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ANALYSIS OF PAHO'S FELLOWSHIP PROGRAM

The WHO Executive Board, in its 1983 meeting, highlighted the importance of the fellowship program as one of the mechanisms for promoting the goal of HFA/2000, and requested the Secretariat to carry out an analysis of the program and to present a report every six years.

The Pan American Health Organization, Regional Office of the World Health Organization for the Americas, mindful of both the global policies and reorientation of programmatic priorities regionally, characteristics of the countries, demand for training, and decentralization of the process for granting fellowships, began a detailed review of the performance of this program based on the information available on the fellowships awarded by the Organization in the last 16 years and on the information gathered by the country offices concerning the last five years. This overall effort was geared to assessing the program's performance, the degree to which the fellowship policies expressed in the pertinent resolutions have been implemented, and the particular conditions inherent to the Region's situation.

This document, based on the data obtained in the study, was presented to the Twelfth Meeting of the Subcommittee on Planning and Programming in April 1989 which, after a detailed discussion, made specific observations that are being brought to the attention of the Executive Committee in a separate report (see Document CE103/19). The topic is now being submitted to the Executive Committee for its suggestions and recommendations for enhancing the report. After consideration by the Regional Committee for the Americas (Directing Council) in September, the document will be submitted by the Americas Region to the WHO Executive Board. The observations of the Executive Committee will also assist in developing criteria for adequate follow-up and better use of fellowships in the Region.

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ANALYSIS OF PAHO'S FELLOWSHIP PROGRAM

I. INTRODUCTION

1.1 Justification

Since their inception, the Pan American Health Organization (PAHO) and the World Health Organization (WHO) have directed a considerable part of their technical cooperation with the member countries to developing and improving the education and training of health personnel. Human resource development is viewed as a critical element in achieving national health care plans.

In the Region of the Americas (AMRO) one of the basic components of human resource development has been the PAHO/WHO Fellowships Program. The basic purpose of this program is to provide training to health care personnel in those priority areas for which adequate training is not available within the country. The Fellowships Program has had to adapt to the countries' changing health care needs. It has been responsive to the progressive development of the service infrastructure, to educational development and to the important role played by universities. The Fellowships Program has also incorporated international, regional and national scientific and technological developments.

The Fellowships Program has had to respond to demands that have arisen from the various levels of the health services sector and from the institutions that train personnel. It has assisted the latter by keeping their faculty abreast of scientific and technological advances in health, as well as by assisting in the incorporation of new educational methods, improved curriculum and teaching technologies.

Thus, the Fellowships Program of PAHO/WHO cannot be analyzed in isolation from the context of the policies adopted by the countries of

the Organization. This is true for the Fellowships Program in particular and for Human Resources Development in general. Any analysis must take into account regional and national short-term and long-term goals, the structural situations which impact on the determination of priorities for human resource development in health and how fellowships are used.

The role of the PAHO/WHO Fellowships Program, within the programs of technical cooperation, reflects the broad regional, subregional and intercountry differences. This role ranges from one of catalyst in a large national program to fundamental training in fields determined to be of priority.

In January 1983 the WHO Executive Board reiterated its recognition of the contribution made by the Fellowships Program to the human resource development (1). It also reaffirmed its view that fellowships should continue to be used as one of a number of mechanisms for training the manpower required to implement the global strategy of "Health for All by the Year 2000" (HFA/2000). The same Resolution requested the Director General and the Regional Directors, in cooperation with the Members States, to continue to improve reporting procedures for fellowships, to carry out an assessment of the program in the context of human resource development and its role in national health systems and to submit a report every six years to the Board.

Based on this resolution and mindful of the annual and quadrennial reports, PAHO decided to undertake an analysis of its fellowship program at the regional level. The analysis presented here is based on existing data for the period 1971-1982 and data collected in a special study which covered the period 1983-1987.

(1) Resolution EB71.R6 1983

1.2 Background and Fellowships Program Policies

WHO has placed a high priority on its Fellowships Program since it was established. In 1947, a few months after WHO was constituted, the Executive Board passed a Resolution (2) designating the Fellowships Program as one of its four fundamental activities. Approximately 25% of the WHO Regular Budget was allocated for Fellowships in the different regions. The PAHO Fellowships Program dates back even further. In 1939 the Pan American Sanitary Bureau (PASB) awarded 22 fellowships in Public Health. Between 1940-1944 another 200 fellowships were awarded for the study of Public Health, medicine and related health sciences. The number of awards rapidly increased reaching an average of 1,000 fellowships annually in the 1970s (3). Fellowship awards in conjunction with short courses, seminars and workshops constituted the Organization's support to health manpower development in the countries.

For purposes of this report, Resolution CD18.25 (4) passed by the WHO Directing Council in 1968 is of particular interest. This Resolution recommended that the Director continue to monitor the Fellowships Program and it requested that fellowships be awarded for training among countries so as to fully utilize the best personnel available within the Region. Subsequent resolutions passed in 1969 broadened criteria and recommended that fellowships be awarded for in country training.

In general, specific policies are not set forth in resolutions of the WHO and PAHO Governing Bodies (5). However, many of the

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- (2) WHO, Resolution EB69/26, November 5, 1981, Annex 9, p. 133
 - (3) PAHO. "La Organización Panamericana de la Salud: 75 Anos de Servicio," Educación Médica y Salud, Washington, D.C., 1977, Vol. 11, No. 4
 - (4) Resolution CD18.25, 1968
 - (5) Resolutions CE61.23 and CD19.38, 1969 (3)

recommendations on health personnel made during the decade of the 1970s constitute the framework for Fellowship's policy during this period.

Health policies and thus policy on human resource development that provided the context for the PAHO and WHO Fellowships Program policies in the 1980's did have an immediate point of reference in a 1977 Resolution passed by the World Health Assembly. Resolution WHA30.43 (6) urges, as a social goal for governments and for the Organization, the attainment for "all the citizens of the World, by the year 2000, a level of health that will permit them to lead a socially and economically productive life". This has been translated into the well known goal of "Health for all by the year 2000" (HFA/2000).(7)

In May 1982, WHO adopted the Seventh General Programme of Work (8) which represents the operational response to the goal of HFA/2000. This program of work considers fellowships, support for training courses and institutions as part of the strategy to develop health services infrastructure and human resource development.

This was followed by the aforementioned Resolution (1) which reinforced the need to orient fellowships to national health policy and the goal of HFA/2000. This Resolution also emphasized the adequate selection of Fellows in relation to a countries needs and the use of a broad array of alternate training mechanisms.

PAHO formulated the Plan for Action for the Implementation of Regional Strategies for Health for All.(9) This document regards as priority the preparation of mid-level, auxiliary, and community based/

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- (1) Resolution EB71.6, 1983
 - (6) Resolution WHA28.40, 1975
 - (7) Resolution WHA30.43, 1977
 - (8) WHO Seven General Programme of Work covering the period 1984-1989, Geneva, 1982
 - (9) PAHO/WHO, Health for all for the year 2000. Plan for Action for the Implementation of Regional Strategies, Washington, D.C.,1982

technical personnel, complimented by undergraduate and postgraduate training in health sciences, and training in public health. The need to ensure the operational capacity of the health system also makes personnel training for administrative development extremely important.

The Medium-Term Program for Human Resource Development of PAHO (10) analyzed the different forms of cooperation and referred to support for direct training by the award of fellowships for study outside the Region and in a Fellows's own country. The latter type of award recognizes the national capacity for training within the country. Likewise, the Medium-Term program proposes a review of the policies and plans for awarding fellowships for projects relevant to human resource needs in health.

1.3 Managerial Strategy

The development and administration of the Fellowships Program in PAHO has occurred within the framework for implementing technical cooperation within the Region.

The administration of fellowships requires a managerial component which has evolved with the overall progression of the Organization's administrative development. Its' *raison d'etre* is its contribution to the development of human resources in the Region, as a function of national and regional health priorities. Thus, fellowships should be viewed in the context of contributing to the population's health which is intimately linked to the managerial strategies practiced by the Organization.

(10) OPS/OMS Programa a Mediano Plazo de Personal de Salud 1984-1989, Washington, D.C., Sept. 1983

The basic principles of PAHO's management strategy can be found in Resolution WHA33.17 (11) of the 1980 World Health Assembly and in the document "Administrative Framework for the Optimal Uses of WHO Resources to Directly Support the Member Countries" (12). The latter document offers points of reference applicable to the orientation of the Fellowships Program.

The first principle recognizes the countries as a "basic unit of production" in the context of technical cooperation in health and placed special importance on the PAHO country offices. It also generated a greater capacity for decision-making and decentralization which provided the context for decentralization within the Fellowships Program.

The second principle, emphasizing more active participation on the part of the countries in the Region, gives them a greater share of responsibility in administering the fellowships through the involvement of their technical units and agencies in the formulation of national fellowship plans.

The third principle defends the flexibility of the managerial process of cooperation, and suggests that consideration be given to alternative forms of training that may encompass more than the use of fellowships.

The fourth principle, favoring the mobilization of national resources, promotes the development of vigorous processes of intercountry cooperation as the basis of a wide-ranging exchange of human resources.

Finally, the fifth principle, promotes internal coordination among all the Organization's components and requires broad participation of all units that correspond to the various fields of knowledge in the orientation of the Fellowships Program.

(11) Resolution WHA33.17, 1980

(12) Resolution WHA-DGO 83.1, 1983

These principles have resulted from the broad health promotion policies and from the human resources and fellowship guidelines. They constitute the theoretical framework for analyzing the Region's Fellowships Program.

II. METHODOLOGY

2.1 Research Design

This study was retrospective and longitudinal and is in fact, comprised of two studies: Study A, covered 16 years of the Fellowships Program, (1971 to 1986), it was based on secondary sources available in PAHO's computer system. The second, Study B, covered the period from 1983 to 1987. The main objective of this study was to analyze the countries' performance in the process of decentralization of the Fellowships Program and to further analyse the policies and regulations established by PAHO/WHO. The collection of new data was designed to complement the information already available.

The countries selected for both studies were Argentina, Belize, Bolivia, Brazil, Colombia, Costa Rica, Cuba, Chile, the Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela (*).

During the 1971-1986 period 17,128 fellowships were awarded to the 22 countries chosen; they represent the universe of Study A. For the 1983-1987 period, 5,259 fellowships were awarded. Information was received for only 5,219 fellowships, which represents 99% of all the fellowships awarded in the five years chosen for Study B.

Following are the policies that were evaluated in this project, the hypotheses they suggested and the and indicators that were used to test them.

(*) The remaining Caribbean's countries were included in a previous study published in the Bulletin of PAHO, Vol. 18 No. 3, 1984. In annex 2 it is included a table with the total fellowships awarded during the period covered by the study.

TABLE 1
POLICIES, HYPOTHESES, AND INDICATORS OF THE STUDY*

PAHO/WHO POLICIES	HYPOTHESES	VARIABLES AND INDICATORS
1. Stepping up aid for the training of national health personnel. Resolution E47.R36 of 1971.	1. The selection of fellowships in terms of fields of study, corresponds to national plans for manpower development based on the national health policies and international and regional commitments (Studies A and B).	- PAHO/WHO fellowship policies - Fields of study
- Establishing plans and proposals for training and development of human resources based on the policies and strategies of HFA/2000 and on national health strategies. Resolution EB71.R6 of 1983.		
2. Using the wide variety of training mechanisms in addition to the fellowships, including support for institutions for local training; support for academic courses, in-service training, and manpower development programs; support for visits from scientific personnel to train researchers, travel for study, and re-entry grants. Resolution EB71.R6 of 1983.	- The fellowship program has contributed to the training of high-level technical personnel and to increasing the critical mass of health personnel in priority areas (Study B). - The fellowships are awarded bearing in mind the different levels of regionalization and organization of health services (Study B). - The increase in the cost of fellowships is related to the inflation of the currencies in the countries, which has largely limited academic training abroad (Study A).	- Number of fellowships - Type of fellowships - Objective of fellowships - Other training activities - Functions - Institution where fellow works - Number of fellowships - Duration of fellowships - Cost

PAHO/WHO POLICIES	HYPOTHESES	VARIABLES AND INDICATORS
3. Adopting adequate procedures for the appropriate selection of candidates for fellowships, including establishing special selection committees. Resolution CS15.19 of 1958, CD17.25 of 1967, CD19.38 of 1969, and EB71.R6 of 1983.	- The selection of fellows results from a systematic process of consultation of the technical levels (work unit of the fellows, selection committees) (Study B).	- Request for and approval of fellowships
4. Designating more women as candidates for the Organization's fellowships. Resolution WHA28.40 of 1975.	- The selection of the fellows requires fulfillment of the requirements established in the PAHO/WHO regulations on fellowships (Studies A and B).	- Age of fellows - Time of service at the institution and post
5. Awarding fellowships to nationals in their own countries. Resolution CE61.R23 and CD19.38 of 1969, and EB71.R6 of 1983.	- In awarding of the fellowships one would expect an increase in the number of fellowships awarded to women (Studies A and B).	- Sex of fellow - Posts of fellows
6. Periodically evaluating the repercussions of the training of health personnel, including the impact of the fellowships on national development in health. Resolution EB71.R6 of 1983.	- In recent years there was been an increase in the awarding of fellowships to nationals for studies in their own countries (Studies A and B). - A high percentage of fellows rejoin their workplace when they finish studies done through their fellowship (Study B). - Most of the countries lack an information system that would enable them to evaluate the results of the fellowships, and that would be useful for feedback to the process of planning manpower development (Study B).	- Country of study - Areas of application of knowledge - Programs benefitted - Reasons for training - Delivery of final report - Follow-up with the fellows, measured through reincorporation to their respective posts and institutions

* Each hypothesis includes a reference in parentheses indicating whether it was for study A, study B, or both.

2.2 Collection of Information and Instruments Used

In both studies, nine indicators of the Fellowships Program were used. Some define characteristics of the fellows and others define characteristics of the program. The specific indicators looked at were frequency, type, duration, and cost of the fellowships; sex, age, and profession of the fellows; field of study; and country of study.

Additional information had to be collected for Study B. To collect this information workshops were held in five countries: Mexico, Cuba, Argentina, Peru, and Uruguay. The purpose of these workshops was to train those who administer the fellowships in data gathering procedures. These meetings gave rise to specific recommendations on the administrative aspects and factors relating to selection of the candidates. These recommendations were submitted to the Health Manpower Development Program in Washington, D.C. for its consideration.

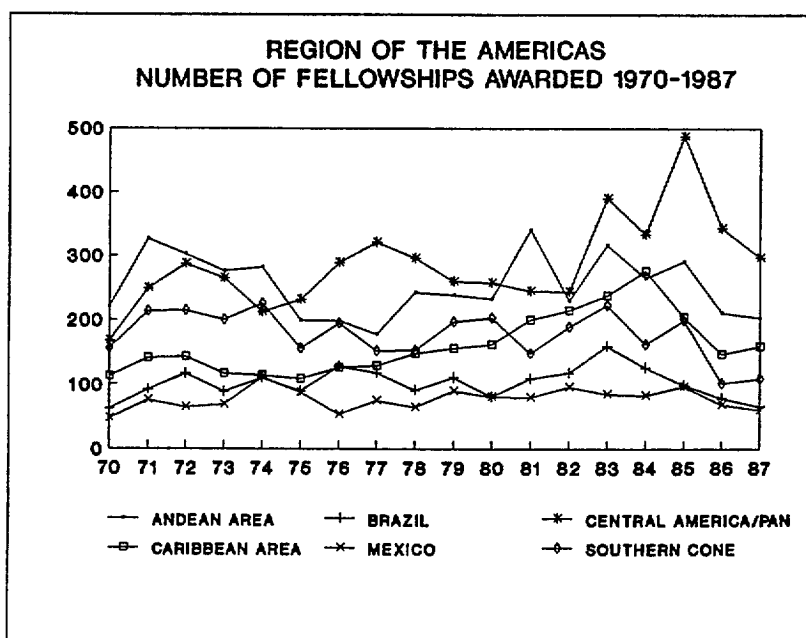
A detailed description of the indicators, as well as of content of the forms used and their processing, appear in the original study, which is available for review in the PAHO Program for Human Resource Development.

III. General Trends: number, duration, and cost

3.1 In analyzing the data in Study A, the sixteen year study period was divided into four year's administrative periods of four years each: 1971-1974, 1975-1978, 1979-1983 and 1983-1987. In general, the average number of awards from 1971-1987 was 1000 per year. There was a noticeable downturn in 1975 when the number of awards fell to 900. A noticable increase also occurred during the period 1983-1985 when the number of awards was approximately 1300 per year.

Graph 1 illustrates the average number of fellowship awards by year from 1970-1987+ by subregion. In this graph one can see a slight decrease in fellowship awards from the Caribbean at the end of the period and a slight increase for Central America and Panama in 1977 and a pronounced growth in 1983 and 1985. The latter increase may possibly be attributable to the impact of the Plan for Priority Health Needs (PPSCAP) which was initiated in 1983.

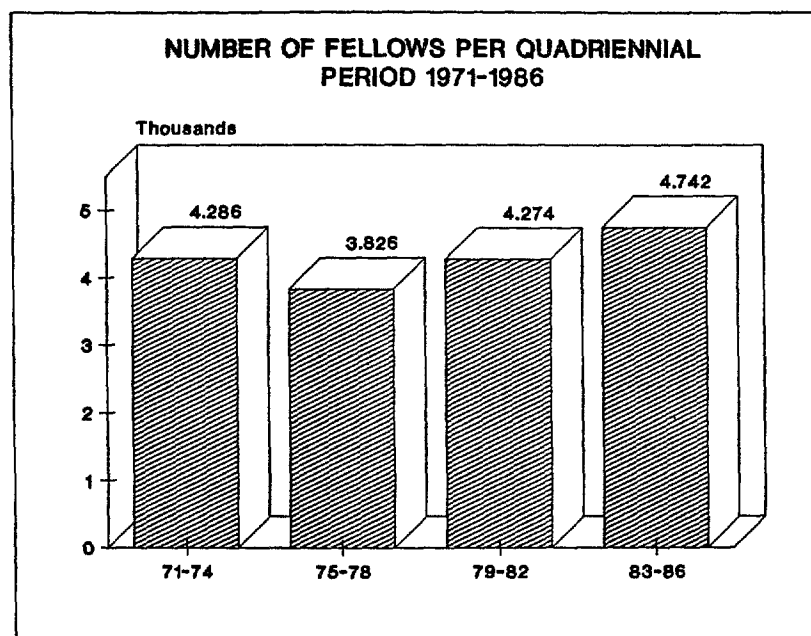
GRAPH 1



The number of fellowships per quadrennium is illustrated in Graph 2. The increase of fellowship awards in the period 1983-1987 is believed to be attributable to the importance placed on the Fellowships Program in

the training of health care personnel. Indeed, in this period there were more fellowship awards in absolute terms than in the other periods.

GRAPH 2



3.2 To advance in the analysis of the fellowship program, the files of the 5,219 fellowships granted from 1983 to mid-1987 (*) in the 22 countries were reviewed; the figures are shown by country in descending order of the number of fellowships used throughout the period (Table 2). As can be noted, after three more or less stable years, there has been a downward thrend in total numbers, at the expense, in particular, of lesser use by countries such as Brazil, Peru, Colombia, the Dominican Republic, and Argentina.

(*) Includes 54% of the fellowships awarded in 1987.

TABLE 3

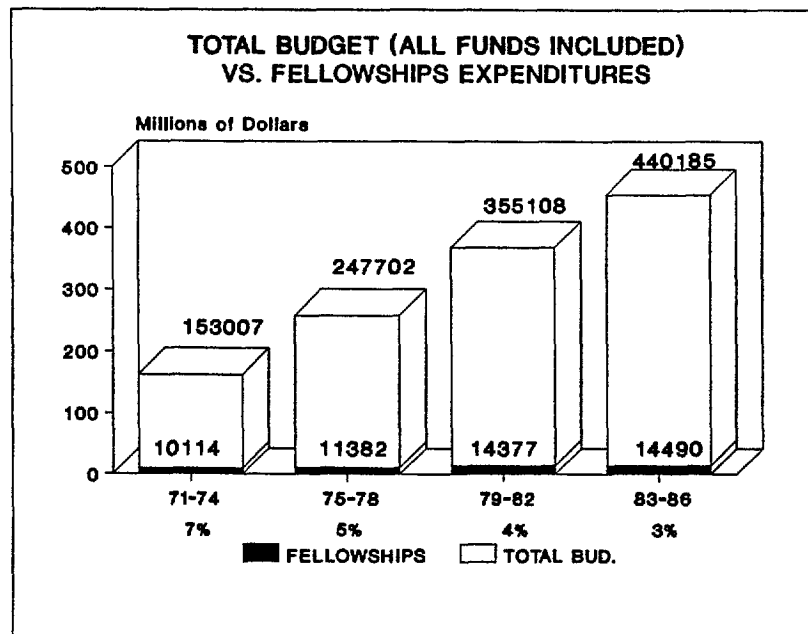
NUMBER OF FELLOWSHIPS IN THE SAMPLE, BY COUNTRY OF ORIGIN
AND YEAR BEGUN, 1983-1987*

COUNTRY	1983		1984		1985		1986		1987		TOTAL		% OF TOTAL
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
BRAZIL	149	30	132	27	97	20	82	17	33	7	493	100	9
CUBA	72	17	135	32	85	20	68	16	63	15	423	100	8
MEXICO	80	23	85	25	96	28	69	20	15	4	345	100	7
GUATEMALA	64	19	63	18	117	34	65	19	35	10	344	100	7
NICARAGUA	72	21	93	27	98	29	75	22	5	1	343	100	7
VENEZUELA	50	16	60	19	78	24	81	25	52	16	321	100	6
PERU	78	29	97	36	60	22	27	10	7	3	269	100	5
COLOMBIA	90	34	51	19	61	23	49	18	16	6	267	100	5
CHILE	59	23	51	20	50	20	44	17	48	19	252	100	5
PANAMA	69	29	46	19	49	20	58	24	18	8	240	100	5
DOMINICAN REP.	90	42	69	32	26	12	13	6	15	7	213	100	4
HONDURAS	60	29	31	15	55	27	39	19	22	11	207	100	4
ARGENTINA	80	41	41	21	41	21	23	12	8	4	193	100	4
ECUADOR	41	22	48	25	52	27	33	17	16	8	190	100	4
JAMAICA	42	23	48	26	46	25	30	16	20	11	186	100	4
PARAGUAY	30	16	51	28	70	38	22	12	12	6	185	100	4
EL SALVADOR	26	15	52	29	52	29	32	18	15	8	177	100	3
COSTA RICA	27	17	37	23	41	26	34	22	19	12	158	100	3
HAITI	22	16	43	32	43	32	11	8	17	13	136	100	3
BOLIVIA	17	16	28	26	25	23	18	17	20	19	108	100	2
URUGUAY	19	19	24	24	29	29	17	17	12	12	101	100	2
BELIZE	11	16	12	18	23	34	13	19	9	13	68	100	1
TOTAL	1248	24	1297	25	1294	25	903	17	477	9	5219	100	100

3.3 In general, the number of fellowships has resulted from the combination of several factors, including budgetary fluctuations, the duration of each fellowship, and the demand of the countries themselves for levels of training they do not have inside their borders.

In budgetary terms funding for fellowships increased by 40% from 1971-1987. This compares with an increase of 287% in the overall PAHO general budget. In the final quadrennium (1983-1987) funds almost tripled to those available for the period 1971-1974, see Graph 3.

GRAPH 3



While the budget for fellowships increased in terms of dollars the actual cost of a fellowship also increased due to inflation and an increase in actual costs. Table 3 shows the average cost of the various types of fellowships by quadrennium.

TABLE 3

AVERAGE COST OF FELLOWSHIPS BY TYPE

PERIOD	SHORT-TERM	COURSES	LONG-TERM
1971-1974	1,363	1,471	4,842
1975-1978	1,830	2,111	5,775
1979-1982	2,341	2,632	8,082
1983-1986	2,171	2,346	9,340

The cost increase was offset by an increase in the number of awards for short-term fellowships. This can be observed in the budgetary trends (Table 4) for the fourth quadrennium, which reflects the absorption by the short-term fellowships of the small increase in resources allocated to the Program. A slight budgetary reduction was observed in long-term fellowships which translated into a significant decline in the use of academic fellowships

TABLE 4

TOTAL COST OF THE FELLOWSHIPS BY TYPE

PERIOD	SHORT-TERM		COURSES		LONG-TERM		TOTAL	
	\$	%	\$	%	\$	%	\$	%
1971-1974	1,885,647	19	2,544,155	25	5,684,796	56	10,114,598	100
1975-1978	3,302,335	29	2,068,875	18	6,011,680	53	11,382,890	100
1979-1982	5,352,100	37	3,399,982	24	5,624,976	39	14,377,058	100
1983-1986	5,876,722	41	3,486,857	24	5,127,686	35	14,490,265	100
TOTAL	16,415,804	33	11,499,869	233	22,449,138	45	50,364,811	100

To gauge inflation over the period covered by the study, one can analyze growth of the average months costs. (+) In 1971, the index was U. S. Dollars 100; by 1986 the index had reached 257.7, see Table 5.

Table 5 also illustrates the failure of cost of a fellowship to keep up with inflation. However small the difference, this reduces the purchasing power of the monthly stipend by as much as 20% below the real adjusted value (D) when compared to the baseline year. This factor and the fact that a long-term fellowship in the United States may vary in cost from US\$15,000 to US\$25,000 may have constituted a disincentive to placing fellows in the United States for study.

TABLE 5
REAL AND DEFLATED VALUE FOR FELLOWSHIP IN THE UNITED STATES
1971-1986*

YEAR A	MONTHLY AVERAGE OBSERVED B	PRICE INDEX C	CORRECTED THEORETICAL VALUE D	B/D -1.00
1971	600.0	100.0	600.0	
1972	655.2	104.5	627.6	+4.4
1973	731.3	111.5	669.0	+9.3
1974	850.3	121.6	729.6	+16.5
1975	831.6	133.6	801.6	+3.7
1976	811.2	142.0	852.0	-4.8
1977	825.5	151.5	909.0	-9.2
1978	832.2	162.7	976.2	-14.8
1979	858.9	177.0	1062.0	-19.1
1980	946.8	193.0	1158.0	-18.2
1981	1024.3	211.5	1169.0	-12.4
1982	1138.1	226.2	1357.2	-16.1
1983	1352.1	233.9	1403.4	-3.7
1984	1274.8	243.0	1452.0	-12.2
1985	1504.8	251.1	1506.6	-0.1
1986	1428.2	257.7	1546.2	-7.6

(*) According to "International Financial Statistics" of the IMF, 1987

(+) Average monthly costs in th United States include stipend, health insurance, travel expenses and where applicable, tuition costs/training fees.

3.4 In this context a further indicator was added, i.e., duration of fellowship, see Table 6. There has been a major increase in very short-term fellowships (less than 1 month), beginning especially in the quadrennium 1979-1982. Fellowships of less than one month account for nearly 60% of all fellowships awarded in the period 1979-1982 as compared to 12% in the period 1971-1974.

TABLE 6

DURATION OF FELLOWSHIPS (1971-1986)

PERIOD	0-1 MO.		1-4 MOS.		4-9 MOS.		9-24 MOS.		24 OR MORE MOS.		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1971-1974	518	12	2027	47	627	15	1107	26	7	0.2	4286	100
1975-1978	628	16	1744	46	584	15	853	22	17	0.4	3826	100
1979-1982	1373	32	1977	46	304	7	598	14	22	0.5	4274	100
1983-1986	2775	59	1308	28	145	3	497	10	17	0.3	4742	100
TOTAL	5294	31	7056	41	1660	10	3055	18	63	0.4	17128	100

During this same period there was a reduction in what are referred to as long-term fellowships (9 to 24 months). In the period 1971-1974 26% of the awards were for this type of training program while in the period 1983-1986 only 10% of the awards were for long-term training programs.

This same phenomenon is reflected in much greater detail in Table 7. This table shows the most recent period (1983-1987), with the breakdown by subregions and countries. One can observe the fluctuations in the use of short-term and long-term fellowships from cases in which 46% of the fellowships awarded were from 9 to 24 months, and others in

which long-term fellowships accounted for less than 5% of the total, as in Argentina, the Dominican Republic, Cuba, Peru, and Uruguay.

TABLE 7

DURATION OF FELLOWSHIPS (1983-1987)

REGION OF ORIGIN	COUNTRY OF ORIGIN	0-1 MOS.		1-4 MOS.		4-9 MOS		9-24 MOS.		24 OR MORE MOS.		TOTAL	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
BRAZIL	BRAZIL	327	66	146	30	9	2	11	2	-	-	493	100
CARIBBEAN	TOTAL	660	69	175	18	20	2	102	11	1	0.1	958	100
	CUBA	319	75	80	19	6	1	18	4	-	-	423	100
	DOMINICAN REP.	158	74	47	22	2	1	6	3	-	-	213	100
	HAITI	82	60	23	17	3	2	28	21	-	-	136	100
	JAMAICA	101	54	25	13	9	5	50	27	1	1	186	100
CENTRAL AMERICA	TOTAL	844	55	383	25	45	3	253	16	12	1	1537	100
	BELIZE	15	22	17	25	3	4	31	46	2	3	68	100
	COSTA RICA	83	53	43	27	-	-	29	18	3	2	158	100
	EL SALVADOR	66	37	65	37	12	7	34	19	-	-	177	100
	GUATEMALA	182	53	113	33	6	2	40	12	3	1	344	100
	HONDURAS	130	63	41	20	3	1	33	16	-	-	207	100
	NICARAGUA	249	73	52	15	13	4	25	7	4	1	304	100
	PANAMA	119	50	52	22	8	3	61	25	-	-	240	100
SOUTHERN CONE	TOTAL	383	52	267	37	29	4	52	7	-	-	731	100
	ARGENTINA	119	62	66	34	5	3	3	2	-	-	193	100
	CHILE	93	37	126	50	8	3	25	10	-	-	252	100
	PARAGUAY	100	54	51	28	14	8	20	11	-	-	185	100
	URUGUAY	71	70	24	24	2	2	4	4	-	-	101	100
MEXICO	MEXICO	222	64	97	28	8	2	15	4	3	1	345	100
ANDEAN REGION	TOTAL	608	53	375	32	57	5	114	10	1	0.08	1155	100
	BOLIVIA	37	34	47	44	1	1	23	21	-	-	108	100
	COLOMBIA	169	63	75	28	7	3	16	6	-	-	267	100
	ECUADOR	67	35	77	41	13	7	33	17	-	-	190	100
	PERU	153	57	91	34	13	5	11	4	1	0.3	269	100
	VENEZUELA	182	57	85	26	23	7	31	10	-	-	321	100
TOTAL		3044	58	1443	28	168	3	547	10	17	0.3	5219	100

The greatest use of fellowships of less than 1 month in duration was by the countries already mentioned as well as Honduras, Nicaragua, and Colombia. In all of these countries, the percentage of short-term fellowships (less than 1 month) was greater than 60% of the total fellowships awarded. This fact may perhaps be explained by the introduction of decentralization which may have initially facilitated their more flexible use.

Likewise, one could speculate that the reduction in the demand for long-term training resulted from the increase of courses throughout the Region. Study opportunities grew in number during the period covered by the study from 10 to practically 80 different types of training programs in the Latin American countries themselves. The counterweight to this hypothesis could be represented by Belize which, unable to train its own personnel, has to maintain a high percentage of academic and/or long-term fellowships.

3.5 Even though most of the countries did not have explicit policies for human resource development or for policies the awarding of fellowships for training abroad, the widespread opinion among national officials is that priority has been placed on country-level training, whether through permanent and formal programs at local institutions and universities or through training mechanisms carried out with international cooperation. The main reason given for this is that, for the same cost of training an individual abroad, several people can be trained within the country. This reasoning follows, in part, the policy set forth by WHO on the "use of fellowships," which encourages self-reliance for carrying out country-level training activities. These activities, which generally include short courses, seminars, and

workshops, have been organized in growing numbers in the countries of the Region. However, they have not been recorded systematically, thereby preventing a more detailed comparison with the reduction in the use of fellowships that has been observed in the last two years. Table 8, even with underrecording in the first years, appears to indicate an increase in such country-level activities. For 75% of the activities recorded, there was the total of 77,363 participants with an average of 39 per activity. This is a significant figure which, even for a minor activity such as "Short Term courses" could still represent a greater training potential than the number of fellowship awarded in the period.

TABLE 8
NUMBER OF EVENTS BY COUNTRIES

COUNTRY	1983	1984	1985	1986	1987	TOTAL
ARGENTINA				48	44	92
BELIZE		5	7	4	6	22
BOLIVIA	15	3	32	23	21	94
BRAZIL	11	20	5	6	13	55
COLOMBIA		3		40	59	102
COSTA RICA				88	154	242
ECUADOR		28	23	36	52	139
EL SALVADOR	21	15	30	30	79	175
GUATEMALA			105	88	76	269
HAITI	4	10	8	14	12	48
HONDURAS	17	18	48	61	47	191
JAMAICA	8	5	19	35	17	84
MEXICO	15	30	52	98	306	501
NICARAGUA	1	8	6	31	26	72
PANAMA	21	21	58	83	108	291
PARAGUAY	4	7	16	55	64	146
URUGUAY				4	31	35
VENEZUELA	8	2	10	39	68	127
TOTAL 18 COUNTRIES	125	175	419	783	1183	2685

IV. Individual Characteristics of the Fellows

4.1 In demographic terms, there was a slight increase in the age of the fellows, and a larger share of women in the program. The average age of fellows increased over the last two periods studied from 36 to 37 years; the youngest was 16 years old, the oldest 76.

TABLE 9
AGE OF FELLOWS

PERIOD	NO DATA		16-25 YEARS		26-30 YEARS		31-35 YEARS		36-40 YEARS		41-45 YEARS		46-50 YEARS		51 AND OVER		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1971-1974	56	1	310	7	860	20	1110	26	841	20	593	14	307	7	209	5	4286	100
1975-1978	79	2	327	9	875	23	869	23	678	18	482	13	295	8	221	6	3826	100
1979-1982	58	1	202	5	888	21	1125	25	781	19	533	13	378	9	309	7	4274	100
1983-1986	54	1	158	3	773	16	1333	28	1129	24	578	12	381	8	336	7	4216	100
TOTAL	247	1	997	6	2508	15	4437	26	3429	20	2186	13	1361	8	1075	6	17128	100

Table 9 shows the distribution of fellowships by quadrennia and age groups; in all of the periods there have been a number of fellowships for persons over 55, the age limit established by the regulations. Likewise, in the last quadrennium there was a slight reduction in the 16-30 years age groups and an increase in the 31-40 years groups, which may be compatible with the trend towards the use of more short-term fellowships by individuals who already have basic training. This trend is to the detriment of younger people, who tend to seek long-term fellowships.

TABLE 10

SEX OF FELLOWS (1971-1986)

PERIODS	FEMALE		MALE		TOTAL		DIFFERENCE
	No.	%	No.	%	No.	%	
1971-1974	1429	33	2857	67	4286	100	-103
1975-1978	1329	35	2497	65	3826	100	- 86
1979-1982	1621	38	2653	62	4274	100	- 63
1983-1986	1914	40	2828	60	4742	100	- 50
TOTAL	6293	37	10835	63	17128	100	- 70

4.2 Table 10 illustrates a 34% increase in fellowships awarded to women from 1971-1974 to 1983-1986. This may explain why the number of fellowships used by men has remained constant, as women have accounted for only a small increase in the total number of fellowships ($\pm 10\%$).

4.3 Another important characteristic is that of the fellows' previous professions, shown in Table 11. There is a good deal of uniformity among the four periods studied, with two exceptions: the doubling of the number of fellows in the professional areas of diagnostic techniques, social sciences and the humanities in the last quadrennium and tripling of the number of non-professional fellows. The professional areas of nursing and environmental health experienced a small reduction. Also, the number of cases in which it has not been possible to obtain adequate information was halved.

TABLE 11

PROFESSION OF FELLOWS (1971-1986)

PROFESSIONAL AREA	1971-74 PERIOD		1975-78 PERIOD		1979-82 PERIOD		1983-86 PERIOD		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
Medicine	1474	34	1262	33	1538	36	1708	36	5982	35
Nursing	532	12	406	11	390	9	425	9	1753	10
Environmental Health and Engineering	544	13	422	11	343	8	429	9	1738	10
Diagnostic Techniques	309	7	314	8	384	9	604	13	1611	9
Veterinary Sciences	323	8	409	11	323	8	493	10	1548	9
Dentistry	182	4	147	4	207	5	146	3	682	4
Statistics	177	4	119	3	161	4	112	2	559	3
Social Sciences and Humanities	89	2	64	2	115	3	275	6	543	3
Administration	156	4	94	2	91	2	130	3	471	3
Nutrition	67	2	104	3	105	2	77	2	353	2
Therapeutic and Reh. Techniques	52	1	21	1	18	1	12	1	103	1
Non-professionals	57	1	89	2	63	1	156	3	363	2
No Information	324	8	375	10	536	13	175	4	1410	8
TOTAL	4286	100	3826	100	4274	100	4742	100	17128	100

4.4 In the last period of the study, 1983-1987, of the 5,219 fellows included, 3,591 (68%) had not received any postgraduate training prior to the fellowship. However, the remaining 1,628 already had a specialization with the most common fields being public health, maternal and child health, surgical specialties, administration, mental health, and environmental health.

4.5 For the overall sample, the Organization awarded 87% of its fellowships to officials from public-sector institutions, 2% to semiautonomous institutions (including Social Security), and 1% to private institutions.

The fellows for the 1983-1987 period were distributed, in terms of their institutional roles, as indicated in Table 12, with a strong majority linked to the ministries of health and lesser percentages attached to universities or other government services (agriculture, water and sewerage), leaving a group of just over 2% from the social security institutes.

TABLE 12

INSTITUTIONS WHERE FELLOWS ARE EMPLOYED

HEALTH MINISTRIES OR SECRETARIATS		
	No.	%
Ministry (Capital)	1294	25.0
Ministry (Regional)	832	16.0
Health Institutions	523	10.0
Capital-city Hospitals	410	7.9
Regional Hospitals	305	5.8
Zoonoses Offices	136	2.6
Malaria Offices	81	1.6
Ministry, Municipal level	53	1.0
Rural Health Center	7	0.13
	<u>3641</u>	<u>70.0</u>

SOCIAL SECURITY INSTITUTES		
	No.	%
Soc. Sec. in the Capital City	73	1.4
Soc. Sec. Hospitals, in Capital	34	0.65
Regional Social Security Hospitals	11	0.21
Rural Soc. Sec. Polytechnic Institute	1	0.02
	<u>119</u>	<u>2.28</u>

UNIVERSITIES		
	No.	%
Public Universities	432	8.3
Private Universities	21	0.40
	<u>453</u>	<u>8.7</u>

OTHER SERVICES		
	No.	%
Other services	265	5.1
Agriculture	155	3.0
Water and Sewerage	137	2.6
	<u>557</u>	<u>10.7</u>

ARMED FORCES	19	0.36

NO INFORMATION	430	8.2

TOTAL	5219	8.2

Of the posts occupied, 44% of the fellows had executive functions and 37% management functions. Teachers and researchers accounted for only 11%. The posts at the time the fellowship was awarded show a high proportion of technical and professional personnel from different programs and a high concentration of directors of programs, departments, units and divisions. A smaller share of the posts held corresponded to level of regional director and director of health centers

TABLE 13
POSTS OCCUPIED BY FELLOWS, BY REGION

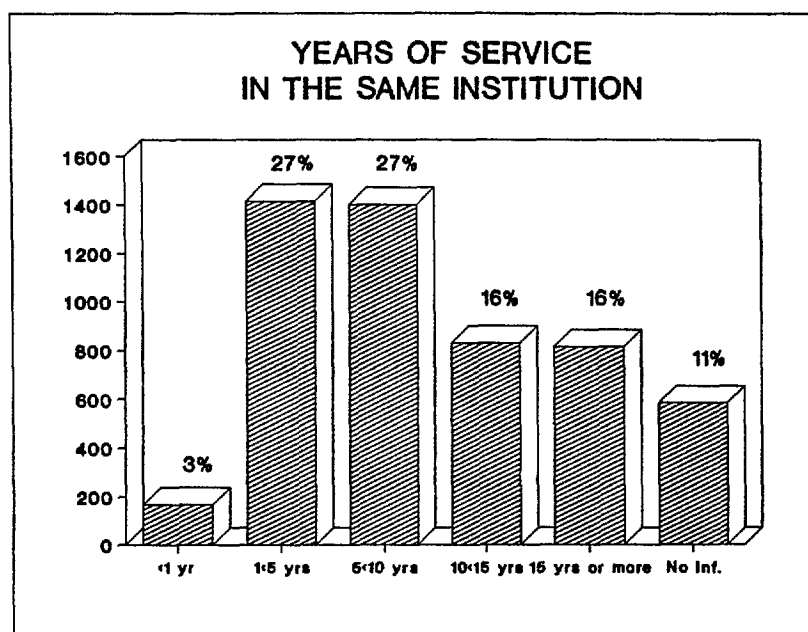
FELLOWS' POSTS	BRAZIL		CARIBBEAN		CENTRAL AMERICA		SOUTHERN CONE		MEXICO		ANDEAN REGION		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Program Technical Expert	137	27.8	287	30.0	376	24.5	187	25.6	41	11.9	389	33.7	1417	27.2
Director of Program, Service	107	21.7	150	15.7	248	16.0	154	21.1	64	18.6	201	17.4	922	17.7
Departmental Director	9	1.8	109	11.4	119	7.7	47	6.4	68	19.7	49	4.2	401	7.7
Professor	40	8.1	40	4.2	87	5.7	80	10.9	33	9.6	99	8.6	379	7.3
Supervisor, Inspector	14	2.8	41	4.3	114	7.4	39	5.3	10	2.9	41	3.5	259	5.0
Chief of Section, Area	21	4.3	37	3.9	83	5.4	42	5.7	11	3.2	47	4.1	241	4.6
Technical Support Personnel	13	2.6	38	4.0	102	6.6	35	4.8	8	2.3	36	3.1	232	4.4
Director División, Unit	29	5.9	20	2.1	41	2.7	27	3.7	33	9.6	37	3.2	187	3.6
Assistant Director, Unit	2	0.4	47	4.9	57	3.7	35	4.8	28	8.1	10	0.9	179	3.4
Researcher	27	5.5	28	2.9	3	0.2	6	0.8	15	4.3	21	1.8	100	1.9
Regional, Area Director	2	0.4	23	2.4	40	2.6	9	1.2	3	0.9	18	1.6	95	1.8
Advisor, Consultant	34	6.9	5	0.5	11	0.7	13	1.8	12	3.5	10	0.9	85	1.6
Health Center Director	6	1.2	13	1.4	30	2.0	19	2.6	8	2.3	5	0.4	81	1.5
Hospital Director	4	0.8	19	2.0	10	0.7	17	2.3	1	0.3	5	0.4	56	1.1
Resident Physician			10	1.0	20	1.3	4	0.5	2	0.6	6	0.5	42	0.8
Dean or Director of School	2	0.4	12	1.3	1	0.1	1	0.1	3	0.9	5	0.4	24	0.5
Director Institution	5	1.0	3	0.3	3	0.2	2	0.3	1	0.3	7	0.6	21	0.4
Others	2	0.4	5	0.5	10	0.7	2	0.3	2	0.6	3	0.3	24	0.5
No information	39	7.9	71	7.4	184	12.0	12	1.6	2	0.6	166	14.4	474	9.1
TOTAL	493	100.0	958	100.0	1537	100.0	731	100.0	345	100.0	1155	100.0	5219	100.0
		9.4		18.4		29.5		14.0		6.6		22.1		100.0

Table 13 shows the distribution of posts by subregion. The time of service at the institution before award of the fellowship varied from a minimum of one month to a maximum of 55 years.

Table 14 shows the distribution of the number of fellows as a function of their length of service at the institution with which they work. 54% has served from one to ten years.

TABLE 14

TIME OF SERVICE AT THE EMPLOYING INSTITUTION



4.6 The vast majority of the fellows, 3,908, or 75% for the period 1983-1987, were awarded a fellowship by the Organization for the first time. This was true in all of the countries studied. The remaining 1,311 fellows had already been awarded between 1 to 5 other fellowships by the PAHO as can be seen in Table 15. This table groups fellows by functions exercised and the number of the fellowships ever awarded.

TABLE 15

NUMBER OF FELLOWSHIPS RECEIVED, BY POST OCCUPIED

FUNCTION	1		2		3		4		5		6		TOTAL
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	
Director of service	1335	69	364	19	125	7	55	3	26	1	16	0.8	1921
Implements service	1816	80	315	14	91	4	36	2	15	1	3	0.1	2276
Teaching and research	389	74	86	16	31	6	10	1	6	1	2	0.4	524
Others/No information	368	74	90	18	22	4	6	1	8	2	4	0.8	498
Total	3908	75	855	16	269	5	107	2	55	1	25	0.5	5219

An attempt was also made to verify whether a fellow had received a training award from another agency. It was found that 4,466 fellows, i.e. 85.6% of the total, had never received a fellowship from another source. 9.6% had received one previous fellowship, 3.4% had had two fellowships, 1.1% had had three fellowships, and 0.3% had had four fellowships. One fellow had received 5 and another fellow had received 6 fellowships awarded by another agency, prior to being awarded a PAHO fellowship.

V. Awarding and use of the Fellowships

5.1 The information on the process whereby fellowships are requested and candidates chosen is usually incomplete and not recorded in the corresponding documentation. This made it necessary to seek secondary information through the officials in charge of managing the fellowships in the country offices. Table 16 below shows the diversity of levels at which the request is made, in relation to the duties of the candidates.

TABLE 16

INDIVIDUAL REQUESTING THE FELLOWSHIP, BY POST

FUNCTION	WORK UNIT AND FELLOW		HIGHER INST. MINISTRY		HIGHER INST. MINISTRY		INTERNA- TIONAL REL.		OTHER		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Director of service	627	33	734	38	27	11	214	11	319	17	1921	100
Executive of service	823	36	658	29	23	1	246	11	526	23	2276	100
Research/teaching	92	18	128	24	145	28	102	19	57	11	524	100
Others/No info.	29	6	22	4	2	-	5	1	440	88	498	100
TOTAL	1571	30	1542	30	197	4	567	11	1342	26	5219	100

Clearly the international relations offices of the ministries of health do not play a major role at this stage in the process. For health services personnel, the most common offices requesting the fellowships have been the work unit directly, and high-ranking levels of the Ministry. For teachers, the upper echelons of the universities were predominant.

Among the cases grouped under "others," there were 39 requests presented by the candidate directly, most of whom were directors of programs or services.

5.2 Most of the fellowships were later approved by some high- ranking office of the Ministry, represented by the health minister, vice-ministers, directors, or secretaries; one-third by the international relations offices; and only 4% by a fellowship committee. Table 17 includes this information for all the countries. One notes a considerable number in the "other" column. Included here are those fellowships awarded for which we could not identify a specific recommending office.

TABLE 17

WHO APPROVED THE FELLOWSHIPS

REGION OF ORIGIN	COUNTRY OF ORIGIN	HIGHER INST. MINISTRY		FELLOWSHIP COMMITTEE		INTERNATIONAL RELATIONS		OTHERS		TOTAL	
		No.	%	No.	%	No.	%	No.	%	No.	%
BRAZIL	BRAZIL	2	-	-	-	453	92	38	8	493	100
CARIBBEAN	TOTAL	458	48	-	-	394	41	106	11	958	100
	CUBA	-	-	-	-	394	93	29	7	423	100
	DOMINICAN REP.	199	93	-	-	-	-	14	7	213	100
	HAITI	130	96	-	-	-	-	6	4	136	100
	JAMAICA	129	69	-	-	-	-	57	31	186	100
CENTRAL AMERICA	TOTAL	1039	68	-	-	-	-	498	32	1537	100
	BELIZE	54	79	-	-	-	-	14	21	68	100
	COSTA RICA	64	41	-	-	-	-	94	59	158	100
	EL SALVADOR	158	89	-	-	-	-	19	11	177	100
	GUATEMALA	339	99	-	-	-	-	5	1	344	100
	HONDURAS	200	97	-	-	-	-	7	3	207	100
	NICARAGUA	-	-	1	0.3	-	-	343	100	343	100
	PANAMA	224	93	-	-	-	-	16	7	240	100
SOUTHERN CONE	TOTAL	315	43	21	3	244	33	151	21	731	100
	ARGENTINA	95	49	11	6	1	1	86	45	193	100
	CHILE	-	-	-	-	243	96	9	4	252	100
	PARAGUAY	146	79	-	-	-	-	39	21	185	100
	URUGUAY	74	73	10	10	-	-	17	17	101	100
MEXICO	MEXICO	-	-	-	-	322	93	23	7	345	100
ANDEAN REGION	TOTAL	565	49	45	4	308	27	238	21	1155	100
	BOLIVIA	17	16	42	39	-	-	49	45	108	100
	COLOMBIA	215	81	2	1	-	-	50	19	267	100
	ECUADOR	146	77	-	-	-	-	44	23	190	100
	PERU	187	70	-	-	-	-	82	30	269	100
	VENEZUELA	-	-	1	0.3	308	96	13	4	321	100
TOTAL		2379	46	67	1	1721	33	1054	20	5219	100

5.3 The PAHO Fellowships Program has adopted a "Field of Study" classification system which includes 120 categories or specific disciplines. Given the size of this classification system, a consolidated scheme with 20 fields of study was developed. Table 18 shows Field of Study by quadrennium. This table shows a marked reduction of fellowships awarded in the field of human resources, and an increase in the areas of maternal and child health, veterinary medicine, outpatient care, biomedical specialties, and mental health.

TABLE 18

FIELDS OF STUDY (1971-1986)

FIELDS OF STUDY	1971-74		1975-78		1979-82		1983-86		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
Human Resources and Health Educ.	810	19.0	616	16.0	510	12.0	404	9.0	2340	14.0
Administration and Planning	541	13.0	477	13.0	460	11.0	475	10.0	1953	11.0
Environmental Health and Eng.	447	10.0	411	11.0	383	9.0	493	10.0	1734	10.0
Epidemiology and Biostatistics	342	8.0	343	9.0	478	11.0	456	10.0	1619	9.0
Diag. and Therap. Techniques	391	9.0	311	8.0	302	7.0	332	7.0	1336	8.0
Nutrition	310	7.0	340	9.0	281	7.0	218	5.0	1149	7.0
Maternal and Child Health	170	4.0	117	3.0	293	7.0	373	8.0	953	6.0
Veterinary Pub. Health	142	3.0	178	5.0	224	5.0	389	8.0	933	5.0
Outpatient and Com. Care	176	4.0	223	6.0	205	5.0	274	6.0	878	5.0
Communicable Diseases	226	5.0	132	4.0	239	6.0	210	4.0	807	5.0
Biomedical Spec.	111	3.0	148	4.0	223	5.0	315	7.0	797	5.0
Clinical and Surgical Spec.	209	5.0	156	4.0	234	6.0	191	4.0	790	5.0
Technology	97	2.0	98	3.0	82	2.0	140	3.0	417	2.0
Dental Spec.	76	2.0	52	1.4	103	2.0	118	3.0	349	2.0
Mental Health	43	1.0	29	0.8	85	2.0	130	3.0	287	2.0
Hospital Care	61	1.4	71	2.0	68	2.0	73	2.0	273	2.0
Non-Communicable Diseases	30	0.7	45	1.2	50	1.2	41	0.9	166	1.0
Occupational Health	38	0.9	32	0.8	26	0.6	51	1.0	147	0.8
Nursing Spec.	50	1.2	27	0.7	11	0.3	38	1.0	126	0.7
Prev. and Social Medicine	16	0.4	20	0.5	17	0.4	21	0.4	74	0.4
TOTAL	4286	100.0	3826	100.0	4274	100.0	4742	100.0	17128	100.

5.4 The information corresponding to the most recent period, 1983-1987, is presented in Table 19 with the same modified classification system of Fields of Study, but organized by objective of the fellowship, which may include short courses, observation visits and graduate training.

TABLE 19

FELLOWSHIP OBJECTIVE BY FIELD OF STUDY

CAMPO DE ESTUDIO	NO INFOR.		SHORT COURSES		VISIT		GRADUATE STUDIES		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
Envir. Health and Eng.	25	5	330	61	152	28	32	6	539	100
Adm. and Planning	29	5	198	37	62	12	246	46	535	100
Epid. and Biostatistics	35	7	334	65	89	17	58	11	516	100
Veterinary Pub. Health	48	11	299	70	77	18	4	1	428	100
Human Res. and Health Education	67	16	179	43	153	36	21	5	420	100
Maternal and Child Health	36	9	282	67	82	20	20	5	420	100
Diag. and Therap. Techniques	30	8	253	70	74	20	7	2	364	100
Biomedical Spec.	32	9	238	70	48	14	24	7	342	100
Outpatient and Com. Care	27	9	90	31	160	55	15	5	292	100
Communicable Diseases	21	9	149	62	53	22	19	8	242	100
Nutrition	50	22	97	43	55	24	25	11	227	100
Clinical and Surgical Specialist	18	9	95	45	74	35	23	11	210	100
Technology	14	9	108	70	30	19	3	2	155	100
Mental Health	25	16	79	51	45	29	5	3	154	100
Odontological Spec.	6	5	62	49	53	42	6	5	127	100
Hospital Care	5	6	30	36	30	36	18	22	83	100
Occupational Health Non-Communicable Diseases	2	4	28	54	11	21	11	21	52	100
Nursing Spec.	2	4	24	49	17	35	6	12	49	100
Prev. and Social Medicine	3	8	6	16	10	26	19	50	38	100
	1	4	17	65	6	23	2	8	26	100
TOTAL	476	9	2898	56	1281	25	564	11	5219	100

The prevalence of postgraduate training for health administration, planning, and nursing is striking in this table. Observation visits have

prevailed in the area of outpatient and community care reflecting the Organizational interest in primary health care. In the other areas, the short courses are the principle type of fellowship, reflecting the Organization's effort to promote continuing education.

5.5 Table 20 illustrates the fellowships awarded during the four quadrennia periods by type of fellowship, (short course, observation visit, or long-term training) and the country of the award. It is noted that the countries where fellows are most frequently placed for long-term training were Guatemala for the Master's program offered by INCAP; the

TABLE 20

COUNTRY OF STUDY AND OBJECTIVE OF FELLOWSHIP (1971-86)

In percentage terms

COUNTRY	SHORT COURSES	OBSERVATION VISITS	POSTGRADUATE	TOTAL
MEXICO	10.4	12.7	14.7	12.3
UNITED STATES	6.1	13.3	16.4	11.6
BRAZIL	9.4	14.8	7.3	11.5
COLOMBIA	11.7	8.4	7.5	9.3
ARGENTINA	9.1	7.6	3.4	7.2
VENEZUELA	11.1	4.7	1.7	6.1
CHILE	9.6	3.8	4.6	5.8
GUATEMALA	1.4	2.8	18.6	5.5
COSTA RICA	4.7	6.8	1.1	4.9
URUGUAY	5.0	2.3	1.8	3.1
PANAMA	7.9	2.4	1.2	3.0
PUERTO RICO	---	2.5	5.6	2.5
CUBA	1.6	3.6	0.7	2.4
PERU	1.7	3.3	0.9	2.3
JAMAICA	1.0	0.8	4.2	1.5
OTHERS	9.3	10.2	10.3	11.0
TOTAL	100%	100%	100%	100%
ABSOLUTE No.	5,487	8,181	3,460	17,128

United States and Mexico for training in Public Health. A considerable number of fellows were also placed in Colombia and Brasil where schools are also recognized for their solid academics. For observation visits the primary countries where fellows are sent are Brasil, the United States, Mexico, Colombia and Argentina. For short courses the countries of study were Colombia, Venezuela, Mexico, Chile, Brasil and Argentina.

5.6 In Study B, the countries which receive fellows were looked at in terms of Field of Study, see Table 21. As in Table 20, even considering only 90% of the sample, the countries most used for study have been those in the Region with approximately 4% requesting training programs in Europe. Table 21 reflects the development of some fields of knowledge in certain countries to which a large number of fellows are sent. Nonetheless, there are areas in which the number of fellows are distributed among several countries, suggesting a more widespread development of such fields, in contrast to particular countries being characterized as centers par excellence for certain fields of study.

TABLE 21

FIELD OF STUDY BY COUNTRY OF STUDY*

FIELD OF STUDY	MEXICO	BRAZIL	U.S.A.	COLOMBIA	ARGENTINA	COSTA RICA	CUBA	CHILE	PERU	VENEZUELA	URUGUAY	GUATEMALA	PERU	JAMAICA
Environmental Health and Engineering	56	69	61	48	52	28	2	15	62	9	6	21	57	3
Administration and Planning	115	50	31	102	25	23	23	57	36	8	2	18	3	9
Epidemiology and Biostatistics	41	46	88	34	35	59	30	45	4	55	5	7	7	12
Veterinary Pub. Health	32	115	7	22	86	14	23	23	3	34	19	5	19	-
Human. Res. and Health Educ.	130	72	20	24	5	27	76	3	5	2	2	13	5	10
Maternal and Child Health	31	17	14	53	19	16	34	26	8	3	162	11	1	10
Diag. and Therap. Techniques	30	47	42	13	60	25	10	22	18	12	1	4	12	-
Biomedical Spec.	35	29	46	4	39	20	3	20	65	6	2	3	2	-
Outpatient and Com. Care	35	30	6	40	10	72	18	7	6	7	10	4	9	14
Communicable Diseases	15	48	32	15	16	11	2	4	9	41	-	13	-	5
Nutrition	20	13	9	21	17	16	7	22	-	9	-	80	2	-
Clinical and Surgical Spec.	23	13	36	16	9	21	31	3	4	3	11	-	-	8
Technology	18	26	25	29	13	9	-	2	1	4	2	12	1	-
Mental Health	21	12	12	9	18	18	2	5	4	3	-	4	2	1
Odontological Spec.	11	4	28	13	9	5	1	-	7	21	-	16	2	-
Hospital Care	23	1	4	15	5	14	4	4	4	4	2	-	-	-
Occupational Health	8	5	1	-	-	-	4	5	-	12	-	-	-	-
Non-Communicable Diseases	7	2	14	2	2	1	2	2	-	1	-	-	1	-
Nursing Spec.	2	-	-	2	2	7	4	-	2	-	-	-	3	16
Prev. and Social Medicine	12	1	4	2	1	1	1	1	-	1	-	-	-	-
TOTAL	665	589	480	464	423	386	277	266	238	235	225	211	126	88

(*) The data correspond to 90% of the sample.

5.7 Another aspect deserving of special consideration is the use of fellowships in the fellow's country of origin. This option is recommended by the Governing Bodies of PAHO/WHO (5) based on the ... "advantage to him, in that he will receive training in an environment more similar to that in which he will practice," in addition to constituting "a means for making better use of the personnel-training resources in the countries themselves."

Table 22 shows the 843 fellowships awarded in the 1971-1986 period for studies in the fellow's own country, reflecting a trend towards a reduction in the overall number of fellowships of this category but, at the same time, an increase in the number of countries using them.

TABLE 22

WITHIN-COUNTRY FELLOWSHIPS

COUNTRY	1971-74 PERIOD		1975-78 PERIOD		1979-82 PERIOD		1983-86 PERIOD	
	No.	%	No.	%	No.	%	No.	%
ARGENTINA	29	10.0	11	5.0	8	2.3	2	1.1
BRAZIL	100	25.0	125	29.0	27	7.0	41	9.0
COLOMBIA	2	0.6	-	-	-	-	8	3.0
GUATEMALA	44	20.0	70	31.0	45	26.0	-	-
JAMAICA	34	35.0	11	11.0	55	28.0	48	29.0
MEXICO	5	2.0	4	1.0	2	0.6	-	-
URUGUAY	16	9.0	6	6.0	39	44.0	-	-
ECUADOR	-	-	-	0.9	1	0.7	-	-
EL SALVADOR	-	-	6	5.0	-	-	-	-
HONDURAS	-	-	1	0.4	-	-	-	-
PANAMA	-	-	1	0.7	2	1.2	29	13.0
PARAGUAY	-	-	13	2.0	-	-	-	-
PERU	-	-	2	1.0	4	1.9	3	1.0
CHILE	-	-	-	-	3	0.4	16	8.0
VENEZUELA	-	-	-	-	8	2.9	20	7.0
DOMINICAN REP.	-	-	-	-	-	-	1	0.5
TOTAL	230		251		194		168	

(5) Resolutions CE61.R23 and CD19.38, 1969

VI. Fellowships as an instrument for technical cooperation

6.1 The first step in analyzing the use of the fellowships in the context of the technical cooperation is establishing a clear correspondence between the classification the program uses and the most recent programmatic structure the Organization adopted with the WHO's Seventh Programme of work and on which the AMPES is based. To do so we have broken down the consolidated classification adopted in this study into the 12 elements that make up PAHO's current Program of Work, as illustrated in the following table:

TABLE 23 (*)

PROGRAMMATIC AREAS	No. of Fellowships	%
INTERNATIONAL TECHNICAL COOPERATION	38	0.7%
DEVELOPMENT NATIONAL HEALTH SYSTEM	449	8.6%
ORGANIZATION HEALTH SERVICES FOR P.H.C.	1028	19.7%
HUMAN RESOURCES IN HEALTH	777	14.9%
INFORMATION AND EDUCATION FOR HEALTH	61	1.2%
PROMOTION AND DEVELOPMENT OF RESEARCH	0	0
GENERAL PROTECTION AND PROMOTION	239	4.6%
PROTECTION AND PROMOTION OF HUMAN GROUPS	595	11.4%
PROTECTION AND PROMOTION OF MENTAL HEALTH	154	3.0%
PROMOTION OF ENVIRONMENTAL HEALTH	543	10.4%
TECHNOLOGIES FOR DIAGNOSTICS AND TREATMENT	421	8.1%
DISEASE PREVENTION AND CONTROL	914	17.5%
SAMPLE TOTAL	5219	100%

This configuration highlights those areas that are priorities in the current programming; areas such as Promotion and Development of

(*) The annex shows a breakdown of this table.

Research, are not considered as fields of study in the Fellowship Program. This does not mean that consideration is not being given to developing specific research in the context of any of the other categories, but rather that the training of researchers is not considered to constitute a specific field of study. This same classification, broken down into its 50 component elements (as shown in Annex No. 1), shows several other priority areas that have come to receive scant attention, such as health legislation, accident prevention, research on human reproduction, diarrheal diseases, and acute respiratory infections, to name some of the more important ones.

In addition to considering these new openings, one can note through the distribution in the other categories a very sound correspondence of the Fellowship Program with the technical cooperation program. Of particular relevance is the large percentage of fellowships awarded in support of the primary health care strategy for the development of human resources, for disease prevention and control, for protecting the health of certain population groups, and for promoting environmental health, which together account for over 70% of the fellowships awarded in the 1983-1987 period.

6.2 The specific results of these training efforts have yet to be analyzed; they are difficult to estimate for such a broad set of actions carried out, both in areas of knowledge and in geographic distribution. Among the indirect indicators are the major expansion of training opportunities in the field of public health which, as mentioned above, has increased from 10 to 80 training programs during the last 20 years. This would not have been possible were it not for the significant increase in personnel trained. Also, more qualified technical teams are working in the health services themselves.

6.3 Also, it has not been possible to carry out individual evaluations of the fellows' academic performance, as the only data item

available is indirect, i.e. recognition of the technical and scientific capacity of the centers used for education and/or training through the Fellowship Program. The following list (Table 24), which covers more than half of the fellows from the 1983-1987 period, includes all the institutions that have received more than 10 students or observers, from PAHO/WHO.

TABLE 24

Institutions of Study attended by the Fellows

<u>Institutions of Study</u>	<u>Frequency</u>	<u>Percentage</u>
CLAP, PAHO/Uruguay	177	3.4
CEPANZO, PAHO/Argentina	166	3.2
INCAP, PAHO/Guatemala	128	2.5
University of Antioquia, Colombia	120	2.3
School of Public Health, National Institute of Mexico	113	2.2
School of Medicine, University of Panama	104	2.0
CEUTE - National Autonomous University of Mexico	98	1.9
PANAFTOSA, PAHO/Brazil	95	1.8
Public Health Department, University of Chile	87	1.7
Ministry of Health, Cuba	84	1.6
University of Buenos Aires, Argentina	72	1.4
Ministry of Health, Costa Rica	69	1.3
University of South Carolina, United States	59	1.1
CEPIS, PAHO/Peru	57	1.1
Ministry of Health, Colombia	49	0.9
University of El Valle, Cali, Colombia	46	0.9
Autonomous University of Mexico	44	0.8
Secretariat of Health, Mexico	42	0.8
Centers for Disease Control, United States	42	0.8
CLATES, PAHO/Brazil	39	0.7
University of Costa Rica	37	0.7
University of Buenos Aires, Argentina	33	0.6
Public Health Institute, Chile	33	0.6
University of West Indies, Jamaica	33	0.6
School of Medicine, University of Santiago, Chile	31	0.6
Ministry of Health, Panama	31	0.6
Venezuelan Center for Classification of Diseases	30	0.6
Javeriana University, Colombia	27	0.5
Osvaldo Cruz Institute, Rio de Janeiro, Brazil	26	0.5

<u>Institutions of Study</u>	<u>Frequency</u>	<u>Percentage</u>
Catholic University, Chile	26	0.5
Advanced Institute for Medical Sciences, Cuba	26	0.5
Costa Rican Social Security Fund	24	0.5
Inter-American Center for the Study of Social Security, Mexico (CIESS)	24	0.5
Ministry of Health, Argentina	23	0.4
Mexican Social Security Institute	23	0.4
Public Health School, University of Sao Paulo, Brazil	22	0.4
Ministry of Health, Guatemala	22	0.4
Metropolitan University of Xochimilco, Mexico	21	0.4
Costa Rican Institute of Aqueducts and Sewerage	20	0.4
International Malaria Institute, Maracay, Venezuela	20	0.4
Environmental Health Technology Company, Sao Paulo, Brazil	19	0.4
National Health Institute, Ministry of Health, Bogota, Colombia	19	0.4
National Hospital Fund, Ministry of Health, Bogota, Colombia	17	0.3
Ministry of Health, Venezuela	17	0.3
Institute for Tropical Medicine, University of Brasilia, Brazil	16	0.3
PASCAP, PAHO/Costa Rica	16	0.3
Carlos Saenz National Children's Hospital, San Jose, Costa Rica	16	0.3
Regional School for Sanitary Engineering, Guatemala	16	0.3
University of Illinois, United States		
Children's Odontological Resource Center, Caracas, Venezuela (CERON)	16	0.3
Rafael Rangel Institute, Venezuela	16	0.3
Immunization Center, Switzerland	16	0.3
BIREME, PAHO/Brazil	15	0.3
Parana' Sanitation Company (SANEPAR), Brazil	15	0.3
Pan American Center for Research and Training on Leprosy and Tropical Diseases (CEPIALET), Venezuela	15	0.3
School of Public Health of Rio de Janeiro, Brazil	14	0.3
University of Minas Gerais, Bahia, Brazil	14	0.3
School of Public Health, University of West Indies, Jamaica	14	0.3
School of Public Health, Johns Hopkins University, United States	14	0.3
Ministry of Health, Chile	12	0.2
Center for Research and Rural Development (CIDER), Mexico	12	0.2
Emilio Coni National Institute of Epidemiology, Santa Fe, Argentina	11	0.2
National Center for Health Education, Ministry of Health, Dominican Republic	11	0.2

<u>Institutions of Study</u>	<u>Frequency</u>	<u>Percentage</u>
National Institutes of Health, United States	11	0.2
Johns Hopkins University, United States	11	0.2
National Center for Virology, Spain	11	0.2
College of Art, Science, and Technology, Jamaica	10	0.2
Center for Adolescent Orientation, Mexico	10	0.2
School of Public Health, University of Minnesota, United States	10	0.2
University of North Carolina, United States	10	0.2
S. Training Center, United States	10	0.2
	<hr/>	<hr/>
	1653	51.0
Others*	1599	30.0
No information	967	19.0

* Institutions that received less than 10 fellows during the period were not included in this list.

6.4 In this same period (1983-1987), it can be verified that apart from the 10% of the fellowships (547) that were aimed at academic training, there are still more than 4,600 fellowships, which represent approximately 1000 per annum, that should have been geared to feeding a broad program of continuing education throughout the Region, which could takes advantage of the superb possibilities for interaction among the countries.

6.5 Another element that could have facilitated this evaluation would be the analysis of the reports that the fellows are to submit at the end of their fellowship. However, reports were not available for over half of the cases analyzed in the period 1983-1987. In addition it was not possible to obtain any information on 13% of the cases, and 41% of the fellows did not present a final report, apparently due to these being short-term fellowships for observation visits that may have been interpreted by their recipients as not requiring reports. As this circumstance merits better control, the following table shows a distribution by country of origin of the fellows, which indicates that

for some countries over 80% of the reports were received, while for others 60% of the reports were received; this might lead one to think that responses of 2% and 4% are indicative of a failure in the fellowship management system at the country office.

TABLE 25

PRESENTATION OF THE FINAL REPORT BY FELLOWS

REGION OF ORIGIN	COUNTRY OF ORIGIN	NO REPORT DELIVERED		REPORT DELIVERED		REPORT NOT		TOTAL	
		No.	%	No.	%	No.	%	No.	%
BRAZIL	BRAZIL	39	7.9	247	50.0	207	42.0	493	100.0
CARIBBEAN	TOTAL	84	8.8	464	48.0	410	43.0	958	100.0
	CUBA	14	3.3	374	88.0	35	8.3	423	100.0
	DOMINICAN REP.	16	7.5	62	29.0	135	63.0	213	100.0
	HAITI	4	2.9	11	8.1	121	89.0	136	100.0
	JAMAICA	50	27.0	17	9.1	119	64.0	186	100.0
CENTRAL AMERICA	TOTAL	293	19.0	448	29.0	796	52.0	1537	100.0
	BELIZE	6	8.8	3	4.4	59	87.0	68	100.0
	COSTA RICA	89	56.0	7	4.4	62	39.0	158	100.0
	EL SALVADOR	11	6.2	141	80.0	25	14.0	177	100.0
	GUATEMALA	14	4.1	206	60.0	124	36.0	344	100.0
	HONDURAS	15	7.2	76	37.0	116	56.0	207	100.0
	NICARAGUA	138	40.0	8	2.3	197	57.0	343	100.0
	PANAMA	20	8.3	7	2.9	213	89.0	240	100.0
SOUTHERN CONE	TOTAL	85	12.0	354	48.0	292	40.0	731	100.0
	ARGENTINA	63	33.0	95	49.0	35	49.0	193	100.0
	CHILE	21	8.3	131	52.0	100	40.0	252	100.0
	PARAGUAY			96	52.0	89	48.0	185	100.0
	URUGUAY	1	0.99	32	32.0	68	67.0	101	100.0
MEXICO	MEXICO	13	3.8	271	79.0	61	18.0	345	100.0
ANDEAN REGION	TOTAL	164	14.0	595	52.0	396	34.0	1155	100.0
	BOLIVIA	16	15.0	45	42.0	47	44.0	108	100.0
	COLOMBIA	8	3.0	166	62.0	93	35.0	267	100.0
	ECUADOR	31	16.0	55	29.0	104	55.0	190	100.0
	PERU	83	31.0	129	48.0	57	21.0	269	100.0
	VENEZUELA	26	8.1	200	62.0	95	30.0	321	100.0
TOTAL		678	13.0	2379	46.0	2162	41.0	5219	100.0

6.6 Finally, one can estimate how appropriate the technical cooperation promoted through the fellowship program is by analyzing reincorporation of the fellow, and in particular by his remaining with the institution of origin at the same level as before or with a rise within the institution to a higher-ranking position. Of the sample that was studied in this regard, there was 95.8% reincorporation. In this same sample, 83% continue working in the original institution and in the same work area, while 12.8% have been promoted or moved to other duties. This may be considered a positive contribution of technical cooperation.

7. Conclusions and Recommendations

7.1 The WHO resolution (1) that has given rise to this study noted the need to establish plans and proposals for the training and development of human resources based on the policies and strategies of HFA/2000 and on national health strategies, which are implicit in the development of health systems, and in particular should oriented the Organization's Fellowship Program. Nonetheless, as was found in this review, although these policies are not formally set at the national level, this has not kept fellowships from being used in the great majority of priority fields of study in the context of the technical cooperation programs. Similarly, there has been a prompt response to international commitments, as was the case with the increase of fellowships in Central America and Panama once the Health Priorities Needs for Central America and Panama (PPSCAP) was implemented.

7.2 In general there has been a change in the dynamic of the fellowship program, with a significant shift from the practice of using long-term fellowships towards the clear prevalence of short-term

(1) EB71.R6, 1983

fellowships. This situation has made possible an adjustment to increasing costs and the maintenance of acceptable coverage of this cooperation instrument while also representing an adaptation to a change in demand, given the attainment of self-reliance of most of the countries for postgraduate training in public health.

7.3 Indeed, extensive use of short-term fellowships has constituted a responsive mechanism for mobilizing resources among the Latin American countries, thereby stimulating the use of alternatives for training in the countries of origin. The use of short-term fellowships complements to a great extent the promotion of courses, seminars, and workshops. Together they represent another positive response to the 1983 WHO Resolution that proposes "using the wide variety of training mechanisms," including in-service training, observation visits, and local training.

7.4 The data referred to, including the 17,128 fellows and the 77,362 participants in short courses, even allowing for a certain measure of overlap in the two figures, are no doubt indicative of an important contribution to expanding the critical mass of personnel in priority health fields.

The difficulty of analyzing the quality of training offered through the program in this study is to a certain point compensated for by recognition of the importance and degree of technical and scientific development of the institutions that have been receiving fellows. This also applies to evaluation of the visits to units of the health services, generally selected for their prestige, and usually undertaken with broad cooperation from the Organization itself.

7.5 As regards selection of the country of study, the most important factors are thought to be prestige of the training programs and development of the health services, political stability of the countries, and the cost of living or real value of the fellowship award in specific

contexts. Advanced development of some areas of knowledge and the prestige of some training programs was clear in certain countries to which a large number of fellows are sent. Nonetheless, the similarity in the number of fellows sent to different countries for studying a given area, and the information that more than 1,000 institutions were used for training the fellows in the last period of the study, casts doubt as to whether there is a conscious decision in the recognition and support for academic centers known for their excellence and for training programs at those services that enjoy national and regional prestige.

7.6 Although a large number of countries indicated that they had selection committees for the fellowship program, which has been a proposed guideline since 1967 (6), and reiterated in the already-mentioned Resolution of 1983, doubts lingered in terms of the effective performance of these committees. The different types of programming for education and training of health personnel through the fellowships program, demonstrated by the diversity of individuals and entities that requested fellowships in the 1983-1987 period, made it possible to infer that its programming has been implemented without the participation of national selection committees, and possibly without participation of the very units in charge of human resources development. Most of the fellowships are requested by upper-level offices of the ministries and academic institutions and by the international relations offices. In contrast, the fellows' work units requested less than one-third of the fellowships, when it was expected that the establishment of selection committees could enable these work units to participate actively in defining the education and training of their personnel. This may be related to the fact that the candidates selected were primarily from the central level or from the area

(6) Resolution WHA28.40, 1975

of research and teaching, to the detriment of those who work at the regional and community levels.

7.7 Also deserving of evaluation in the context of the Fellowship Program is the resolution of the Governing Bodies (6) that proposes expanding the award of fellowships to female candidates in the framework of efforts to incorporate women in health and development. Progress towards this particular goal has been positive, with a reduction in the percentage difference, which is still favorable to men at a level of 50%. The study illustrates that this situation responds largely to the make-up of the technical and administrative structure of national health institutions, which explains the continued predominance of men. Indeed, most of the management-level posts -- from which fellowship requests are received -- were filled by men. This situation raises differences as to the behavior of the labor force in health, which could be analyzed separately.

7.8 The procedures for awarding fellowships are based on resolutions of the Governing Bodies, interpreted by the fellowship management offices in the regions. In the Americas region, the procedures are found in an Operations Manual on PAHO/WHO fellowships. The management strategy, giving greater decision-making powers to the countries, gives the Representatives (PWRs) a high degree of autonomy in managing the cooperation instruments, which explains in large measure the flexibility in use of the fellowships and the application of fellowships for the mobilization of national personnel. Nonetheless, this does not release them from compliance with the regulations, nor does it justify the incorrect practice observed in accepting fellows with less than two years

(6) Resolution WHA28.40, 1975

of work with their institutions, or the awarding of fellowships to personnel over the 55-year age limit. Likewise, interactive use of fellowships, even on a small scale, may suggest a high degree of political influence in the distribution of fellowships.

7.9 Even in relation to the procedures, attention must be drawn to the inadequacy of the information system on the use of fellowships in the countries; neither the human resources units or the international relations units maintain systematic records on the fellows, nor do they follow up afterwards. Also, fulfillment of the requirement of presenting a report at the end of the fellowship has been very low. Little importance has been attributed to this report; even when done, it is filed away, and is not taken into account as a feedback mechanism in the training process. In function of the lack of interest shown after the fellowship is used, available information on reincorporation of the fellows to their jobs, and continuity in their original institutions, has been poor.

7.10 Nevertheless, the analysis carried out makes it possible to demonstrate, with three-fourths of the fellows located, not only the permanence of the majority at the same institutions, but also the eventual move within these institutions to higher-level technical and administrative posts, or to posts of the same rank but with recognition of the area of knowledge expanded with the fellowship. Thus one can say that the fellowship program, in addition to contributing to the training of high-level personnel, is fomenting the promotion of personnel within health organizations. This is both a stimulus to the personnel, and a way to support exchange on recent scientific and technical advances, facilitating the flow of new international guidelines and the implementation of their strategies.

7.11 Recommendations

7.11.1 To promote, at the country level, policies for human resource development and for the use of fellowships, to make it possible to delineate long- and medium-term programming, to achieve the goal of HFA in the context of transformation of the health services;

7.11.2 In the context of the policies referred to, to involve in a single programming process, in a complementary fashion, the fellowships and the short courses, seminars, and workshops, ensuring the harmonious development of these components of technical cooperation at the country level;

7.11.3 To promote a more wide-ranging exchange between the Organization's technical units and the country offices in coordinating the training system, including the fellowships as a priority resource, not only for academic and/or postgraduate training, but also for ensuring the continuing education of health services personnel;

7.11.4 Despite the importance of the mobilization promoted by the fellowship program, attention is called to the need to ensure that the use of short-term fellowships always take into account the character of training, which constitutes the program's *raison d'être*;

7.11.5 To immediately replace the classification used in the Fellowship System by whatever adaptation is necessary of the Organization's own programmatic classification, thus allowing for a more direct link with the Organization's current guidelines on international technical cooperation;

7.11.6 To establish a unified information subsystem for fellowships that can integrate the data for the country level and central coordination;

7.11.7 To establish a mechanism to promote, obtain and analyze periodic reports and recommendations on study programs and plans to be taken into account in selecting the training centers; to reactivate and review more frequently the Directory of Training Programs;

7.11.8 To reinforce the requirement that a national selection committee for the fellowship program include the participation of representatives from Planning, Human Resources, and the appropriate technical area in each case, in addition to the PAHO Representative and the local-level person in charge of fellowships, who will be responsible for providing the information needed for programming the fellowship;

7.11.9 Further analysis is recommended on the structure of the labor force in health by sex, as well as permanent oversight of the fellowships applied for by an awarded to women in the framework of efforts to incorporate women into health and development;

7.11.10 To rigorously apply the relevant criteria for the approval of fellowships for study abroad, ensuring that they are used only when all possibilities of equivalent training in one's own country have been exhausted.

In addition to the specific aspects indicated, it is suggested that beginning with this study further analysis continue at the country level as a means of enhancing the Fellowship Program and its role as one of the fundamental components of PAHO's technical cooperation.

ANNEX 1

DISTRIBUTION OF FELLOWSHIPS BY PAHO'S PROGRAM CLASSIFICATION		SUBT. TO
1,2 - DIRECTION, COORDINATION AND MANAGEMENT	2.1 GENERAL PROGRAM DEVELOPMENT AND MANAGEMENT	
	2.2 HEALTH INFORMATION SUPPORT	38
3. HEALTH SYSTEMS DEVELOPMENT	3.1 HEALTH SITUATION AND TREND ASSESSMENT	444
	3.2 MANAGERIAL PROCESS FOR NATIONAL HEALTH DEVELOPMENT	
	3.3 HEALTH SYSTEMS RESEARCH	
	3.4 HEALTH LEGISLATION	
	3.5 DISASTER PREPAREDNESS	5
4. ORGANIZATION OF HLTH. SYSTEMS BASED ON PRIMARY HLTH. CARE	4.1 PROGRAM PLANNING AND GENERAL ACTIVITIES	446
	4.2 DEVELOPMENT OF HEALTH SERVICES	582
	4.3 INCREASE OF OPERATING CAPACITY OF HEALTH SYSTEMS	
5. HEALTH MANPOWER	5 HEALTH MANPOWER	777
6. PUBLIC INF. AND EDUC. FOR HEALTH	6.1 PUBLIC INFORMATION	
	6.2 COMMUNITY HEALTH EDUCATION	61
7. RESEARCH	7 RESEARCH PROMOTION AND DEVELOPMENT	
8. GENERAL HEALTH PROTECTION AND PROMOTION	8.1 NUTRITION	117
	8.2 ORAL HEALTH	122
	8.3 ACCIDENT PREVENTION	
9. PROTECTION AND PROMOTION OF THE HEALTH OF SPECIFIC POPULATION GROUPS	9.1 MATERNAL AND CHILD HEALTH, INCLUDING FAMILY PLANNING	483
	9.2 HUMAN REPRODUCTION RESEARCH	
	9.3 WORKERS' HEALTH	50
	9.4 HEALTH OF THE ELDERLY	28
	9.5 HEALTH OF THE DISABLED	34
10. PROTECTION AND PROMOTION OF MENTAL HEALTH	10.1 PSYCHOSOCIAL FACTORS IN THE PROMOTION OF HEALTH AND HUMAN DEVELOPMENT	34
	10.2 PREVENTION AND CONTROL OF ALCOHOL AND DRUG ABUSE	120
	10.3 PREVENTION AND TREATMENT OF MENTAL AND NEUROLOGICAL DISORDERS	
11. PROMOTION OF ENVIRONMENTAL HEALTH	11.1 COMMUNITY WATER SUPPLY, SANITATION AND HOUSING SERVICES	252
	11.3 CONTROL OF ENVIRONMENTAL HEALTH HAZARDS	175
	11.4 FOOD SAFETY	110
12. DIAGNOSTIC, THERAPEUTIC AND REHABILITATIVE TECHNOLOGY	12.1 CLINICAL, LABORATORY & RADIOLOGICAL TECHNOLOGY FOR HLTH. SYSTEMS BASED ON PHC	279
	12.2 ESSENTIAL DRUGS AND VACCINES	114
	12.3 QUALITY, SAFETY AND EFFICACY OF DRUGS, VACCINES AND MEDICAL DEVICES	28
	12.4 TRADITIONAL MEDICINE	
13. DISEASE PREVENTION AND CONTROL	13.1 IMMUNIZATION	16
	13.2 DISEASE VECTOR CONTROL	106
	13.3 MALARIA	67
	13.4 PARASITIC DISEASES	6
	13.5 TROPICAL DISEASE RESEARCH	23
	13.6 DIARRHEAL DISEASES	
	13.7 ACUTE RESPIRATORY INFECTIONS	
	13.8 TUBERCULOSIS	38
	13.9 LEPROSY	33
	13.11 SEXUALLY TRANSMITTED DISEASES	38
	13.12 SMALLPOX ERADICATION AND SURVEILLANCE	
	13.13 GENERAL COMMUNICABLE DISEASE PREVENTION AND CONTROL ACTIVITIES	110
	13.14 BLINDNESS	
	13.15 CANCER	15
	13.16 CARDIOVASCULAR DISEASES	7
	13.17 GENERAL NONCOMMUNICABLE DISEASE PREVENTION AND CONTROL ACTIVITIES	27
	13.18 ZOOSES	158
	13.19 FOOT-AND-MOUTH DISEASE	270
TOTAL		5219

FELLOWSHIPS AWARDED TO ALL THE COUNTRIES OF THE REGION

COUNTRY	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	TOTAL
ANT/BARB.	8	11	8	5	13	9	6	10	7	8	10	7	6	7	14	7	136
ARGENTINA	64	78	70	72	44	63	57	77	111	84	69	77	80	41	41	23	1,051
BAHAMAS	6	6	3	1	3	1	3	9	13	17	11	17	17	5	15	7	134
BARBADOS	25	30	27	27	35	20	15	28	30	23	35	22	29	29	20	20	415
BELIZE	19	13	10	4	13	12	7	4	8	12	7	7	11	12	23	13	175
BOLIVIA	58	50	31	42	27	32	17	14	24	43	46	8	17	28	25	18	480
BRASIL	91	117	88	109	89	128	118	90	110	80	108	118	149	132	97	82	1,706
BRITISH TERR	9	12	12	13	9	24	22	21	29	25	25	10	21	22	19	18	291
CANADA	2	4	6	10	11	13	4	9	10	19	6	9	2	10	11	11	137
CHILE	66	58	63	92	71	78	47	45	59	74	42	50	59	51	50	44	949
COLOMBIA	73	104	78	78	48	43	55	66	58	56	114	67	90	51	61	49	1,091
COSTA RICA	36	38	45	30	38	60	62	54	79	51	47	37	27	37	41	34	716
CUBA	48	68	44	54	54	72	41	52	39	68	85	95	72	135	85	68	1,080
DOMINICA	6	11	11	8	9	20	15	21	8	20	17	13	13	12	10	12	206
DOMINICAN RE	33	38	29	38	15	16	33	28	33	33	48	41	90	69	26	13	583
ECUADOR	48	36	40	55	28	21	31	37	29	29	53	25	41	48	52	33	606
EL SALVADOR	41	45	37	29	35	34	26	35	17	19	19	25	26	52	52	32	524
FR.ANTILLES	3	2	3	4	1	1	2	6	1	1	1		1	2	6	4	38
GRENADA	9	12	5	6	6	18	14	7	4	12	17	7	6	7	7	5	142
GUATEMALA	44	55	57	62	50	45	56	73	48	29	59	35	64	63	117	65	922
GUYANA	23	16	16	14	24	21	23	20	24	6	18	14	15	24	9	10	277
HAITI	12	17	22	14	18	23	22	33	31	14	20	27	22	43	43	11	372
HONDURAS	32	32	34	23	36	67	91	60	60	73	50	55	60	31	55	39	798
JAMAICA	48	20	21	7	21	15	33	35	53	47	47	51	42	48	46	30	564
MEXICO	75	64	68	110	87	53	74	64	89	80	79	95	80	85	96	69	1,268
NETH.ANTILLES				7	5	5	7		1		2				3		30
NICARAGUA	34	36	37	24	31	30	35	37	14	22	22	52	72	93	98	75	712
PANAMA	43	68	45	40	28	41	44	33	34	52	41	33	69	46	49	58	724
PARAGUAY	29	31	20	23	23	27	20	10	12	21	14	36	30	51	70	22	439
PERU	67	34	39	33	22	41	30	60	44	44	59	62	78	97	60	27	797
PUERTO RICO		1	1														2
SAINT LUCIA	16	7	9	14	11	22	21	21	13	9	16	16	7	13	17	8	220
ST. VINCENT	8	9	6	9	9	20	7	15	26	7	14	11	9	10	12	6	178
ST.CHRISTOPH	4	6	9	12	7	18	14	16	9	11	9	9	7	4	12	4	151
SURINAME	8	9	4	4	13	6	8	12	7	5	18	14	24	11	17	14	174
TRINIDAD & T	31	26	25	10	13	14	16	20	15	11	10	14	18	23	11	22	279
URUGUAY	54	47	47	38	18	27	28	21	15	24	23	26	19	24	29	17	457
USA	37	48	32	43	31	30	23	25	21	9	17	11	18	15	21	19	400
VENEZUELA	80	78	88	74	74	62	45	66	83	60	68	67	50	60	78	81	1,114
TOTAL	1,290	1,337	1,190	1,238	1,070	1,232	1,172	1,234	1,268	1,198	1,346	1,263	1,441	1,491	1,498	1,070	20,338