



XVII Pan American Sanitary Conference

XVIII Regional Committee Meeting



Washington, D. C., U.S.A.
September-October 1966

Provisional Agenda Item 23

CSP17/27 (Eng.)
19 September 1966
ORIGINAL: SPANISH

SUPPLY OF TEXTBOOKS FOR MEDICAL STUDENTS

The Director has the honor to transmit to the XVII Pan American Sanitary Conference Document CE54/14, "Supply of Textbooks for Medical Students" which was submitted to the 54th Meeting of the Executive Committee for consideration, as well as a copy of Resolution XVII adopted at this same meeting.

Annexes.



*executive committee of
the directing council*

PAN AMERICAN
HEALTH
ORGANIZATION

*working party of
the regional committee*

WORLD
HEALTH
ORGANIZATION



54th Meeting
Washington, D.C.
April 1966

Provisional Agenda Item 17

CE54/14 (Eng.)
19 September 1966
ORIGINAL: ENGLISH

SUPPLY OF TEXTBOOKS FOR MEDICAL STUDENTS

The Director proposes for consideration of the Executive Committee a program for the improvement of the quality of teaching of medicine through the provision of textbooks, principally in Spanish and Portuguese. These textbooks would cover the basic sciences in the medical school curriculum for students of Latin America. Difficulty of access to textbooks and often inadequate quality of those available are most important problems today in the teaching of medicine. As part of the policy of the Organization particular attention has been given to a solution of these problems. A plan has now been devised which derives from a study undertaken by two experts who visited 36 schools of Latin America and interviewed more than a hundred deans and professors of medicine. To these surveys has been added information originating from other institutions and persons with experience in the problem.

In essence the plan provides for the Pan American Health Organization to sponsor the publication of 22 textbooks covering the basic sciences in the medical school curriculum in Latin America. This would be done through a revolving fund for medical textbooks, which would allow for the initial selection, translation and publication of these books for subsequent sale or rental at cost to the students of Latin America.

Although it may need to be up-dated in some cases, the situation in Latin America with respect to the number of schools of medicine, students admitted, students graduated, and total students is as follows:

(*)

Number of Schools of Medicine	Total Students	Admission to first year	Graduates	Percentage
110	83,568	14,896	6,196	41.5%

*This information applies to the academic year 1963 except in a few cases where it is based in 1960 figures.

First year admissions can be broken down as follows:

97 schools admit an average of: 70 students - total: 6,790 students
13 schools admit more than: 200 students - total: 8,196 students

Of these 13 schools, 6 admit between 200 and 400 students; the remaining 7 schools each admit more than 400 students, one of them admitting as many as 2,000 students.

The Organization proposes a publication program which takes into account the needs and objectives of the medical education program in Latin America. Further, it proposes that textbooks be provided for 22 subjects in the medical curriculum and that these be published in groupings beginning with requirements for the first year in medical schools.

Plan of Operations

Medical schools in the program will be supplied with a total of the "starting edition" of about 10,000 copies on the basis of an agreement to be negotiated between the Organization and the Government concerned. These agreements will ensure the continuity of the program through a system which provides for recovering the cost of the books supplied.

Each medical school participating in the program will be invited to nominate candidates to an expert committee which will be responsible for selecting or preparing the textbook that is to be published. Since the instructors will have taken part in selecting the committee concerned, it is expected that the books selected will be readily acceptable.

The expert committees will meet according to subjects groups, consideration being given first to basic sciences and introduction to scientific method; then the application of these to the healthy man, and finally, to man in search of cure of disease. Textbooks will be reviewed periodically by the expert committees in order to keep them up-to-date.

Cost Estimates

A detailed review has been made of cost elements. Printing costs have included estimates for royalties, translation into Spanish and Portuguese, revisions and corrections, printing, binding and distribution. Estimates also have been made for the cost of expert committees for selection of books and for administration of the program including consultants. The foregoing cost estimates, based on 20,000 copies of each book result in a per book cost of \$4.96.

The cost by calendar year over a five year period is shown below. Since each book is expected to last three years, it will be noted that the figures in the years 1970 and 1971 include reprinting of the books produced in 1967 and 1968 respectively.

<u>Year</u>	<u>Subjects</u>	<u>Copies</u>	<u>Cost</u>
1967	5	100,000	\$496,000
1968	5	100,000	496,000
1969	4	80,000	396,800
1970	9	180,000	892,800
1971	9	180,000	892,800
	<u>22*</u>	<u>640,000</u>	<u>\$3,174,400</u>

Financial Implications for PAHO

The foregoing cost figures represent the gross requirements for the first five years. It is expected that during the same period repayments derived from sale or rental of books will amount to \$1.7 million, leaving a net capital investment of \$1.5 million at the end of five years. From that point the system would be fully self-financing, and in addition may reasonably be expected to repay a substantial portion of the capital investment.

Preliminary discussions have been held with the Inter-American Development Bank with a view to obtaining a line of credit up to \$3.2 millions to assure financing of the gross cost, and to provide a Revolving Fund for future operation of the system. It is expected that long-term financing over a period of twenty years can be obtained at a low rate of interest, with an initial grace period of five or six years before starting repayment.

Under the financing arrangement outlined above, the Organization would undertake a commitment to start amortization payments in 1971 or 1972. At maximum this would require \$100,000 per year over a twenty year period. Should the system be able, as planned, to repay a substantial portion of the investment, the financial cost to PAHO would be reduced a corresponding amount.

It is believed that the enormous benefits which will accrue to medical education in the Americas justifies the proposed investment by the Pan American Health Organization.

* Excludes repeat of five subjects in 1970 and 1971.

RESOLUTION XVII

SUPPLY OF TEXTBOOKS FOR MEDICAL STUDENTS

THE EXECUTIVE COMMITTEE,

Having examined the program for the supply of textbooks for students of schools of medicine in Latin America (Document CE54/14);

Bearing in mind the value and importance of this program for the professional training of future physicians of the Americas;

Bearing in mind the interest expressed by the universities and schools of medicine in this program; and

Recognizing the feasibility and utility of this program in the form proposed,

RESOLVES:

1. To approve the important initiative of the Director and to instruct him to continue his negotiations with the Inter-American Development Bank (IDB) and other agencies with a view to obtaining financial support for the program for the supply of textbooks to medical students in Latin America.

2. To authorize the Director to negotiate with the IDB or other agencies the most favorable terms possible for the financing of the program.

3. To recommend to the XVII Pan American Sanitary Conference, XVIII Meeting of the Regional Committee of the World Health Organization for the Americas, that it authorize the Director (a) to sign a contract

for the loan with the IDB or other agencies; and (b) to undertake such actions and negotiations as may be necessary for the initiation and operation of the program and to report on them from time to time to the Governing Bodies.

(Approved at the eighth plenary session,
21 April 1966)

XVII Pan American Sanitary Conference XVIII Regional Committee Meeting



Washington, D. C., U.S.A.
September-October 1966

Provisional Agenda Item 23

GSP17/27 (Eng.)
ANNEX III
24 September 1966
ORIGINAL: SPANISH

SUPPLY OF TEXTBOOKS FOR MEDICAL STUDENTS

R E P O R T *

On the Visit to Medical Schools in Latin America
for the Textbooks Program

by

Dr. Hugo Trucco and
Dr. Alejandro Jiménez Arango
Consultants, PAHO/WHO

September and October, 1965

* Annex and detailed questionnaire from original report not included.

I. INTRODUCTION

Last August, Dr. Abraham Horwitz, Director of the Pan American Sanitary Bureau, invited us to participate in a hemispheric-level study of the actual needs of Latin American Medical Schools with regard to the supply of textbooks for medical students.

There was evidence which indicated that medical students felt that their education was being impeded because of the lack of adequate supplies of textbooks. It was considered desirable to determine more precisely the actual situation with a view to finding a solution to the problem. Such a solution could have consisted of adequate financing of the publication of textbooks in the appropriate language, which could be supplied to all medical students under conditions appropriate to their financial capacity, while seeking a formula which would permit the indefinite continuation of such a program.

Replying immediately to the invitation of the Director, we were in Washington, D.C., on August 28 and 29, 1965.

On August 30, we established contact with Dr. Ramón Villarreal, RES/MED*, who provided additional information on the idea of the Director.

That same afternoon, we had an interview with Dr. Abraham Horwitz, at which Drs. Emilio Budnik, Carlos Díaz Coller, Ramón Villarreal and the two consultants were present.

II. PRESENTATION OF THE PROGRAM

Dr. Horwitz explained at length his purposes in requesting our cooperation in the program, and gave us an opportunity to converse and exchange ideas which enabled us to understand the true scope of its objectives.

The task of the advisory service would be to visit several Latin American countries in order to study a significant number of Medical Schools; to determine the present situation regarding the existence of a need for textbooks for students; and to explore solutions to the problem that may exist. After the problem entrusted to us had been defined, we reached agreement on the very broad implications of the proposed project, which would have a direct bearing on the teaching of medicine as a factor of unquestionable importance in a general health program. Consequently, the program was designed to improve the level of that teaching and to provide facilities for the students, while adapting the methodology of teaching to the present-day needs of those who impart it and those who receive it.

* Medical Education and Research Training Unit.

We were entrusted with the task of preparing a work plan, and after it had been prepared in the form of a questionnaire and approved by the officers of the Bureau, it was decided that both consultants should go to Venezuela on September 4. The Bureau assumed responsibility for transmitting communications related to their visit to the appropriate Zone Offices for local organization of the visits and interviews with persons, such as deans or directors of medical schools, who would be concerned with the teaching of medicine.

The need to make such visits within a short period of time of approximately six weeks limited the visits to only a few of the existent Medical Schools. Nevertheless, it is believed that the sampling obtained is significant and demonstrates the present status of the problem in Latin America.

III. PERSONS INTERVIEWED

The first visits were made in Venezuela and, in that country the following Schools of Medicine were visited, and their respective Directors were interviewed. The institutions visited and the persons interviewed were:

Central University of Venezuela, Dr. Alberto Aagaard, and Dr. Andrade, Dean and Director of the School of Medicine, respectively.

Central University of Venezuela, Dr. Aníbal Osuna, Director, School of Public Health.

Dr. Aníbal J. Núñez, Permanent Secretary of the National Council of Universities, and Dr. Margarita Dobles, Technical Advisor of the Council.

Dr. Luis Delfín Ponce, Dean, School of Medicine, Universidad de Oriente, and Vice-President of the Association of Medical Schools of Venezuela.

Dr. Luis Peñalver, Rector, Universidad de Oriente.

Dr. Luis Manuel Manzanilla, Coordinator "José María Vargas" School of Medicine.

Dr. Ovidio Beltrán Reyes, Director, School of Medicine, University of Carabobo; Dr. Torrealba, Professor of Parasitology, and Mrs. Katz, Librarian of that Institution.

Dr. Jorge Vera, Assistant Rector of the University of Carabobo, Acting Rector, and Professor of Physiopathology.

Dr. Victor O. Houtmann, Director of the Student Social Welfare Service of the University of Carabobo;

Dr. Héctor Sequera Palencia, Dean of the School of Medicine, Universidad de Los Andes, and Professor of Preventive Medicine in that Institution;

Dr. Luis Elbano Zerpa Díaz, Assistant Rector, Universidad de Los Andes;

Dr. Juan Luis Mora, Secretary General, Universidad de Los Andes;

Dr. Enrique Molina, Dean, School of Medicine, University of Zulia, and President of the Association of Medical Schools of Venezuela, and

Dr. L. Fernández, Director of Faculty, University of Zulia.

After completing the visit to Venezuela, we went to Argentina, after a brief stop-over in São Paulo for the purpose of exchanging views with Dr. Ernani Braga, Executive Director of the Pan American Federation of Medical Schools, who had carried out similar activities in Brazil with a group of medical educators who worked under his direction. We gave Dr. Braga a copy of the outline of the questionnaire.

In Argentina, we interviewed the following persons:

Dr. Osvaldo Fustinoni, Dean of the School of Medical Sciences, National University of Argentina;

Dr. Horacio Rodríguez Castell, Dean, School of Medical Sciences, Universidad del Salvador, Buenos Aires, and Dr. Loti, Assistant Dean of that School;

Mr. Buenaventura Bueno, Director of Public Relations of Editorial Universitaria de Buenos Aires /University Press, Buenos Aires/;

Dr. Oscar L. Goycochea, Dean of the School of Medicine, Catholic University of Córdoba;

Dr. Tomás Villafañe, Dean of the School of Medical Sciences, National University of Córdoba, and Dr. Francisco Torres and Mr. Rodolfo A. Tannchen, Secretary and Director of the Library of that Institution, respectively, and

Dr. Roger Zaldivar, Dean of the School of Medical Sciences of the National University of Cuyo (Mendoza) and Mr. Atanasio Pimenides and Mr. Salomon Sappag, Director of the Library and Assistant Administrative Secretary of the aforementioned School, respectively.

After our stay in Buenos Aires, we made a rapid visit to Montevideo, where we interviewed the following persons:

Dr. Washington Buño, Dean of the School of Medicine, Universidad de la República, Montevideo, and Dr. A. Velloso, Professor of Gynecology, who is a member of the Library Committee, Director of the Library, and Student Representative.

In Chile, we conferred with the following Deans:

Dr. Amador Neghme, Dean of the School of Medicine, University of Chile, and Dr. Jorge Roman and Mr. Rene Sotomayor, Director and Assistant Director of the aforementioned school, respectively, and

Dr. Roberto Barahona, Dean, School of Medicine, Catholic University of Chile.

During our stay in Peru we interviewed the following persons:

Dr. Campos Rey de Castro, Dean, School of Medicine of San Fernando, University of San Marcos, Lima;

Dr. Alberto Hurtado, Dean, "Cayetano Heredia" School of Medicine of the Peruvian University of Medical Sciences, and Dr. Carlos Monge Castelli, Dr. Carlos Kumdieck, and Dr. Vicente Zapata Ortiz, Head Professor of Clinical Medicine, Head Professor of Biochemistry, and Assistant Dean and Professor of Pharmacology, respectively;

Dr. Vicente Zapata Ortiz, (Assistant Dean and Head Professor of Pharmacology).

Without delay, we visited the following persons in Ecuador:

Dr. José Miguel Varas, Dean, School of Medical Sciences, University of Guayaquil;

Dr. Leopoldo Arcos, Assistant Dean, School of Medicine, Central University of Ecuador, Quito; Dr. Augusto Bonilla and Dr. Galo Ballesteros, Members of the Board of Directors of the School; and Dr. Marco A. Hedoiza, Professor of Pathology at that Institution.

Continuing our trip to Colombia, we had the following interviews:

Dr. Bernardo Moreno, Executive Director, and Dr. Raúl Paredes, Head of the Division of Education for Planning and Development of the Colombian Association of Schools of Medicine;

Dr. Eduardo Borda, Dean, School of Medicine of Pontificia Universidad Católica Javeriana; Sister M. Consuelo, S.S.N.D., Assistant Director of the Library of the School;

Dr. Gabriel Velázquez Palau, Dean, School of Medicine, Universidad del Valle, Cali; and

Dr. Pelayo Correa, Assistant Dean; Dr. José I. Bruno, Head of the Department of Biology, Dr. Hernando Salazar, Secretary of the School; Dr. Humberto Gomez Osorio, Head of the Department of Morphology; Mr. Héctor Galeano Arbelaez, Representative of the Director of the Library; Mr. José Miguel Varas, President of the Student Council of the School;

Dr. Guillermo López, Acting Dean, School of Medicine, National University of Colombia;

Dr. Hernando Martínez, Assistant Dean of the same School.

We immediately proceeded to Panama for interviews with:

Dr. Gustavo Méndez Pereira, Dean, School of Medicine, National University of Panama.

Dr. Hugo Trucco then went to Costa Rica to interview:

Dr. Mario Miranda, Dean, School of Medicine, University of Costa Rica, and the following professors:

Dr. Edgar Cabezas Solera of the Department of Surgery

Dr. Rodrigo Cordero of the Department of Medicine

Dr. Víctor Hernández of the Department of Physiopathology

Dr. Rodrigo Loria of the Department of Pediatrics

Dr. Hernán Fernández, Ph. D., Department of Microbiology

Dr. Luis Rojas, Department of Biochemistry

Dr. Víctor M. Campos, Department of Pharmacology

Dr. Alvaro Fonseca, FACS, Department of Anatomy

Dr. Armando Ruiz, Department of Parasitology

Dr. Rodrigo Gutiérrez, Department of Physiology

Dr. Efraín Rojas, Director of the Library

Dr. Alejandro Jiménez A. proceeded to El Salvador for interviews with the following persons:

Dr. Juan José Fernández, Dean, School of Medicine, Autonomous University of El Salvador;

Dr. Fabio Castillo, Rector of the University

Dr. Alfonso Trejos, Professor of Microbiology

Dr. María Isabel Rodríguez, Professor of Physiology

Dr. Juan Héctor Berríos, Professor of Anatomy

Finally, the following persons were interviewed in Mexico:

Dr. Donato Alarcón, Director, School of Medicine, National Autonomous University of Mexico;

Dr. José A. Athie y Gutiérrez, Assistant Secretary of the School;

Dr. Ignacio Chávez, Rector;

Dr. Ignacio Barragán, Director of the School of Advanced Studies in Rural Medicine, National Polytechnic Institute (IPN);

Dr. José Sosa Martínez, Head of the Department of Microbiology and Parasitology;

Dr. Florencio Rustrian Sosa, Head Librarian; and

Dr. Luis López A., Head of the Department of Morphology of the IPN, referred to above;

Dr. Ignacio Alcaraz del Río, Director, School of Medicine, University of Guadalajara; Dr. Gilberto Arce, Secretary and Professor of the Department of Anatomy; and Dr. Joaquín Ramos Santos, Director, School of Medicine, Autonomous University of Guadalajara;

Dr. Guillermo Santoscóy Gómez, Director, Institute of Biological Sciences;

Dr. Ignacio Aceves Muñoz, Secretary of the School of Medicine;

Dr. Carlos Ocegüera Navarro, Head of the Department of Physiological Sciences;

Dr. Silviano Hernández González, Head of the Department of Morphology;

Dr. Luis Caribay, Rector of the Autonomous University of Guadalajara;

Dr. Alberto Rosado, Director, School of Medicine, Universidad del Sureste o Universidad de Yucatán /Southeastern University or University of Yucatán/, Mérida, and

Dr. Humberto Castro Montes de Oca, Secretary of the same School.

We returned to Mexico City for the following additional interviews:

Dr. Héctor Coll, Chief, Zone Office

Dr. Daniel Alonso, Deputy Minister of Medical Education of Cuba, and

Dr. Ramón Martínez, Director of Medical Sciences, School of Medicine, National University of Cuba.

Dr. José Miguel Torre, Director, School of Medicine, Autonomous University of San Luis Potosí.

Dr. José Pedro Gama Carpio, Director, School of Medicine of León, University of Guanajuato, and President of the Association of Departments and Schools of Medicine of Mexico, and

Dr. Miguel R. Barrios, Secretary of the same Association.

To sum up, we visited 11 countries and obtained 102 personal interviews with university officials representing 32 Schools of Medicine in Latin American area, not to mention the visits made in Brazil by a group under the direction of Dr. Ernani Braga.

IV. SUMMARY OF INTERVIEWS

On most occasions, the personal interviews followed a similar general pattern. In addition to the general information which was designed to clarify the principal aspects of the program of the Bureau, we discussed the basic idea with the person or persons interviewed. In other words, we sought to determine to what extent they understood the purpose pursued by the Bureau in conducting the survey.

At all times, particular care was taken to point out that the basic purpose of the first visit of the consultants was to become familiar with the existent situation in the Schools of Medicine. In brief, to obtain precise information through personal contact with Directors of Schools; to find out whether a shortage of textbooks existed; to determine whether adequate publishing facilities were available; to see how they handled such problems, if existent; to determine what financial resources were available, etc.

If the lack of textbooks was an important problem, we conversed with the persons visited, encouraging a dialogue designed to establish their true personal opinions with regard to procedures which could be utilized in order to remedy a situation which the Bureau had defined as a probable problem.

We stressed insistently that, with regard to the lack of textbooks, considered as a university problem, the Bureau did not have a definitive program. It was not formulating exclusive solutions but simply feeling out the thinking of the persons interviewed in order to have an accurate idea which would enable it to try to find one or several solutions to the problem.

We always insisted upon a full exchange of views, and only after such an exchange we discussed, in a more or less orderly manner, the work outline-questionnaire in order to obtain the same information from all the persons who were interviewed. It was indicated that several aspects discussed required subsequent study or consultation between the respective Deans or Directors and their staff and, consequently, a copy of the outline-questionnaire was left with them. Those interviewed assured us that they would send additional information to Washington.

The aforementioned interviews and personal talks provided realistic information on the existent situation which can be summarized objectively. In order to facilitate a better chronological presentation, in this summary we will adhere to the numerals of the outline-questionnaire which were utilized in the interviews.

A. Present Situation

2.1 With regard to the availability of textbooks, there was unanimous agreement that the Schools are in a very difficult situation. We did not find a single School which had a sufficient number of textbooks in its library and, on the contrary, most of them consider the problem to be most acute, inasmuch as the demand of the students for textbooks exceeds the existent supply by far. The situation varied all the way from places where there were practically no usable textbooks in the libraries to Schools where enormous, albeit insufficient, efforts are being made to maintain a large number of textbooks.

Very few universities have a library which can satisfy their needs. Even where such libraries exist, they do not meet the demand of the students, neither with regard to costs nor to their size.

Generally speaking, in most of the cities visited, there are commercial libraries which have a good number of textbooks. In some countries, however, there are difficulties which result from the foreign exchange situation or other difficulties with regard to imports of textbooks. The cost of the textbooks has increased over the years, and their purchase becomes ever more difficult.

2.2 In view of this situation, the students and faculty seek to establish substitute systems of apprenticeship or teaching. In a considerable number of Schools, there are mimeographed guides or manuals, prepared by the students or the professor and frequently revised by the latter.

It was unanimously agreed that this is not good teaching material and that excessive note-taking is a defect the elimination of which should be sought by all possible means. Despite this assurance, in many schools it is recognized that the student turns to that method simply because he has no other way to cope with his need to study, either because he does not find adequate material in the library or because the prices of textbooks are too high for him.

2.3 Generally speaking, there is too little publishing activity in the Universities. The following cases may be cited as exceptions: at Universidad de los Andes (Mérida, Venezuela), the Dean of the School of Medicine indicated that they have very good publication facilities and a good printshop, although he stressed the fact that there is no definite policy with regard to publications. At any rate, he offered those facilities in order to cooperate with the program of the Bureau.

In Buenos Aires, Editorial Universitaria de Buenos Aires (EUDEBA) carries out very important activities in the publications field, and one of its lines of activity is the publication of textbooks. The capital of EUDEBA comes from various sources, and the University of Buenos Aires contributes 99 percent of it. It operates like a commercial company, without any type of privileges or subsidies. Its purpose is to disseminate culture, not only at the university level but also among the general public. It has its own system of distribution of publications and exports a large part of its production. It is interested in the publication of original or translated texts, has published some medical works, and promotes the preparation of university textbooks. It works exclusively as a publishing firm, on the basis of contracts with local printshops. At present, it publishes 15 works per month and pays royalties which fluctuate between 5 per cent and 10 per cent of the sales price.

In Chile there is Editorial Andrés Bello, which is a branch of Editorial Jurídica of the University of Chile; its financing is provided for in national legislation. It operates as a commercial enterprise and it is estimated that, in order to be profitable, each edition which it produces must exceed 5,000 copies.

In Mexico, Editorial Universitaria has a capital which amounts to US\$400,000 and considerable capacity for publication. Nevertheless, Dr. Donato Alarcón, Dean of the School of Medicine, stressed the fact that its capacity is curtailed because of excessive work, particularly in other branches of knowledge. Furthermore, there are other publishing firms which are very active in the production of translations of medical textbooks, such as Interamericana, which is a purely commercial enterprise.

2.4 All those interviewed stressed that the prices of textbooks are excessive in relation to the economic capacity of the students. This becomes ever more evident, as the prices have increased progressively while an ever greater number of students from economically weak social sectors obtain access to universities. Frequently, the cost of a textbook is equal to the living costs of a student for a whole month. The percentage of students who have sufficient means to purchase textbooks is very small. The same holds true for universities, when they try to solve the problem with their own resources. In reality, notwithstanding the efforts which some have made, we did not find a single university which was in a financial position to defray the cost of textbooks for its own students.

Another difficult factor is language, since most of the suitable textbooks are published in languages other than Spanish -generally English- and a considerable proportion of the students do not have a sufficient command of that language. This is true despite the fact that, in many schools, English is a required subject. On the other hand, in some countries the use of English language textbooks, or of textbooks published in a language other than Spanish, does not seem advisable.

We heard frequent reference to the non-existence of a textbook which would be adequate for teaching needs. Specifically, some professors reiterated the fact that the usual textbooks deal haphazardly or inadequately with certain problems which are of great importance for the Latin American countries in our times. For these and other reasons, in many departments the use of a list of textbooks rather than specific textbooks is recommended.

2.5 Generally speaking, the library budgets of the Schools which we visited were insufficient and, in certain instances, there is no such budget. With their limited funds, the Schools must spend significant percentages of the budget in the purchase of textbooks, to the detriment of the purchase of other works, such as reference materials, reviews and purely consultative works.

The few university bookshops which exist sell textbooks to the students at cost price, which sometimes is not low enough, and provide certain payment facilities. They are not subsidized by the universities, although not infrequently certain administrative deficiencies imply, in practice, the existence of fairly considerable expenditures for university entities.

For the reason just noted above, universities sometimes find that the publication of textbooks is onerous, although such activities may have been planned on the basis of their constituting profitable enterprises.

B. Selection of Textbooks

3.1 With a view to indicating the precise priorities of the subjects which should be favored in the textbooks program, additional time was requested by the Deans or Directors in order to permit them to consult their own staff. Nevertheless, the great majority of them expressed their personal opinions, and there was a remarkable degree of agreement in favor of priority for the Basic Medical or Pre-Clinical Sciences. There was also a consensus to the effect that, in order to change the outlook of the student and to change teaching methods it is essential to initiate this program or a similar one for the initial years of study and in accordance with the subjects taught in those years.

3.2 With regard to the alternative provided for publishing a textbook, it was felt that this was the Gordian knot of the entire problem.

The mere reading of the outline-questionnaire did not always lead to a correct conclusion. There were rather frequent errors of interpretation of that material. Some schools considered the project which was submitted to them for study as a possible "imposition" of a specific textbook. Not infrequently we found some conceptual confusion with regard to the significance of a given textbook which some professors identified with the course itself or considered as a rigid guideline for the professor.

Others felt that it would be extremely difficult or impossible to select the ideal committee of experts for choosing the textbooks.

It was necessary to be very careful in explaining the objectives of the program in the broadest terms and in stressing that ours was merely an exploratory visit. Furthermore, we reiterated that the Bureau desired the active participation of all schools in the preparation of the program which was outlined in our initial visit, in the form of suggestions and dialogues.

We made it clear that the idea was to offer assistance in the teaching of medicine in the Latin American area with a view to raising that teaching to the highest level, albeit with all existent local or regional variations and completely respecting the independence of the universities as well as the free play of national as well as local characteristics.

The extensive dialogues described above always led to a final voluntary, unanimous and harmonious response which may be summarized as follows:

The ideal system would consist of a good selection of a committee of experts -by subject- which would be determined after the schools send their respective candidates to participate in such committees. It was clearly understood that each school, after consulting its own professors, would submit a list of 4 to 5 candidates by subject, and that from such lists each school would select the persons who, in the opinion of their experts, would be ideal members of the selections committee. It was hoped that, in obtaining all the proposed names, there would be a considerable degree of agreement with regard to 4 to 5 of the names, inasmuch as each school would, in turn, select them from among Latin American experts in each subject. The names would not be limited to members of the faculty of the school, nor to those of the country itself, but would be sought throughout the Latin American area. In this manner the appropriate committee would be selected by the Latin American professors of the subject in question, from their own ranks.

It was felt that, after the committee had been selected, certain textbooks should be sufficiently flexible as to be adapted to regional needs, and that it was necessary to keep them current.

3.3 In accordance with the above concept, it was unanimously agreed that the list of candidates should be sent at a future date. Some schools believe that their particular choice of candidates for membership in the experts' committees should be effected after the Bureau has finally decided with regard to the program under consideration.

3.4 There was a consensus in favor of stating that there was no objection to accepting the textbooks chosen, as outlined above, by committees in the selection of the membership of which the professors had participated.

3.5 With regard to royalties and copyright, where applicable, it is felt that this aspect should be considered subsequently and directly with the authors concerned.

C. Distribution of Textbooks and Continuity of the Program

4.1 There also was a consensus to the effect that the ideal situation would be one in which each student would have his own textbook and that, consequently, a program designed to meet the needs of 100 per cent of the students or, at least, 50 per cent of them, should be envisaged.

4.2 It was felt that the program should be initiated with an initial contribution by the Organization of a quantity of textbooks, and that, subsequently, the program should be implemented by means of a system similar to that of the Revolving Fund (Kellogg Foundation) which is utilized in Cali at Universidad del Valle.

4.3 All the school officials interviewed offered to take over local administration of the program subsequently, and some expressed the opinion that they could take over transportation costs.

It was unanimously agreed that it was the duty of the schools and universities to establish the modus operandi jointly with the Bureau so as to assure that a program similar to that proposed would be continued and maintained indefinitely.

4.4 It was considered that the alternatives proposed were not exclusive and that it would be more advisable to combine the systems in order that --in the final analysis-- the student would be enabled to accumulate his own library. Therefore, the system which would most probably turn out to be successful would be that of selling the textbooks on the installment plan, with possibilities of resale at lower prices after use. Consequently, this system entailed the recovery of the capital in order to maintain the teaching materials current and renewing them.

In very brief summary it may be stated that:

- a) There is an evident lack of medical textbooks.
- b) The adequate solution of this problem is an urgent necessity.
- c) Several alternatives may be accepted throughout the Latin American area.
- d) The mere fact of sending two consultants of the Bureau on an exploratory mission had a general impact and resulted in an immediate reaction which was very favorable to the idea championed by the Bureau.

Therefore, on the basis of our exploratory visit and the reactions which we perceived, we now submit our recommendations.

V. RECOMMENDATIONS

The idea of considering the possibility of providing textbooks for Latin America medical students responds to an urgent need, and the medical schools of that area, not only approve the idea, but applaud it.

With a view to achieving that objective, we venture to recommend the following phases of work:

- 1) From the very outset, the program should be provided with an administrative structure under the programs of medical education of the Pan American Sanitary Bureau.

Consequently, it should have the following personnel:

- a) A Program Director, on a full-time basis;
 - b) An Advisory Committee which will meet at least once a year in order to receive progress reports, to approve the activities carried out or to issue new directives and, generally speaking, to maintain contact with the implementation of the program, analyzing it critically and formulating the suggestions which it considers necessary;
 - c) Short-Term Consultants whose principal task is to advise medical schools on specific problems that may arise in implementation of the program. For example, let us envisage the possibility of sending the technical administrator of the Revolving Fund (Kellogg Foundation) from Cali to a given school of medicine for the purpose of organizing this or a similar system related to the sale or re-sale of textbooks.
- 2) After the appropriate Department has been organized, its first task will be to inform each of the medical schools of Latin America in full detail of the objectives pursued in the program which may be summarized as: a) assistance in the improvement of the teaching of medicine; and b) the supply of textbooks, on a gratis basis, to all medical schools and departments of Latin America.
 - 3) The next task would be to request of each school a list of candidates for membership on the various committees of experts which would be established, by subject or groups of subjects, in order to carry out the missions which will be described in detail subsequently. It is expected that, if each school sends a list of four to five names of persons qualified as the most

suitable one for membership on the respective committees of experts, there will be a remarkable degree of agreement on the first four names which, because of that fact alone, would be selected as members of the appropriate committee. In brief, the schools themselves would select the committees of experts which would act in their behalf.

- 4) Furthermore, it would be requested that each school should indicate the priority which it attributes to the disciplines that will be strengthened by the program. It is essential to know such priorities in order to determine the relative importance to be assigned to the various disciplines or subjects in implementing the project.
- 5) The next step would be to select the candidates proposed by the schools as members of the committees of experts, whose various tasks are detailed as follows: a) the candidates should meet at the Bureau in Washington, D.C., in order to consider whether, at present, there exists a textbook capable of meeting present-day needs in the teaching of the appropriate subject. These committees will be convoked in accordance with the priorities attributed to their respective subjects or disciplines; b) if an adequate and useful textbook is available at the continental level it would be published, if written in the Spanish or Portuguese languages, or, if written in another language, it would be translated; c) if, on the other hand, there is no adequate textbook, the committee would recommend the mechanisms for preparation of an appropriate text; and e) after the textbook is selected, the committee would be responsible for maintaining it current. In this manner, the committee of experts on a given subject, and those who are responsible for all the other subjects, would maintain permanent contact with the program and would constitute a useful supplement for maintaining the program on a dynamic and current basis.
- 6) It is possible that an adequate textbook will not be available for all subjects. Therefore, we recommend that, in certain cases, the appropriate committee of experts consider the possibility of gradually preparing the ideal textbook by means of a loose-leaf book with replaceable pages. This would provide the following advantages, among others: a) the textbook could be kept current by merely replacing material in the chapters which need to be brought up-to-date; b) it would be possible to stress aspects of regional interest, adapting the textbook to the region and its characteristics; c) from the economic standpoint, although the first edition may be more costly, in subsequent

editions the cost of bringing the textbook up-to-date will be only partial, inasmuch as it is assumed that, in any textbook, there will be a larger or smaller nucleus of material which is not subject to frequent changes, and would not require revision or re-publication; d) it would enable the Professor to include his own particular viewpoints as annexed pages; and e) in those subjects regarding which there are more than one "school of thought" it would be possible to present all the various "schools of thought" so that the student will receive all information on the subject simultaneously, thereby affording an opportunity for him to exercise his individual critical faculty and to reach his own reasoned conclusion.

- 7) The program should begin with the subjects or disciplines of the first years of study, in such a way as to induce a change in the thinking of the student from that of his early university studies while promoting a change in the methods of instruction which, obviously, should be initiated as of the first step in university life.
- 8) The program for the supply of textbooks should begin with an initial contribution of the selected books. Nevertheless, it is essential to establish an organizational system which would render this initiative both permanent and indefinite. Therefore, we recommend that the medical schools establish a system similar to that of the "Revolving Fund" which exists at Universidad del Valle in Cali, or a system for the sale and resale of textbooks, in which case the amounts that are obtained for recovery of the textbooks, should be estimated in such a manner that they would increase the initial capital slightly in order to cope with the ever greater demands for textbooks which will result from increased enrollment of students, growing publication costs, and the reduced purchasing power of the currency of the country concerned.
- 9) In view of the fact that the program should be permanent and indefinite, we recommend most emphatically that, instead of initiating it partially, sufficient resources be obtained for its total and complete implementation. In our opinion, if it is not possible to implement the program totally and completely, it would be preferable that the Pan American Sanitary Bureau not initiate the program.
- 10) The agreements which the Pan American Sanitary Bureau would conclude with the schools of medicine of the respective universities should envisage the commitments to be established

in such agreements with regard to the local organization, auditing and continuity of the program.

- 11) Coordination of the program with the plans that are being studied with a view to establishing a Regional Medical Library, as well as the audio-visual aids program of the Pan American Sanitary Bureau and similar programs organized by other agencies, should also be taken into account.
- 12) It is desirable that the program be carried out jointly with the Pan American Federation of Associations of Medical Schools. In countries in which the National Associations have manifested an interest in the program and where the necessary resources are available, the aforesaid Federation may play an important role in administration of the program.

When the final decision in favor of establishing the program is taken it will be necessary to urge the Associations to participate actively in precise evaluation of the problem, and in creating a favorable climate for it. Finally, the Associations can assume responsibility for coordination of activities of the Bureau and of the Medical Schools. It is of fundamental importance that the program be maintained in dynamic and permanent fashion, both vigorous and current. It is in this subsequent aspect that the Associations can play an important role.

- 13) In view of its cost, in order to finance the program it is advisable that the Pan American Sanitary Bureau explore the possibilities of public or private, national or international institutions cooperating in defraying costs of the program. It would appear that the Inter-American Development Bank would be the most appropriate organization for financing the program. If the necessary climate and interest are created, it will be feasible to find a system which would enable the Bank to finance the program. If there is a favorable policy, the Bank is in a position to show to its Member States that the countries themselves feel that the development of medical education is a channel for national development which really deserves priority consideration.

On the other hand, it would be possible to show the countries which are represented in their respective medical schools that they are the ones who are utilizing their contributions to the Bank in one of the fields in which they desire and need assistance urgently.

- 14) The program can be financed in phases. In other words, it will be necessary to establish a period for the start of the initial financing and another for its termination. We are convinced that the aforementioned period should start as soon as possible and that it should be completed within a period equivalent to two years of teaching, or, in other words, six years. Therefore, the initial contribution would be relatively large, but not in excess of 20 per cent of the total. This will serve to launch the activities of the program, and a small group of texts will probably be selected to demonstrate the objectives and the philosophy of the proposed project. Subsequently, progress toward total achievement of the objectives of the program can be stressed gradually.
- 15) In order to launch the program, it is necessary to understand thoroughly the multiple difficulties which must be overcome before success can be achieved. Suffice it to refer to the individualistic attitude which is pre-eminent in some professors, the "personal interest" factor which may be present in the most devoted authors who do not wish to see their respective textbooks replaced, or in authors who have produced textbooks from which it may be desired to select some chapters while they may feel that the entire textbook is good and, consequently, may not be willing to sub-divide it, or the activities of publishing houses which may see their current commercial interests threatened.

This program of the Bureau will be faced with many and various difficulties. In our opinion, they can all be overcome, but, in order to achieve this, in deciding to initiate the program, the Bureau must organize an adequate section or department from the very outset, with endowed suitable personnel and sufficient resources. This section or department must understand the objectives of the Bureau very clearly, as well as the scope of such objectives.

- 16) We should like to stress the fact that the projections of this program are not limited to the field of medical education, where the experiment will be initiated, but that the experience which it will provide may be utilized in other fields of education.

Finally, the consultants wish to state for the record that the opportunity to participate in the initial phase of a program which may be of enormous importance to Latin America, and to have visited many institutions in various countries, has been a pleasant and profoundly interesting experience. Everywhere

we were received in a friendly and cordial spirit, and we had the privilege of engaging in a far-ranging exchange of ideas and concepts with the most distinguished medical educators in Latin America. The ideas and suggestions which they contributed enabled us work out an ever more clear definition of the objectives, projections and implementation of the proposed program. The material and the conclusions contained in this report are the fruit of our interviews, and in this paper we have merely sought to express the practically unanimous concepts which we heard expressed in the institutions that we visited in connection with the project which was the object of our work.

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SUPPLY OF TEXTBOOKS FOR MEDICAL STUDENTS

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I. INTRODUCTION

The social and economic development efforts in which the countries of the Continent are engaged and all the complex changes that they imply, in industrialization, agrarian, fiscal, and administrative reforms, are essentially directed to the achievement of a better society. This social improvement is focused on man and requires him to improve his own capabilities as well. Hence the fundamental importance of education -which is a way of making a person more capable- for social development.

The need to reform educational systems and give them the content required for more rapid development finds specific expression in the need to produce a better university product. There is need for physicians, physicists, chemists, agronomists, and other skills, whose training is in line with modern science and technology. This superior professional quality cannot be obtained if the means that ensure it are not available to instructors and students alike. The best will in the world is of no avail if essential elements for teaching and learning are lacking. One of these elements is a first-rate textbook to be used by the student under the guidance and with the explanations of the instructor.

II. BACKGROUND

The interest of the Pan American Health Organization in the supply of textbooks for medical school arises from its responsibility to promote the education of health personnel. Governments have increasingly requested the cooperation of the Organization in developing their medical schools. In the last few years PAHO staff and consultants have analyzed the situation of medical education in the Region, the problems affecting its development, and the mechanisms through which the Organization, as an intergovernmental agency in the health field, could further cooperate toward the better training of health personnel, including medical doctors.

In some areas, such as the advanced training of faculty members, the Organization has been cooperating with its Member Countries. There are other areas, however, that present special problems and no solution can be foreseen on the basis of the resources available to local agencies or governments. One of these problem areas is the shortage of textbooks in the medical schools.

The interest of the Organization in this field is not new: for many years it has published a number of manuals that have been widely accepted as teaching material for the various health professions. These books have been provided free or at low prices through regular PAHO channels. However, the problem of textbooks for medical students is not amenable to the same treatment because of the large amount of money involved and the special requirement of universal acceptance of each text in order to achieve the economics of large-scale publishing.

A study of the problem was made for the Organization by experts from the Faculties of Medicine of the University of Concepción (Chile), and the National University of Colombia, who visited 36 medical schools in 12 Spanish-speaking Latin American countries. In Brazil ten medical schools were studied in collaboration with the Pan American Federation of Associations of Medical Schools and the Brazilian Association of Medical Schools.

The studies were based on interviews with officers, professors, and students, and resulted in the following findings:

a) The lack of textbooks for the teaching of medicine was pronounced; none of the medical schools had sufficient text in their libraries to permit the student body to complete their reading assignments without having to purchase their own books;

b) The sales price of the few existing textbooks was excessive relative to the financial situation of the students and the budgetary possibilities of the universities;

c) Most existing textbooks were published in English and while many students were able to read some English only a minority could pursue their studies in a language other than Spanish or Portuguese (Brazil);

d) According to students and instructors, many of the existing textbooks were obsolete, or inadequate;

e) In two of the Schools visited (universidad del Valle and Universidad de Zulia) it was found that the problem was being partially solved, on a permanent basis, through a "book bank" or revolving fund established, in the case of the Universidad del Valle, with an initial grant of \$10,000 from the W.K. Kellogg Foundation. Similar programs were being established in other universities. The functioning of these funds was very satisfactory, but they were not large enough to solve the problem completely;

f) The officers, faculty members, and students interviewed in all of the other medical schools, showed an interest in developing similar programs and offered not only their strong support, but also their assistance in the development of the program. (CSP17/27, Annex III).

For these reasons, PAHO is considering the possibility of developing a program to make modern textbooks of high scientific quality available to medical students of Latin America in their own languages. The textbooks would be sold or rented to the students on terms and conditions suitable to their economic condition.

To be effective, such a program would have to be continuous. For that, a revolving fund, already proved satisfactory at local level could be established.

To reduce editorial expenses, each edition should have a substantial number of copies. This would be needed, in any case, to provide each student with textbooks. For maximum savings, it would be necessary, as far as possible, to have uniform textbooks. These would be accepted more readily if the professors of all medical schools could participate in their selection in some way.

To reduce distribution costs, all the PAHO channels and those that have been offered to it should be utilized: zone and country representatives, Pan American Federation of Associations of Faculties (Schools) of Medicine, National Associations of Medical Faculties, Universities and Medical Schools.

In order to produce real benefits in the teaching process, the program, from the beginning, should be of adequate size. It is therefore proposed to publish each year the complete set of textbooks for one year of medical school.

The expenditure of a relatively large amount of money in a rather short period of time makes it necessary to look for a method of financing that would permit amortization over a longer period of time.

This proposal was first presented to the Executive Committee of PAHO during its 54th meeting. The Committee, after a thorough analysis of the matter, resolved to authorize the Director to negotiate the financing of the program with the Inter American Development Bank or other agencies. It also recommended to the Pan American Sanitary Conference that it authorize the Director to enter into a loan contract as well as to negotiate agreements necessary for implementation of the program. (CSP17/27).

III. PROPOSED PROGRAM

Number of books needed. The present situation in Latin America with respect to the number of schools of medicine, students admitted, students graduated, and total students is as follows:

TABLE NO 1

(*) Number of Schools of Medicine	Total students	Admissions to first year
110	83,568	14,896

(*) This information applies to the academic year 1963 except in a few cases where it is based on 1960 figures.

First year admissions can be broken down as follows:

97 schools admit an average of: 70 students
 13 schools admit more than: 200 students

Of these 13 schools, 6 admit between 200 and 400 students, the remaining 7 schools each admit more than 400 students, one of them admitting as many as 2,000 students.

The Pan American Health Organization proposes to advance to 97 schools all the textbooks they need --6,790 textbooks in each of 22 medical subjects, and up to 200 copies per school to the remaining 13 schools which admit 200 or more students per year, for a total of 2,600 textbooks, making a grand total per 110 schools of 9,390 textbooks per subject for the first year. In round numbers, 20,000 copies of each text would have to be published to meet needs over a three-year period, taking re-use into account.

TABLE NO 2

	1st. year	2nd. year	3rd. year	total
Sold	5,000	5,000	5,000	15,000
Sold and resold	2,500	2,500*	2,500*	2,500
Rented	2,500	2,500*	2,500*	2,500
Total new books required	10,000	5,000	5,000	20,000

The sequence of subjects for the production of the textbooks will follow the suggestions of the medical schools. It has been considered advantageous to begin with those textbooks required for the first years of the medical career. Tentatively consideration is being given to publishing 22 titles of the most important subjects in medical teaching. Five titles would be produced on each one of the first two years and four on each one of the three following years.

A sufficient number of books will be published the first year to supply the demand for textbooks on subjects in the group in question over a three-year period. As each edition will last three years -a reasonable period of usefulness for a textbook both as to its physical durability as to its timeliness- the editions will begin to overlap only from the fourth year onwards as will be seen from table No 3, which covers a period of ten years.

* Not included in total since they remain available from previous year.

TABLE Nº 3

PUBLICATION TIMETABLE FOR MEDICAL SCHOOLS
 IN LATIN AMERICA
 1967-1976

Year of Publication	Original editions	Years of use	Reprints	Years of use
1967	Group "A" - 5 subjects	1967-69		
1968	Group "B" - 5 subjects	1968-70		
1969	Group "C" - 4 subjects	1969-71		
1970	Group "D" - 4 subjects	1970-72	Group "A"	1970-72
1971	Group "E" - 4 subjects	1971-73	Group "B"	1971-73
1972			Group "C"	1972-74
1973			Group "A" and "D"	
1974			Group "B" and "E"	
1975			Group "C"	
1976			Group "A" and "D"	

Selection of textbooks. The success of the program will depend in large measure on the acceptance of the textbooks both by instructors and by students. It is proposed that, after consultation with its faculty members as to any special national or local features of medicine, each medical school submit a list of four or five candidates to form an expert committee on each subject. The persons nominated will be those best qualified to select the books to be published. The expert committees can be appropriately appointed from these lists. This procedure was considered acceptable by the deans and instructors interviewed, and ensures that the members of each expert committee will be leaders in their field.

The expert committees will be responsible for selecting or preparing the textbooks, and the faculty of all participating institutions will be expected to use the texts, since they will have taken part in selecting the committees.

The expert committees will meet according to subject groups, consideration being given first to the basic sciences and introduction to scientific method, then to the application of these to the well man, and finally, to man in search of health. The program will begin with the subjects of the first three years of the curriculum and therefore will help to bring about a change in the mentality of the student on entry into university life.

If the expert committee decides that a suitable and useful textbook in a particular subject is already available, it will be translated and published. If no such textbook exists, the committee may assign the responsibility to various experts to select suitable chapters from various textbooks and give them the necessary coherence, or to write the chapters needed to make the book suitable and useful.

The textbooks will be published in Spanish or Portuguese and, where English or French is needed, the Organization will take steps to provide medical schools with suitable textbooks already in print in those languages.

Finally, the Organization will maintain a continuing active program to keep the textbooks up to date. In addition, continuous evaluation of the program will be built in to assure continued usefulness and service.

It will be recognized that a key feature of the entire program is the selection of textbooks for use in all schools, allowing large scale-publication at low unit cost. This will permit achievement of the objective to provide books at prices within the limited financial means of medical students.

Publication and distribution. A number of interviews and discussions have been held with officers of national and international agencies and private and official institutions interested in medical education in Latin America, and with experience in the international production of textbooks. The matter has also been discussed with representatives of the publishing industry. The conclusions reached with this latter group are in general that this program would be of great benefit to medical education and that it would not duplicate, overlap, or replace existing publication activities since medical textbooks now available in Spanish and Portuguese are insufficient in quantity to meet existing needs.

The proposed system, through mass production and resulted lower costs, would enter a new market. For developing this program PAHO plans to utilize existing publishing facilities. PAHO does not plan to become a textbook printing enterprise. All printing and related activities in this field will be carried out through existing commercial channels. It is estimated that about 80% of the total investment will go to the already established printing and publishing industry. It is also expected that making books available to students at prices within their financial possibilities will further stimulate their interest in reading, consulting, and purchasing more publications besides those that would be provided through the proposed PAHO programs. Plans are being made to establish coordination with related textbook programs carried out by public and private agencies in national and international if the program is approved.

Administration of the program by the schools. Medical schools will participate in the program on the basis of an agreement signed by the Government of each country involved and the Pan American Health Organization. The Organization already has 17 agreements dealing with medical education in 11 countries, and this proposal could be introduced as an extension of such agreements. The idea of the agreements between the universities and PAHO has been discussed favorably with approximately one third of the medical schools of Latin America. The long experience of PAHO in negotiating tripartite agreement arrangements with governmental and education institutions has been satisfactory and productive.

The proposal has been endorsed by the associations of medical schools of Latin America and by the Pan American Federation of Associations of Medical Schools. The result of the PAHO survey and the endorsement of the Association of Medical Schools demonstrates not only the interest of the medical faculties, but also the willingness of the universities to participate with financial and administrative resources of their own.

The participating medical schools will be supplied with the "starting edition". The schools will use income from selling or rental of the books to pay for the advanced books and to order additional basic books as new contingents of students are admitted.

Budget. Financing. Revolving Fund. Table No 4 shows the details of the budget for the production of 640,000 textbooks in 22 subjects - the number indicated for the five-year period 1967-71. The estimates shown in item A are based on extensive discussions with individuals, non-profit organizations, and commercial firms experienced in international textbook programs.

In addition to distribution and related administrative and technical costs included in item A, there is provision for permanent staff and short term consultants specifically assigned to this program. Additional staff may be required especially for administrative and financial services, but the number would not have significant influence on the unit cost.

It is recognized that the Organization will also make a substantial contribution to the program through its regular staff and facilities. The Office of the Director, the Medical Education Branch, the Administrative Branches, the Zone Offices and Country Representatives all will contribute some portion of their energies to this activity. It is not practical to attempt to place a figure on this contribution, since there are not substantial potential budgetary implications.

Table No 5 shows the estimates for the operation by groups of subjects, the gross cost of production of the textbooks, the net income from the operation of the Revolving Fund, and finally, the net expenditure on the textbooks.

The annual budget is shown year by year and by groups of textbooks and the unit cost has been rounded to \$5.00 (estimated cost \$4.96) so as to facilitate partial and total calculations.

An analysis of this table, which covers the 9-year period 1967-75 instead of 1967-71 permits an appraisal of future prospects and shows the following:

a) The first income from sale or rental of books will be received in the Revolving Fund to help finance the second year of the program, and the production of textbooks is expected to be self-financing after the fifth year of operation. That is to say, if the Fund begins to operate in 1967, its accumulated income through 1972 will be sufficient to cover the cost of the heavy printing scheduled for 1973, 1974 and so on.

As shown in Table 5, the gross expenditure of the program over the first 5-year period is 3.2 millions. However, in view of the expected income, the net requirement to establish and maintain the revolving fund would be only \$2 million.

The financing of a new activity such as this, involving a relatively large capital investment over a period of five years, may perhaps best be

TABLE No 4

COST OF PRODUCTION OF TEXTBOOKS ^{1/}

a. Selection, translation, editing, printing and distribution

1 Text ... (average 500 pages)..... 20,000 copies:

Royalties	\$ 3,000	
Translation into Spanish.....	5,000	
Translation into Portuguese	6,000	- ^{3/}
Revision	2,000	
Corrections	2,000	
Printing, binding, plates, distribution, etc.	60,000	
1 committee of 3 experts	<u>2,850</u>	
Cost per 20,000 copies of one textbook	80,850	

Cost for one year (5 textbooks) \$404,250

B. Administration

Chief of Program		
Chief of Production		
Administrative Officers (2)		
Secretaries (2)	68,000	
Consultants, travel and miss.	<u>24,000</u>	<u>92,000</u>

C. Total cost per 100,000 copies \$496,250

Cost for 1 textbook 4.96

D. Cost per calendar year

<u>Year</u>	<u>Subjects</u>	<u>Copies</u>	<u>Cost</u>
1967	5	100,000	\$496,000
1968	5	100,000	496,000
1969	4	80,000	396,000
1970	9	180,000	692,000
1971	<u>9</u>	<u>180,000</u>	<u>892,000</u>
	22 ^{2/}	640,000	\$3,174,000

^{1/} These estimates are subject to revision as costs may change. The unit cost also will rise or fall in relation to the yearly change in volume of copies produce.

^{2/} Excludes repeat of five subjects in 1970 and 1971.

^{3/} The availability of books already translated will bring down the cost per unit of textbock.

TABLE No 5

BUDGET FOR A TEXTBOOK PROGRAM ON THE BASIS OF A REVOLVING FUND *

No. of copies	1967	1968	1969	1970	1971	Totals	1972	1973	1974	1975
100,000	500	...	...	500	...	1,000	...	500	...	...
A. (Texts 1 to 5)	(Gross expenditure) (Income)	(166.6)	(166.6)	(166.6)	(166.6)	(666.6)	(166.6)	(166.6)	(166.6)	(166.6)
	Net expenditure	500	(166.6)	(166.6)	333.3	333.3	(166.6)	333.3	(166.6)	(166.6)
100,000	...	500	...	...	500	1,000	...	...	500	...
B. (Texts 6 to 10)	(Gross expenditure) (Income)	...	...	(166.6)	(166.6)	(500)	(166.6)	(166.6)	(166.6)	(166.6)
	Net expenditure	...	500	(166.6)	(166.6)	500	(166.6)	(166.6)	333.3	(166.6)
80,000	...	...	400	...	...	400	400	...	...	400
C. (Texts 11 to 14)	(Gross expenditure) (Income)	...	...	...	(133.3)	(266.6)	(133.3)	(133.3)	(133.3)	(133.3)
	Net expenditure	...	...	400	(133.3)	133.3	266.6	(133.3)	(133.3)	266.6
80,000	...	...	...	400	...	400	...	400	...	...
D. (Texts 15 to 18)	(Gross expenditure) (Income)	...	...	...	(133.3)	(133.3)	(133.3)	(133.3)	(133.3)	(133.3)
	Net expenditure	...	...	...	400	266.6	(133.3)	266.6	(133.3)	(133.3)
80,000	...	...	...	...	400	400	...	...	400	...
E. (Texts 19 to 22)	(Gross expenditure) (Income)	...	...	...	...	...	(133.3)	(133.3)	(133.3)	(133.3)
	Net expenditure	...	...	...	400	400	(133.3)	(133.3)	266.6	(133.3)
	Gross expenditure	500	500	400	900	3,200	400	900	900	400
	Net expenditure	...	(166.6)	(333.3)	(466.6)	(1,566.6)	(733.3)	(733.3)	(733.3)	(733.3)
	Adjustments, incidental expenses	500	333.3	66.6	433.3	1,633.3	(333.3)	166.6	166.6	(333.3)
	TOTAL					2,000				

* In thousands of dollars.

approached through borrowing, since it is not practicable to increase the annual budget in such amounts. Through borrowing, the repayment can be budgeted in more modest amounts over a longer period. It should be recognized that the full amount borrowed will continue to be an asset of the Organization, through the revolving fund which will be established.

PAHO Proposes to repay the loan out of its regular budget over a period of 20 years after a 5-year period of grace. If the loan is made, a predictable long-term obligation for the regular budget of the Organization will be created, so that the loan will not generate any unknown or unexpected burdens on the Member Governments. The annual payments on the loan would approximate \$130,000 per year, representing only about 1.4% of the PAHO regular budget for 1967.

The Financial Regulations of the Organization provide in Article VI, paragraph 6.9 as follows: "The Director with the prior and written approval of a majority of the members of the Executive Committee shall have the power to borrow funds".

The power to enter into a loan agreement, assumes that any loan will make provisions for repayment, consequently the power to repay is implicit in paragraph 6.9.

In view of the increasing interest of the IDB in cooperating in programs of manpower training, one of the possible sources of financing for this project was considered to be through a loan by the IDB. For this purpose a proposal was presented to the President of the IDB for preliminary discussions. The proposal is currently being studied by the Bank.

IV. FINAL COMMENTS

The pace at which the countries are approaching the solution of their health problems demands an aggressive approach to health manpower training. The preparation of physicians is of the utmost importance in these efforts, and in the training of this personnel the textbook is a key element in introducing required changes for improvement in the whole educational process.