | (1,301,111) | (1,187,593) | (1,187,593) |
| Texas..... | 2,805,538 | 1,463,809 | 1,463,809 |
| Utah (Intermountain)..... | 3,562,599 | 2,719,536 | 2,719,536 |
| Vermont (N. New England).... | 313,788 | 745,609 | 745,609 |
| Virginia..... | 696,633 | 1,020,331 | 1,020,331 |
| Washington..... | 2,035,610 | 1,681,350 | 1,681,350 |
| West Virginia..... | 447,905 | 574,281 | 574,281 |
| Wisconsin..... | 1,843,868 | 1,202,408 | 1,202,408 |
| Wyoming (See Colorado)..... | --- | --- | --- |
| | <hr/> \$78,202,039 | <hr/> \$74,918,618 | <hr/> \$74,918,618 |

In-center Hospital Hemodialysis - Chronic Hemodialysis

Cost figures range from \$15,000 to \$50,000 annually per person.

Home Dialysis

For dialysis in the home by the patient or a family member costs average \$15,000 for the first year of dialysis which includes an average 10 weeks of in-center training, purchase of equipment, and home renovation.

Ensuing years cost in the home range from \$5,000 to \$7,000 annually.

Limited Care Dialysis

Although complete cost data on dialysis provided in low overhead facilities is not available, indices point to an annual cost data range from \$7,500 to \$15,000 per year per person.

KIDNEY DISEASE CONTROL PROGRAM

Cost Trends in Transplantation

It is very difficult to discuss how advances in transplantation have led to cost reductions without first defining the components of transplant cost. The two biggest and most problematical components of transplant costs are the pre-transplant dialysis (if you want to consider this as a transplant cost) and the post-transplant complications. The cost of the actual transplant itself and the immediate post-operative hospital care for a normal surgical end result is somewhat fixed and standard and is comparable to other surgical costs. Any improvements in transplant costs, therefore, will have to come either in the reduction of pre-transplant dialysis time or in the reduction of post-transplant complications.

Most medical research and advances have also been in these two areas. As the result of organ procurement projects supported by the Kidney Disease Control Program and various other organ procurement and sharing projects through the country, there is the feeling, although very subjective, that because of organ sharing and procurement programs, a patient's time awaiting cadaver transplantation has been reduced. This, in turn, reduces the pre-operative dialysis which, therefore, represents a cost savings.

As far as advances directed toward the problem of rejection are concerned, advances have been made in two basic areas:

1. Tissue typing - Within the last 5 years, considerable refinement in technique and knowledge of tissue typing has been made. Although there is a great deal of controversy at the moment, about the efficacy of tissue typing, most transplanters will agree that tissue typing has contributed significantly to the recent improvement in transplant survival data. This is even more evident in the living related donors, but is also true for cadaveric donors. As tissue typing has become more refined and transplants are done between more genetically compatible donor and recipient, the complications of rejection have decreased, thus representing a significant cost reduction.
2. Immunosuppression - Immunosuppression directed against the transplantation rejection phenomena has also improved over the past 5 years, with ALG probably being the most significant addition to the immunosuppressive armamentarium. This area, like that of tissue typing, is by no means adequate as yet, and continued research must be done. However, better immunosuppressive therapy has resulted in fewer complications as well as the ability to treat rejection at an earlier stage and has resulted, ultimately, in less morbidity and less cost.

Another very recent technical advancement, which has represented significant cost saving in a limited number of transplant centers, is the pulsatile perfusion apparatus developed by Dr. Belzer. In the centers most experienced in using this apparatus, one is able to remove the donor kidneys, and evaluate them anatomically and physiologically, before embarking on the tissue typing, thus cutting down significantly on tissue typing expenses. However, this

saving is significant only in a limited number of centers that have had a great deal of experience with this apparatus. As more centers use it and gain more experience with it, one is hopeful that this will represent widespread savings.

Another very significant factor affecting reduction of transplant costs is experience and number of transplants done by the center. Dr. Kountz's testimony at last year's Senate hearings stated that of the 200 transplants that were performed at their center, the first 50 cost about \$20,000, the next 100, between \$10,000 and \$15,000, and the last 50, between \$5,000 and \$10,000.

Unfortunately, progress in transplantation has been somewhat slow and steady, and there have been no major or drastic breakthroughs as yet. I have rendered transplantation just an ordinary surgical procedure. Therefore, costs still tend to be very high and somewhat difficult to assess.

KIDNEY DISEASE CONTROL PROGRAM

Cost Trends in Hemodialysis

The Kidney Disease Control Program let 12 six-year home hemodialysis training program contracts in 1967. The purposes of these contracts are to test the feasibility of home dialysis as an effective and efficient method of treatment of end-stage kidney disease, to provide the Kidney Disease Control Program with pertinent cost and medical data, and to develop financial sources other than Federal to support such a training program.

The cost data collected from these contracts has shown that the costs of home dialysis are considerably lower than center dialysis and the trends of these home costs indicate they will continue to drop. Contributing factors to these lower costs have been such things as:

1. lowering costs of equipment and supplies;
2. bulk buying and storage of supplies by the training center for the home patient;
3. development of techniques for reuse of certain supplies, i.e., blood tubing, artificial kidney (coil, capillary, and Kiil);
4. lower personnel costs through the effective use of paramedical personnel for patient training and supervision; and
5. effective utilization of already over-crowded hospital beds: if a hospital operates on a 6 day, 2 shift schedule, 4 center dialysis patients will continually occupy one bed; however, if that same bed is used to train a patient for home dialysis using the average training time of 6 to 8 weeks, six to eight patients will occupy that bed every year.

A certain number of patients cannot be trained for home hemodialysis for a variety of reasons, some of which include intellectual inability to grasp the procedure, psychological problems in accepting the responsibility, and not having a reliable partner to assist in the procedure at home.

Thus, in order to develop a relatively economical way to treat these patients, the concept of "limited care" dialysis came into being. The Kidney Disease Control Program began funding three limited care facilities in June 1970.

The purpose of these units is to provide dialysis in a low overhead facility staffed with limited medical personnel and operated essentially by paramedical personnel. Complete cost data on the operation of this kind of unit is not available at this time but all indexes point to average costs per dialysis of between \$50 to \$100 as compared to the average of \$200 to \$300 per dialysis costs in a hospital setting.

KIDNEY DISEASE CONTROL PROGRAM

The Dow Hollow Fiber Artificial Kidney (HFAK)

This dialyzer is composed of some 10 to 13,000 deacetylated cellulose acetate hollow fibers, plasticized and imbedded in a silicone rubber base at either end. The fibers are but 215 microns in diameter providing an effective dialyzing surface of approximately 1 meter square. They are about 8 inches long and require only about 115 to 135 mls of priming fluid (depending upon the geometry of the header used). The performance of this dialyzer, in general, is as effective as a coil type dialyzer with regard to dialysance and ultrafiltration. Its cost, ease of use, and its reuseability make it more efficient than most of the available equipment. However, all is not as rosy as appears. The one major drawback to this piece of equipment is in its thrombogenic tendencies, a fact that makes its general applicability impractical at the present time. In regard to performance, the dialysance, as measured by the creatinine, urea and phosphate clearances, demonstrate that this unit functions as effectively as the Coil and considerably more so than the Kiil. In addition, Dr. Gotch was not able to demonstrate any tangible differences in the well being of the patients dialyzed with any of these dialyzers. Ultrafiltration was quite easily effected by varying the negative pressures produced by a Venturi. Negative pressures could be easily generated from a -250 to a -500 millimeters of mercury with a mere 25- to 30-pound waterhead pressure. Two potential problems arise in this area:

1. Attaining a 30-pound head of pressure from the water tap, and
2. Adjustments that would necessarily be made to adapt the dialyzer to these new pressures.

Apparently, both can be handled quite easily mechanically. However, the latter of these points appears to be more troublesome because of the reluctance of some of the manufacturing companies to make modifications on their machines (usually, this involves not much more than a change in dial settings and readout dials).

In regard to its efficiency of use, this unit combines the best points of the Kiil and the Coil dialyzers. The unit at present costs about \$18.95. Mass production began in January and over 1,200 were sold. February sales figures will run over 2,000 and there is presently an adequate inventory on hand for purchase. It comes presterilized, requiring only a brief period of time to set it up, yet it can easily be cleaned and reesterilized with Formalin solution, to be used again (a process which only takes about 15 minutes). The HFAK can be used without a blood pump and can be used with either a fistula or an external cannula.

The major problem associated with this dialyzer is its thrombogenic tendencies, which appear to be not only related to the unit itself, but also to the individual patient. Such factors as fiber distortion, a problem which probably will not be completely eradicated because of the difficulty in the manufacturing process itself, and the shape of the header, an area where blood pools before it goes through the hollow fibers, are the two major mechanical problems at the present time. Often, one will see significant stagnation of flow in the header resulting in hemoconcentration because of fluid dynamic changes occurring when moving from a large bore tube to a very small bore tube. Indeed, both of these factors will tend toward spontaneous thrombosis. In addition, there appears to be considerable patient variance in regard to spontaneous clotting within the dialyzer itself. Dr. Gotch has already undertaken some basic coagulation studies in small groups of patients, and these seem to suggest that there are certain characteristics found in patients who do not readily clot their units. These factors are threefold:

1. They seem to have prolonged bleeding time;
2. They appear to have a decreased prothrombin consumption time; and
3. They appear to have abnormal platelet clumping with collagen stimulation.

One therapeutic maneuver that immediately suggests itself is to place patients on long-term anticoagulation with Coumadin. However, this only slightly prolonged the life of the dialyzer in those patients with a tendency to clot but, unfortunately, with a significant increase in morbidity. This finding hints that the clotting may be primarily related to factors other than those related to coagulation. Indeed, Dr. Gotch presently suspects that the clotting is secondary to platelet-fibrin clumping, which subsequently occludes the hollow fibers and secondarily results in clot formation. At present, he was working on more detailed coagulation experiments in an attempt to further elucidate the problem.

The Cordis Dow Corporation is presently in the process of developing a more efficient capillary that will effectively reduce clot formation. It will be introduced by Dr. Gotch at the ASAIO this summer and subsequently be put on the market. It will sell for the same price as the present kidney.