

**AN EVALUATION OF
THE INTERNATIONAL HEALTH EXCHANGE
AND
THE YOUNG CANADIAN RESEARCHERS AWARD PROGRAMS**

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Preface

This evaluation of the International Health Exchange (IHEP) and Young Canadian Researchers Award (YCR) programs was requested and funded by the International Development Research Centre (IDRC) of Canada. The evaluation was carried out between October 29, 1987 and January 21, 1988 at the Centre for Cognitive and Ethnographic Studies in Education (McGill University) by Professors Thomas Eisemon and Ailie Cleghorn. The views and opinions contained in this report are the responsibility of the authors and do not necessarily state or reflect those of IDRC.

The authors are grateful to the officers of the Fellowships and Awards and Health Sciences divisions at IDRC as well as to the international, national, governmental and non-governmental organizations whose staff so willingly talked to us. We are also indebted to the faculty members of the many universities we contacted who so patiently took time to provide the information we sought. The evaluation could not, of course, have been conducted without the cooperation of the former award holders and their supervisors.

Several students at McGill University assisted us with this evaluation by locating former award holders, conducting interviews, summarizing documents, and assisting in the analysis of the data. They are Jane Shapiro, Josette McGregor, Richard Larocque, Marguerite Roy. Erin O'Brien transcribed the interviews and prepared the final manuscript.

1. INTRODUCTION

1.1 In July 1987 officers of the Fellowships and Awards Division (FAD) approached the Centre for Cognitive and Ethnographic Studies at McGill University regarding an evaluation of the International Health Exchange Program (IHEP) and the Young Canadian Researchers (YCR) awards. Subsequent correspondence resulted in agreement on October 29, 1987 (Appendix A) to carry out an evaluation with the following three objectives:

1.1.1 To assess the premises of the IHEP and the YCRA with regard to the need to increase the supply of Canadians with expertise in international health fields;

1.1.2 To examine the management and organization of these programs and their impact on the careers of recipients; and,

1.1.3 To ascertain how well they articulate with other Centre activities and with other award programs in Canada having similar objectives.

1.2 Methods of Data Collection

Information for this evaluation was collected from three sources: 1) interviews with former award holders (Appendix B), academic supervisors and administrators of the IHEP and YCR programs (Appendix C); 2) discussions with staff of international and national assistance agencies involved in international health (Appendix D); and 3) from official documents such as program reports and previous evaluations (Appendix E).

1.2.1 Interviews with Former Award Holders and Academic Supervisors

Forty-four interviews with former award holders and academic supervisors were carried out in Montreal, Toronto, Ottawa, Hamilton and Calgary. These included:

Twenty former IHEP award holders. This represents about 15% of the 129 former award holders;

Nine recipients of the short-term YCR awards (29% of the 30 award holders);

Four recipients of the long-term YCR awards, or 37% of the 11 former award holders; and,

Eleven health professionals engaged in university teaching or research in international health. These were located and interviewed at seven of the twelve universities we contacted (Appendix F).

Computerized lists prepared by the IHEP and the YCR program officers were used to locate former award holders. These provided recent biographical information such as last known addresses, degrees obtained, etc. Information about former IHEP recipients was more up to date than that available for former YCR recipients. Almost half (48%) of all former IHEP award holders were located in Montreal, Toronto, Ottawa, Hamilton and Calgary. Difficulties were encountered in locating former recipients of the YCR awards. About 24% of the 40 former YCR holders who are in the health sciences were located; and these were the nine respondents. The short-term YCR award holders were located at the University of Calgary or were recent graduates of that medical program now living elsewhere. Four of the eleven long-term YCR award holders were located and interviewed in Ottawa, Toronto and Calgary.

Although the problem of locating former YCR award holders had been encountered in previous evaluation efforts and attributed to the mobility of the sample population, former IHEP award holders were easier to find. It appears that the IHEP award holders maintain more frequent contact with award administrators and/or their supervisors than do the YCR recipients.

Interviews with former IHEP and YCR award holders provided information about two main topics; the impact and the administration of the awards. Hour-long interviews were designed to obtain more data than previous evaluations had provided. In addition to obtaining further information regarding award impact and award administration, we were interested in exploring how a candidate's prior experience and/or interests might affect choice of a career in international health. Interviews with academic supervisors also elicited information about program outcomes. Since these supervisors have considerable experience in international health, they were also asked about Canada's

capacity to train experts in this field.

1.2.2 Interviews with Staff of International and National Assistance Agencies

Interviews were carried out with staff of international and national assistance agencies to determine the number of Canadian health professionals employed by international organizations and the extent to which Canada is able to fill its quotas in organizations such as WHO. These included: Dr. Jean Lariviere, Senior Medical Advisor, Health and Welfare Canada; Ms. Nancy Garrett, Health Specialist, and Dr. Claude Latarte, Senior Health Specialist, of the Social Dimensions Sector of the Social Development Directorate, CIDA, and Ms. Fatima Ameen, Consultant, Policy and Information Directorate, CIDA.

The above interviews threw light on the extent to which IDRC programs complement CIDA's International Development Awards Program. This information was expanded upon by Mr. Cameron Bowes, Senior Resources Officer, Trainees and Awards Unit, Technical Cooperation Directorate of CIDA. The object was to determine what is unique about IDRC's contribution in stimulating interest in development among Canadian health professionals.

In order to obtain an understanding of how the IHEP and YCR award programs originated and relate to IDRC's mandate, interviews and follow-up discussions were held with: Mr. Chris Smart and Ms. Francoise Coupal of the Fellowships and Awards Division, Dr. Richard Wilson, Director, Health Sciences Division and Miss Rachel Des Rosiers, Deputy Director, Earth and Engineering Science Division. Mrs. Rollande O'Brien, Program Officer of the International Health Exchange Program, supplied additional information about its history, objectives and administration. We also contacted Mr. Allan Bierbrier, Associate Executive Director of the Canadian Public Health Association about the program. We spoke, as well, to Mrs. Joan MacNeil, International Affairs Manager, the Canadian Nurses Association and to Dr. Joe Losos, President of the Canadian Society for Tropical Medicine and International Health which has administrative responsibilities for the IHEP.

1.2.3 Reports and Other Documents Evaluated

Several documents received from the IHEP and YCR program officers and from other individuals we contacted provided background information and a departure point for this evaluation. These are listed in Appendix E and are discussed below. Information about the short-term YCR program was obtained from the University of Calgary, Department of Community Health.

The report of The Feasibility Study on the Role of Networking in International Health, by L. Berlinguet, M. Kerr and A. MacKinnon was commissioned by the Canadian Society for Tropical Medicine and International Health and completed in 1987 to explore the role of Canadian universities in development oriented health training. The consulting team focussed its attention on university "networks" in international and community health. The team concluded that these networks could be improved with a communication service, an advisory service, an advocacy service and with better coordination between agencies involved in funding training and research in international health.

CIDA's Scholarship Program for Canadians: Its Background and Development, 1971 to 1984 was produced by the Human Resources Directorate, Secretariat, CIDA Scholarship Committee, in June 1985. The report describes the history, goals and objectives of the scholarship program which supported 148 individuals by the end of 1983. The report notes that scholarship holders have received training or practical experience in tropical medicine and international health. We are informed that the number of awards available for health professionals is expected to increase in the near future and that these will be a new source of mid career training for Canadians (Appendix G).

Canadian Universities' Role in International Health: Health for all by the year 2000, was edited by D. Shires, L. Mensah, and D. O'Brien, (Halifax: Lester Pearson Institute for International Development, 1986). This is a report of a conference held in November 1985 at Dalhousie University. Sponsored by the Association of Universities and Colleges of Canada, CIDA, the Lester Pearson Institute (Dalhousie University) and the Pan American Health Organization, the conference brought together professionals in such disciplines as nursing, medicine, dentistry, economics and health education from Canadian universities, NGOs and public health agencies. The purpose of the conference was to try to arrive at a consensus about how Canada can best contribute to the solution of health problems in developing countries.

Entrepreneurs in Education: A Study of the Capacity of Canadian Institutions to Respond to Increasing and Changing Human Resource Development Requests from Developing Countries, (Kanchar International, 1987), was commissioned by IDRC in 1984. The principal investigators were D. Simpson and C. Sissons. This exhaustive study provided important background information about human resources policies of CIDA, IDRC, and the capacity of Canadian universities to participate in development projects.

Canadian University International Health Development Projects: 1983 to 1987. This report prepared by the Association of Universities and Colleges of Canada lists projects funded by CIDA's Institutional Collaboration Program as well as co-operative projects supported by IDRC (Appendix H).

Among the most important documents reviewed were previous evaluation reports of the IHEP program (the December 1987 internal evaluation for the years 1983 to 1987) and the YCR survey carried out by Mr. Patrick Doherty for the Fellowships and Awards Division in 1986. These reports are described below.

1987 IHEP Evaluation (Draft Report)

The 1987 internal evaluation provides a summary of the history and growth of the program which was established in 1983. At the outset, only medical students and foreign physicians were eligible for the award. Since 1985, the program has been opened up to nurses, nutritionists and other health professionals. To date, the IHEP has funded 129 individuals: 91 medical students, 11 post-graduate physicians, 13 nurses and 14 other health professionals. According to the IHEP Program Officer, about one half of all medical students who applied in 1987 were turned down. In 1986, 26% of the 41 medical student applicants were turned down due to lack of funds while 14% were rejected because of poor project proposals, unsuitable developing country institutional affiliations, or poor academic standing. Similar information on post-graduate physicians, nurses and other health professionals was not available.

The IHEP was initially designed to be an exchange program between Canadian and developing country institutions for medical students and postgraduate physicians. However,

the program has expanded to include other health professionals and the emphasis has shifted to the training of Canadians in international health. Thus, the term "exchange" is now somewhat of a misnomer. Nevertheless, the change in program focus is consistent with the long-term goal of the program to increase the pool of Canadian health professionals trained in international health in order to meet the growing demand in Canada and abroad.

From its inception, the IHEP has selected students in open competition. Candidates must submit a health project proposal, be recommended by a Canadian university through a supervisor, and be accepted to complete the proposed project by a preceptor in a developing country. Priority is given to students who wish to complete their elective at the community level in rural districts. Postgraduate physicians are selected on the basis of the scientific merit of their projects, as well as the relevance of the project to the health sector of the participating developing country. How that is determined is not clear (Appendix I).

The IHEP is promoted in all medical and nursing faculties and announcements are placed in such publications as the Canadian Public Health Association: Health Digest and the Journal of the Canadian Medical Association. Overseas applications are invited through Canadian embassies and High Commissions. They are also solicited by members of the Canadian Society for Tropical Medicine who have contacts with health professionals in developing countries.

Demand for support from the IHEP is increasing each year. Smaller grants are now given to a larger number of students than in previous years. At present, the average grant to medical students and other health professionals is \$1800. But the overall average, including the larger grants given to postgraduate physicians, is about \$2700. Total funding for the IHEP 1986-1987 was \$250,000.

Enquiries from nurses have more than tripled since 1986 when several faculties of nursing have changed their curricula so that students can receive academic recognition for an international elective. Now eight faculties of nursing and all Canadian university faculties of medicine have recommended students to the program. The number of other health disciplines recommending students is growing. Requests for information and funding have come from faculties or departments of pharmacology, nutrition, occupational health, economics, physical therapy, community health,

epidemiology, dentistry, sciences and from veterinary medicine.

The integration of international health topics into the academic programs of a growing number of universities and the expanding number of candidates, not only in the medical field, but in other health sciences, reflects an increasing interest in careers in international health fields. In this connection, the IHEP Draft Report of 1987 takes note of the need for Canadian universities to develop the capacity to absorb those with appropriate training in international health. It appears that the institutional capacity of Canadian institutions may be slowly developing in response to increased interests and needs.

The report illustrates that the IHEP has internal mechanisms for self-critical, improvement oriented evaluation. Some primary concerns relate to the selection process (ie. to avoid tourism), and whether the awards encourage recipients to take up careers in international health. Assessment of the impact of the award on former award holders is clearly difficult. Although it appears that most former award holders would like to orient their careers to international health, the exact number who are presently doing so seems to be very small. (As far as we can ascertain from the report there are less than five.) With the exception of post-graduate physicians, most of whom have already entered such careers, it is still too soon to determine the number of medical students, nurses and other health professionals who will follow suit. Most are still completing their studies.

The IHEP encourages high quality reports from returning students by offering a two hundred dollar annual prize (the Losos award) to the student who submits the best project report. A similar prize will be given in 1988 to the best project prepared by a nurse. A certificate of program completion is given to the overseas health professionals who come to Canada for training. Such certificates provide documentation of professional training.

While it is important that student research projects be of high quality, it is also important to remember that the IHEP requirement for a research project is often the first for students who have not yet received Master's level training. That the majority of reports seem to be of good quality despite the frequent absence of close supervision while in the field, attests to the ability and motivation of

most award holders.

It was beyond the scope of the internal evaluation to demonstrate the impact of the program on the 20 overseas health professionals who have been funded to date. Program administrators believe that the IHEP goal of strengthening the role played by Canadian institutions in international health is being achieved through these exchanges. Nevertheless, it appears that the program for foreign health professionals is quite difficult to administer. It is difficult to select appropriate candidates, to select a program in a Canadian university that provides training appropriate for Third World countries, and to negotiate visas, travel arrangements and accommodations. Foreign candidates are selected for training programs primarily from the public health sector. This is to ensure knowledge and skills acquired in Canada are put to best use in their countries. The difficulty in achieving this is borne out by several reports of former exchange students who have remarked on a lack of congruence between what they have been trained for in Canada and the conditions they encounter when they return.

The Doherty Report: 1986 YCR Survey

The Report of the Young Canadian Researchers Award Survey carried out by Mr. Patrick Doherty in March 1986, as well as in the Brief on that report prepared by Ms. Francoise Coupal, suggests that the YCR award program is achieving its primary goal of providing a training opportunity that can activate an interest in a career choice related to development. In addition to demonstrating the goal-consistent success of the program, these submissions identified important concerns, one being that of overbudgeting.

The budget of the Young Canadian Researchers award program is approximately \$450,000. for a twelve month period. Since its inception in 1982, 85 awards have been granted. the majority of these being medical students taking electives in developing countries.

These reports do not make a clear distinction as to the difference, for example, in selection criteria between the short-term YCR program now administered by the Department of Community Health at the University of Calgary on behalf of

IDRC, and the long term program administered by the Fellowships and Awards Division (Appendix J).

The survey carried out by Mr. Doherty explored two major assumptions: 1) that the award is important because it provides Canadian students with their first experience of international development; and 2) this encourages them to enter careers in fields related to development. Given that the program was only four years old when this survey was carried out, these issues were bound to be difficult to address. Questionnaires were sent to all 73 YCR recipients up to March 31, 1986, (49% of whom were in the health professions). Twenty-six completed questionnaires were returned (10 from individuals in the health professions). Fifteen were returned undelivered. In order to ensure anonymity, the survey did not gather information that would later assist with tracing the respondents. Thus, it was of little assistance in locating past award holders. The main results of the survey are itemized below.

- Fifteen of the 26 respondents reported that at the time of the survey they were involved in international development;

- Fifty percent of respondents indicated that the YCR was their first exposure to international development, (however, there was no evidence that the award generated the initial interest); and,

- Regarding impact of the experience offered by the award, 92% reported a feeling of personal accomplishment and 76% reported a feeling of academic accomplishment.

As Mr. Chris Smart (IDRC Fellowship and Awards Division) notes in an internal IDRC memorandum dated November 24, 1986, the above survey was carried out too early to systematically follow up many award holders as insufficient time had elapsed for an assessment of actual impact of the award on their careers. The survey could only confirm the general impression that the interests of the award recipients are being nurtured by the experience that the award offers.

2. SUMMARY OF FINDINGS AND RECOMMENDATIONS

2.1 Needs and Objectives

2.1.1 Fellowships and Awards Division programs address important needs for Canadian expertise in fields related to tropical medicine and international health in Third World countries. Interviews with representatives of bilateral, multilateral and non-governmental organizations indicate that:

a) Canada lacks adequate numbers of health professionals to implement projects and meet its commitments to international agencies; and

b) that the demand for this expertise is likely to increase as Canada takes greater responsibility for the development, administration and evaluation of assistance projects in health and other fields.

The total stock of Canadian expertise in tropical medicine and international health cannot be estimated with precision. The Canadian Public Health Association International Health Manpower Register lists 348 experts (Appendix K). A similar number of consultant experts (363 in 1986) are registered with CIDA's Social and Human Resources Division. From what we have been able to determine, there are, perhaps, 150 to 200 Canadian health professionals working abroad employed by such agencies as WHO, UNICEF, UNDP, CIDA, IDRC, CUSO, CARE, Catholic Relief Services, the International Red Cross, AMREF, WUSC, as well as by firms like Lavalin and Bell (Canada) with major overseas commitments. In international agencies like WHO, Canada is unable to fill its professional quota (or 36 of the 42 positions allocated to Canadians for 1987). CIDA and IDRC report problems in staffing positions requiring health professionals with international experience. Canadian non-governmental organizations must often rely on foreign parent organizations to deliver health and other development services due to their inability to staff and maintain field offices. Thus, about 2% of the CIDA funds given to Canadian NGOs for African emergency relief in the mid 1980s supported Canadian administered projects (Simpson 1987, 50). Proposals under consideration by the government to increase the size of CIDA missions and encourage greater Canadian representation overseas will require employment of more professionals with

health and development expertise, and this is apt to be difficult in the present circumstances.

2.1.2 The need for Canadian expertise is acute in several fields in the health sciences, especially for Master's and doctoral level graduates of programs in international health and in specialties such as health administration and health economics. There is also a need for Canadian consultant expertise. Although there is apparently a large number of resource persons interested in overseas work, few of the individuals registered with the Canadian Society for Tropical Medicine and International Health have substantial overseas experience and/or the skills required by development agencies. In 1985-86, for example the World Bank employed only one Canadian health consultant (for one day). Fellowships and Awards Division programs are responsive to these needs and are making a major contribution to increasing Canadian capacity.

2.1.3 There is much interest on the part of Canadian medical and other health professionals in Fellowships and Awards Division programs designed to provide opportunities to acquire development experience. More specifically, the demand is highest for programs which do not lead to advanced research degrees, ie. the International Health Exchange Program and the short term Young Canadian Researchers Award Program administered by the University of Calgary on behalf of IDRC. Both programs mainly support practical training overseas undertaken in the context of professional studies in health specialties. The limited demand for advanced research training is in part due to the fact that fields such as tropical medicine and international health are, as yet, poorly developed in Canadian universities.

Many Canadian universities offer postgraduate programs in community health or public health, including the University of Montreal, the University of Sherbrooke, McMaster University, the University of Ottawa, and the University of Calgary. Most of these programs have elective coursework in topics in international health. Other universities such as McGill and the University of Toronto have postgraduate programs in fields like epidemiology and health administration which train health professionals for careers in international health. In addition, a number of basic science departments in Canadian medical faculties provide training in fields of importance to tropical

medicine. However, no Canadian institution presently provides postgraduate instruction in tropical medicine or in international public health comparable in scope to the programs offered in these fields at leading American, British, Belgian and French universities. Instructional resources in these fields are dispersed across a number of Canadian institutions. This has inhibited the development of specialized training in tropical medicine and international public health in Canada, encouraged many Canadians to undertake such training in other countries and accounts in large part for the low demand for Young Canadian Researchers award funding for completion of postgraduate degrees.

2.1.4. Canadian universities have not placed much importance on programs in tropical medicine and international health for several reasons. Higher education is, of course, a provincial responsibility and except in certain francophone universities in Quebec, there has been little provincial or university support for instructional programs in these fields which must, to a very large extent, be financed from research grants and assistance projects. Unfortunately, research grants and assistance projects provide few incentives to develop training capacity. Until recently Canadian universities were not entitled to receive overhead funding from CIDA or IDRC for grants received to assist in institutional and staff development or for co-operative research. Such projects typically draw staff resources away from mainstream programs, support few students, increase demands on instructional and research facilities with little provision for supplementation of these resources, are costly to administer, and thus, are unattractive to many university administrators. CIDA and IDRC now allow universities to obtain some overhead funding; 30% of Canadian salary costs in the case of CIDA, and up to 14% of IDRC project budgets. Arrangements vary, but in many Canadian universities a proportion of these funds are returned to the academic units that sponsor overseas projects. (At McGill one third of overhead funding is available for the sponsoring unit's use.) These funds can be used creatively for building training and research capacity; to pay staff, to support Canadian students, for seminar and publications series, to purchase journals, etc. Unfortunately, the amounts are often too small as the overhead provisions of CIDA and IDRC are much less generous than those of, say, many American funding agencies involved in development research and assistance. In the absence of categorical grants from provincial ministries of education and health for programs in tropical medicine and

international health, it may be necessary to increase overhead funding in federal grants to Canadian universities to enable them to expand programs in these fields. Although this matter is outside the terms of reference of our report, it is nevertheless important to acknowledge.

2.1.5 Consideration should be given to developing a multifaceted, long term strategy for increasing Canadian capacity in tropical medicine and international health. Such a strategy must reflect the Centre's mandate to foster research capacity. Priority should be given to identifying and funding individuals who are most likely to enter research careers. Because of the small number of postgraduate students in these fields, it is necessary to support innovative programs that will interest medical students in development work as well as provide medical graduates and other health professionals with opportunities to acquire additional overseas experience, thus creating a "ladder" leading them into advanced studies and eligibility for the Young Canadian Researchers award. In addition it will be necessary to provide such support in ways that strengthen the programs of Canadian universities. This strategy might include the following elements:

1) Increasing support for practical training overseas undertaken in the context of professional education in the health sciences while giving greater importance to the research project requirements of programs like the IHEP;

2) Providing new opportunities to health care professionals with some overseas experience to acquire additional practical and research experience that will enable them to take up careers or motivate them to continue their education in tropical medicine and international health;

3) Facilitating the development and expansion of Master's and doctoral programs in these fields in Canadian universities through:

a) supporting training undertaken in other developed countries only as part of the requirements of degree programs in Canadian universities;

b) support for coursework or research training at other Canadian universities in order to encourage cooperation among institutions increasing the scope of training in tropical medicine and international

health;

c) providing funding for visiting scholars from Third World countries to contribute to research and teaching programs in Canadian universities; and

d) co-ordinating the activities of the Health Sciences, Co-operative Programs and the Fellowships and Awards divisions to better articulate development of postgraduate training with support for collaborative research.

4) Collaborating with the Human Resources and Institutional Cooperation divisions of CIDA, the Medical Research Council, Health and Welfare Canada, the Association of Universities and Colleges of Canada, and with provincial ministries of education and health in efforts to increase support for and facilitate coordination among Canadian programs in tropical medicine and international health.

2.2 The International Health Exchange Program

2.2.1 The International Health Exchange Program (IHEP) is a cost/effective means of increasing the number of health care professionals with some development experience, and, perhaps eventually of enlarging the pool of Canadians who take up careers in international health. Since the program's establishment in 1983, more than one hundred (129) physicians, nurses and other health care professionals have been funded for studies and/or for short term research projects carried out in developing countries. This program has been funded at a very low level (e.g. \$250,000 in 1986-1987) in relation to the number of awards that are given (44 to Canadians and five to nationals of Third World countries that year). Most awards essentially cover transportation costs and a modest contribution to subsistence expenses for an average period of fieldwork of two months. One third (36%) of the funds received by the Canadian Society for Tropical Medicine and International Health and the Canadian Public Health Association are spent to administer the program, which seems to be very reasonable in relation to the scope of activities, and probably much less than what it might cost IDRC to administer such a program.

2.2.2 Our findings are consistent with and expand upon the results of the 1987 internal evaluation of the IHEP. Briefly, most awardees report that the program has afforded an opportunity to pursue their interests in international development, given them valuable professional experience, and in some cases, encouraged participants to undertake further studies or training leading to careers in fields related to international health. The program has also strengthened the professional training of those who will practice community health in Canada, exposing them to different health care systems, often in remote or impoverished areas, providing a new and different perspective on health care delivery.

2.2.3 The program should, in time, increase the number of applicants for the Young Canadian Researchers award who have selected careers in international health, and are completing advanced degrees in fields requiring fieldwork abroad. However, to date, only one IHEP award holder has sought long term Young Canadian Researchers Award funding and at least two of the nineteen former award holders we contacted are working in international health. Two others are now in advanced degree programs in Canadian universities and are likely to apply to IDRC. More applications can be expected from physicians, nurses and other health professionals as they complete their present programs and enter Master's and doctoral programs. The program's impact on applications for the Young Canadian Researchers Award from health professionals should be evident soon.

2.2.4 The expanding number of applications for the IHEP awards (eighty projected for 1987/88 compared to about sixty for 1986/87, an indication of its success in generating interest in international health in Canadian universities). However, we recommend that the program's objectives, requirements, and followup procedures be re-assessed in order to increase its effectiveness as a means of leading health care professionals into research careers. This might be done in several ways:

- 1) by making research training an explicit program objective with more rigorous assessment of special project proposals;

- 2) by linking student projects to the ongoing research of Third World host institutions;

3) by providing funds to the Canadian Society for Tropical Medicine and International Health for publication of selected project reports in an International Health Working Paper series;

4) by giving greater visibility to the Losos Award (perhaps through IDRC and professional publications) as well as through activities such as publication of an annual newsletter reaching former award holders and informing them of opportunities for research at Canadian universities.

2.2.5 Although the majority of IHEP award holders desire further professional experience in international health, there are few opportunities available to them. Most lack the length and diversity of overseas experience to qualify for employment or for work as consultants to international, bilateral or non-governmental organizations. It is recommended that consideration be given to establishing a special internship program for former IHEP award holders who are not enrolled in Master's or doctoral programs in international health fields, who have not yet taken up careers in international health and require additional professional experience overseas. The program might provide practical training and some research experience for up to six months at host institutions, at levels of support comparable to the present IHEP program for students doing undergraduate electives overseas. Such a program would be best administered by the Canadian Society for Tropical Medicine and International Health. The Society would arrange for placements either in Third World health care institutions and services, or in health assistance projects funded by Canada or international agencies that might share program costs. Up to five awards should be given annually for their purpose.

2.2.6 In the past two years, the IHEP has broadened its pool of applicants to include professionals in nursing, nutrition and other health sciences. These efforts should be encouraged and expanded. To date, thirteen undergraduate and postgraduate nurses and fourteen other health professionals have been funded by the program. It is recommended that efforts be made to increase the number of non-physician awardees so that approximately half of those who receive awards are undertaking professional training in nursing, nutrition, etc. This will require solicitation of applications. Efforts should also be made to encourage applications from students in professional programs in

economics, public administration, health education, home economics, adult education and social work to undertake honours or Master's level electives involving fieldwork in developing countries focusing on health topics.

2.2.7 The International Health Exchange Program awards funds to support the postgraduate training of physicians for periods extending to three months overseas. We question the continuance of these awards for two reasons. First, some of the awards are given in support of degree training in tropical medicine to applicants eligible for support from the Young Canadian Researchers award program if their projects involve research activities. Only one of the awards made in 1985-86, for instance, involved less than three months of fieldwork. If, on the other hand, the purpose of these awards is to provide opportunities for professional experience, we feel that this is better achieved through an internship program of the kind described in 2.2.5 above. Second, if the program is designed mainly for health professionals who wish to enter or to develop expertise in international health in mid career, then the need for these awards may be alleviated by the anticipated restructuring of CIDA's Awards program. We are informed that from 1988, CIDA may direct funding to professionals in mid career, including those in the health sciences, who might otherwise seek support from programs such as the one administered by the Canadian Society for Tropical Medicine and International Health. A proposal to restructure CIDA's awards programs is being presented for decision in February 1988 and possible implementation in 1988-89.

2.2.8 A small number of awards are given by the International Health Exchange Program to overseas health professionals who undertake training in Canadian universities (five in 1986-87). This seems, from the reports of past recipients, to be the least successful aspect of the IHEP program. Moreover, research training should be undertaken in the context of projects funded by the Health Sciences and Co-operative Programs divisions. Third World health professionals can, however, make a major contribution to the international health programs of Canadian universities by offering seminars and short courses in institutions with programs in this and related fields. We recommend that the purpose of these awards be broadened and, more specifically, that the funds be used to develop programs in international health at Canadian universities.

The Canadian Society for Tropical Medicine and Public Health might vet requests from Canadian universities for visiting professors to be funded by the program. The universities should share the associated costs in order to increase the number of awards and ensure commitment of the host institution to the activity. At least two or three awards should be made annually.

2.2.9 We recommend that support for the IHEP be continued for an additional three years, with provisions for increased funding at the level of \$300,000. to \$350,000. per annum from 1988. Additional funding will be required for the purposes mentioned above; funding for a publication series and newsletter, for an internship program for former award holders, and to pay a portion of the honoraria and living expenses for visiting scholars from Third World countries.

2.3 Short Term Young Canadian Researchers Award

2.3.1 Funds were given by the Fellowships and Awards Division to several Canadian Universities to support professional and postgraduate elective studies of physicians. This program, which is presently administered only by the University of Calgary, funds undergraduate medical students and postgraduate students and residents in the Department of Community Health Sciences. Its objectives are similar to those of the International Health Exchange Program.

2.3.2 The program was funded at about \$30,000. in 1985-86 when thirteen awards were made, mainly for travel assistance. Funding for 1986-87 has decreased to \$20,000. The value of the awards is less than those made under the auspices of the IHEP, and administrative costs are somewhat lower (21% in 1986). Interviews with award recipients indicate that this program, like the IHEP is effective in developing interest in international health among medical students. The research projects of award holders seem to be as or more substantial than those funded by the IHEP (Appendix L and Appendix M).

2.3.3 We are not, however, persuaded that a separate program should be maintained for the University of Calgary, or for any other Canadian university. The students funded

under the short-term Young Canadian Researchers award program may be eligible for the IHEP awards. It has been suggested that students at the University of Calgary might not qualify for the IHEP awards because of the length and timing of their undergraduate electives. Similar arguments were made by representatives of the University of Montreal and other Canadian universities which once administered the Young Canadian Researchers award funds on behalf of the Fellowships and Awards Division. Yet, except for the University of Montreal, (and, of course, the University of Calgary) most major Canadian universities are represented among the IHEP medical student award holders. The lack of representation of the University of Montreal and the need for a special program for the University of Calgary can be addressed through liberalizing the selection criteria for the IHEP so that well conceived, short term student projects can be funded either early or in the final year of medical studies. The administrators of the International Health Exchange Program have indicated to us that this is now possible.

2.3.4 Support for postgraduate studies of students and residents in the Department of Community Health Sciences might be provided through the long term Young Canadian Researchers Award program administered by IDRC. Such support is provided for a minimum of three months at a level somewhat higher than the stipends given by the University of Calgary. However, the Young Canadian Researchers award competition is held annually and the pool of applicants is larger. Nevertheless, the research projects of postgraduate students in the Department of Community Health Sciences seem to us to compare very favourably to those of other Young Canadian Researchers award holders. We do not feel that elimination of this program would create a special hardship for these students.

2.3.5 We recommend that the short term Young Canadian Researchers award administered by the University of Calgary be terminated in mid 1988, prior to the beginning of the 1988-89 academic year.

2.4 Long-Term Young Canadian Researchers Award (Health Sciences)

2.4.1 The Young Canadian Researchers Award program is the most direct means of increasing Canadian research capacity in international health. Unfortunately, from 1982 to 1986, only eleven awards were given to individuals in the health sciences and related fields. Only six of these awards were given for completion of advanced research degrees. Three of these students completed their training outside Canada in American, British or Belgian universities. This may reflect the lack of opportunities for advanced degree training in international health in Canadian universities.

2.4.2 However, a large number of Canadian universities now offer advanced degree programs in international or community health with an international orientation. Most programs are very small in staffing and enrollment. At the University of Calgary, for example, only one student in the doctoral program in community health is specializing in international health. Consequently, while Canadian universities have some training capacity in international health, this is dispersed, diminishing the pool of potential applicants for the long term Young Canadian Researchers award, and encouraging good Canadian students to go abroad for advanced training.

2.4.3 This situation is not likely to greatly improve in the near future. Recent efforts to better publicize the Young Canadian Researchers award program will increase the number of applications. More applications can also be expected when former IHEP and short-term Young Canadian Researchers award holders enter postgraduate programs in international health, eventually seeking support for overseas fieldwork. Still, the demand for such support will grow very slowly as long as the fields of tropical medicine and international health are poorly developed in Canadian universities.

2.4.4 Previously, the Fellowships and Awards Division gave several Professional Development Awards to individuals in the health sciences who were neither enrolled in Master's or doctoral programs. We note with approval that the 1987 Young Canadian Researchers award program announcement makes no provision for support of such training.

2.4.5 Support will continue to be provided to students

in the health sciences who undertake advanced training in developed countries. We recommend that this practice be changed, though we recognize the professional benefits to be obtained from training at leading institutions in tropical medicine and international health. Support for studies in other developed countries undermines efforts to develop capacity in Canadian institutions. Nevertheless, we feel that the Fellowships and Awards Division should support such studies if they are undertaken by students who are enrolled in Master's or doctoral degree programs at Canadian universities, and this training will facilitate completion of their degrees.

2.4.6 We recommend, as well, that in exceptional cases, support be provided to Canadian students who undertake short term research training at another Canadian institution in preparation for overseas fieldwork. We acknowledge that this proposal represents a radical interpretation of the Centre's mandate and a substantial departure from its practice of supporting Canadian students for work overseas. Yet, we find it difficult to reconcile the Centre's reluctance to support short term training of Canadians at Canadian institutions with its willingness to send Canadians to other developed countries for this purpose. Moreover, we feel that in order to develop Canadian capacity in international health, the Centre should foster greater collaboration among programs offering training in this and related fields by providing some funding to students to take coursework at other institutions as part of their degree requirements. What is proposed will require modification of the Young Canadian Researchers award program announcement. We suggest that the Fellowships and Awards Division consult with the Canadian Society for Tropical Medicine and International Health in advising grantees of opportunities for professional training in the health sciences at Canadian institutions.

2.4.7 Another way the Centre can assist Canadian universities to develop research and training in international health is to better articulate the programs of the Fellowships and Awards and Co-operative Programs divisions. Only one Young Canadian Researchers award has been given to a Canadian student involved in research carried out under the auspices of a project supported by the Co-operative Programs Division. In selecting Young Canadian Researchers award holders, preference should continue to be given to students participating in cooperative projects.

Special efforts might be made by the Fellowships and Awards Division to bring the Young Canadian Researchers award program to the attention of the Canadian co-directors of the thirteen Co-operative Programs projects in the health sciences, and to solicit applications from them for the 1988 competition. (Interviews with five Canadian directors of these projects indicated that they were unaware that postgraduate students receive preferential treatment in the Young Canadian Researchers award competition). The Fellowships and Awards Division might, in addition, participate in the development of cooperative projects so that Canadian co-directors may plan research activities so that postgraduate students are eligible to apply for Young Canadian Researchers award funding. Unless these opportunities are made known to researchers in the initial stages of project planning, it is unlikely that Canadian students will be able to take advantage of them.

2.4.8 To be eligible to receive a Young Canadian Researchers award, a student must be affiliated with a Third World institution, and produce proof of efforts to secure such affiliation at the time of application. It is often difficult for students or their supervisors to confirm a suitable institutional placement, and placements may not be the most professionally beneficial to the students or to the host institutions. We recommend that the Centre, with its regional offices in Latin America, Africa, the Middle East and Asia, be of assistance to successful applicants for Young Canadian Researchers award in arranging for or suggesting suitable placements.

2.4.9 No provision is made in the awards for support for host institutions, although any research equipment purchased for the award holder becomes the property of these institutions. Affiliation of foreign scholars often involves costs to the host institutions as well as in many cases, substantial commitment of professional time in supervision and support that in some Canadian universities would be recognized in workload formulations or compensated. We recommend that some funds be given to the host institution either in the form of a research overhead, or that funds be made available to Third World supervisors to attend doctoral oral examinations to strengthen linkages between Canadian and overseas institutions.

We suggest, as well, that award holders be strongly

encouraged to publish thesis or dissertation research in Third World scientific journals and that any manuscript preparation costs and page fees should not reduce the value of the Young Canadian Researchers award.

2.4.10 Our survey of former holders of the Young Canadian Researchers award indicates that while the program has been effective in facilitating entry into careers in international development, their association with the Centre and its programs is abruptly and unnecessarily terminated. The resource represented by the cadre of former award holders has been largely ignored. We recommend that the Fellowships and Awards Division maintain contact with award holders through publication of an annual newsletter, by soliciting the advice of former recipients on pending applications for Young Canadian Researchers award, in assessing and arranging for placements. We suggest, in addition, that the Health Sciences and other divisions make greater use of the expertise of former award holders for short-term consultancies and for evaluation of research proposals so that the Young Canadian Researchers award program is seen as the beginning of a professional relationship with the Centre that will continue throughout their careers. Consideration should also be given to dissemination of some Young Canadian Researchers award sponsored research through the Centre's publication programs including its manuscript reports series as well as its magazine Explore.

3. THE INTERNATIONAL HEALTH EXCHANGE PROGRAM

The results of interviews with 20 former award holders and 11 supervisors have impressed us with the important role that the supervisors have in the success of the award program. They are often the main, if not the only, advocate of overseas experience and training for students in the health fields within their universities. According to the Program Officer, some supervisors have been instrumental in effecting curriculum changes in medicine and in nursing faculties. They do not always enjoy the support of their deans and chairmen, and two reported that they must fight a constant battle against the perception that Third World health problems are a low priority for the health professions in Canada.

The supervisors' help during the application process is critical for many former award holders, especially in the development of project proposals. They are instrumental in effecting Third World institutional contacts on behalf of the award holders, frequently having worked themselves with the host country preceptors. Thus, the opinions of this group constitute an important source of information about the impact, administration and other aspects of the award program. The importance of this group is underlined by the fact that they are in a position to advertise the award programs and to identify students who will make good candidates for the award.

3.1 Impact of the IHEP Award on Former Award Holders

There was no evidence in our interviews with former award holders that the program generated an interest in development or in international health. Typically, respondents reported that they had held these interests "all their lives." Some had acquired them as their professional interests evolved, as in the case of this medical student.

"I was interested in parasitology which invariably involves tropical medicine. Because this was a different kind of medicine I needed to go (to a developing country) to know if I could work there on a long term basis."

When asked to speculate about the "ideal candidate" for

the award, several former recipients mentioned the importance of "independence". The need to deal with the unexpected and to "improvise" when original project plans could not be carried out was considered essential to a successful professional experience. The question prompted one supervisor who has had considerable contact with former and future award holders to reflect on the kinds of personality characteristics that are typically associated with success in medical school and, later, in the practice of medicine. He noted that health practice in the developing world requires a very different or at least additional set of personal qualities:

"The restless curiosity may partly be a reaction against the very rigid frame of medical education.... Dedication to health problems and concern about the situation and status of people less fortunate than we are.... Scientific curiosity about health care problems that are challenging and need to be solved is also important but it isn't a driving force for all people.... There are profiles of people who are likely to be attracted to careers in international health and who are likely to be successful in those careers. There are two different profiles. A person who is likely to be attracted is somebody who has a restless kind of curiosity about things outside the conventional framework of her or his profession. And I put her before his that way because there are, in my experience, a lot more women than men interested in this field, at least at this medical school."

The important point here is that there may be a difference between those who are initially attracted to the field of international health and those who are likely to be successful in such careers. Since the main purpose of this evaluation was to explore the impact of the award on former award holders, most of our information pertains to individuals who have been attracted to the field. The success of those who want to enter careers in international health is yet to be determined. Furthermore, it is difficult to obtain an accurate indication of the impact of the award since it interacts with prior interests and experiences as well as with the academic plans of the award holders.

Almost all of former award holders (18) reported that the experience the award offered was generally positive in its impact. This was expressed in one of the following three ways: 1) that they wanted another such experience with the

hope of pursuing a career in international health; 2) that their interest in developing world health problems had increased, or 3) that they had acquired a new perspective on the practice of medicine in this country.

The actual number of individuals who have decided to pursue careers in international health remains small in proportion to the number of awards given. Only two have entered postgraduate programs in tropical medicine or international health and two others are working abroad in international and non-governmental organizations. All four had considerable previous exposure to Third World countries through travel or residence abroad. Such prior exposure in the case of two other former award holders seems to have assisted in the decision not to enter the field of international health. One medical student reported that the award had helped him to decide that working in a developing country was "not for him", although he wanted to return to the region as a visitor. Another remarked that, "we just are not wanted anymore. They want their own experts."

Although several respondents reported that their research plans had to be changed once in the field, this did not seem to deter them from carrying out their projects. More precisely formulated research topics seemed to be the most difficult to carry out. The majority of projects are descriptive in nature as the following titles suggest: "The Delivery of Surgical Services in _____", and "Factors Influencing Health and Welfare in _____", etc.

One former award holder who spent two months in Africa reported that she was able, in two days, to gather the statistical data for a study of the incidence of nutritional deficiency in a rural community. She spent the remaining time in the field "lending a hand" in a clinic. Although such individuals may be exceptional, this report points to the need for very clear guidelines and direction in the development of project proposals. In this connection, it might be informative for program administrators to review past project proposals and reports for the kinds of circumstances or project topics that result in a change of research plans.

Although at least 75% of the award holders reported that they would like another overseas experience and/or, that their interest in international health had increased, virtually none knew how they could obtain such experience. One pointed out that there are two ways to go about

developing a career in international health; by spending a significant length of time in a developing country while still relatively young, returning as an "expert", or, by spending a few months a year over a period of about twenty years working on short term projects. This respondent did not, however, know what steps could be taken to establish a career in international health.

Two factors seem to impinge on the generally positive impact that the award had on these individuals. First, most former award holders are not far enough along in their studies to make firm career plans. They report that they have to finish their present studies first:

"It increased the certainty of my interest.... The impact is immediate but it fades after you get caught up in other things. I still want to go back but I don't know when."

A second inhibiting factor was expressed by several award holders. They were concerned that establishing a career in international health with its requisite travel and relocation in a developing country might conflict with family obligations.

In addition to increasing interest in international health, the award sometimes had an impact on the award holder's view of the way medicine is practiced in this country. For example, a resident in family medicine in Ottawa talked at some length and with some bitterness about the change in her views about medical practice in Canada. She now reacts very strongly to what seems to her to be a "waste" of expensive medical resources on voluntary procedures in Canada compared to the reliance in Third World countries on inadequate resources for treating life threatening diseases. Another former award holder, a nurse, said that rather than return to a Third World country, she would now be more interested in working with Canada's native peoples. Another nurse mentioned that the experience heightened her sensitivity to cross-cultural communication in the practice of medicine and she felt that Canadian expertise gained in the Third World could be well utilized in dealing with immigrants and refugees now living in Canada.

The eleven academic supervisors we interviewed were asked about the impact of the award on former award holders. Supervisors' comments often drifted to award program policy and other issues. Several suggested that while the program

may be effective in generating an interest in careers in international health, there are few opportunities for medical students and other health professionals to acquire additional experience. Award recipients did not have enough experience to work in international health. What is lacking, many felt, were opportunities that would enable award holders to develop sufficient expertise for employment in international organizations or motivate them to undertake further training.

3.2 Administration of the IHEP Award Program

More than 90% (19) of former IHEP award holders reported satisfaction with award administration. Contacts with award administrators were said to be informative and helpful, with applicants often being given assistance in developing their research proposals or being directed to individuals within their universities who could be helpful. Eligibility criteria were described as fair; guidelines as clear. The IHEP was described as "flexible" in its organization and "willing to bend" when it came to application deadlines. In a program that is open to medical students, undergraduate and graduate nurses as well as other health professionals, it is inevitable, even desirable, that eligibility criteria be different for each category of applicant (see Appendix I). Similarly, with applications coming from different universities, each with a different academic calendar, it is essential that the selection process take place several times a year, which is the case. This may occasionally result in relatively late announcements to individuals who have received the award, the consequence being that planning and travel arrangements suffer. While this was mentioned by two former award holders and one supervisor, it does not appear to be a major problem.

Some bias may enter the selection process through the important role that supervisors play. The supervisors identify likely candidates who have an interest in international health. One supervisor who has recommended many medical students for the IHEP was careful to note that, "The selection process is something I have nothing to do with, very deliberately." However, many felt that they were in the best position to decide which medical students should receive the award, and that the IHEP selection committee should not make the final decision. In this connection one suggested that:

"There should be some overall guidelines from the IHEP



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(613) 725-3769 TELEX 053-3841 TELEFAX (613) 725-9826

CPHA International Health Manpower Register

Information summary as of January 4, 1988.

Total # of registrants: 348

# of physicians:	129	
" " nurses	88	
" " pharmacists	9	
other (post grad)	89	(includes health planners, economists, health educators, researchers, dentists, nutritionists, hospital and university administrators)

The remaining 30(+) include professionals such as:
physiotherapists, occupational therapists, nutritionists
and media/public relations specialists.

Organizations who have utilized the Register. (We
do not have data available on whether these organizations
ultimately selected/utilized our candidates/suggestions).

CIDA
IDRC
CUSO
WUSC
PAHO
CANADIAN PHYSICIANS FOR AID AND RELIEF
MARSHALL MACKLIN MONAGHAN LTD.
CARE CANADA
MATCH INTERNATIONAL
WESTINGHOUSE ELECTRIC CORPORATION
PRAGMA CORPORATION
WHO
UNICEF

APPENDIX K

Canadian Public Health Association
International Health Manpower Register
Information Summary

Deadline for applications is January 1 each year and tenure must begin before March 1 of the following year. Applications are available from IDRC or deans of research and graduate studies in Canadian universities.

The International Development Research Centre (IDRC) was established in 1970 by an Act of Canadian Parliament, as an autonomous public corporation, to stimulate and support scientific and technical research by developing countries for their own benefit. IDRC supports research in the fields of Agriculture, Food and Nutrition Sciences; Social Sciences; Health Sciences; Information Sciences; Communications/Media; and Earth Sciences/Architecture/Engineering.

- 30 -

Reference:

Louise Behan, Media Relations Officer
IDRC
10th floor, 250 Albert Street
P.O. Box 8500
OTTAWA, Ontario K1G 3H9 (613) 598-0564

Françoise Coupal, Awards Officer
Fellowship and Awards Division
IDRC
P.O. Box 8500
OTTAWA, Ontario K1G 3H9 (613) 236-6163 ext. 2430



newsnouvellesnewsnouvelles

FOR IMMEDIATE RELEASE

June 12, 1987

21 CANADIANS CHOSEN TO DO RESEARCH IN THE THIRD WORLD

OTTAWA -- Eleven female and 10 male graduate students have been selected to conduct their proposed research projects in developing countries. The awards, offered through the Young Canadian Researchers program of the International Development Research Centre (IDRC), will give each recipient up to \$20,000 for a period of 12 months or less.

The young professionals and students, at the doctoral or master's degree level at 9 Canadian Universities, will conduct field research ranging from socio-economic development options in South Africa after apartheid; popular organizations and new forms of political participation in Chile; urban migration and its effect on child nutrition in Papua New Guinea; and the transmission of the AIDS-causing HIV infection in Kenya.

The competition is open primarily to Canadian Ph.D. students engaged in research and study of development-related subjects in areas of IDRC involvement. Also eligible are young professionals working in the fields of communication/media, finance or administration.

For the next competition, the Young Canadian Researchers program will expand to support outstanding Ph.D. students for two-year research projects with a value of up to \$40,000. As well, students at the Master's level in the field of Information Sciences and Communications will be able to apply. Five additional doctoral level grants of \$20,000 will also be available to young Canadian researchers currently involved in IDRC-funded agriculture or food projects and who wish to do research with a national or international agriculture research centre in a Third World country.

.... 2

Head Office/Siège social: 250 Albert/rue Albert, P.O. Box/B.P. 8500, Ottawa, Ontario, Canada, K1G 3H9 (613) 236-6163

Regional Offices/Bureaux régionaux:

- West and Central Africa/Afrique centrale et occidentale CRDI/B.P. 11007, CD Annexe, Dakar, Sénégal
- Middle East and North Africa/Moyen-Orient et Afrique du Nord CRDI/IDRC, P.O. Box 14 Orman, Giza, Cairo, Egypt
- Eastern and Southern Africa/Afrique orientale et australe IDRC, P.O. Box 62084, Nairobi, Kenya
- Southeast and East Asia/Asie du Sud-Est et de l'Est IDRC, Tanglin P.O. Box 101, Singapore 9124, Republic of Singapore
- South Asia/Asie du Sud IDRC, 11 Jor Bagh, New Delhi, 110025, India
- Latin America and the Caribbean/Amerique latine et Antilles C.R.D. Apartado Aéreo 53016, Bogotá, D.E., Colombia



INTERNATIONAL
DEVELOPMENT
RESEARCH CENTRE

The International Development Research Centre (IDRC) in Ottawa was established in 1970, by an Act of the Canadian Parliament, as an autonomous public corporation, to stimulate and support research responding to the priorities of Third World countries. This year, IDRC will be offering awards to:

YOUNG CANADIAN RESEARCHERS

Objectives

To contribute to the growth of research capacity in Canada that is responsive to Third World priorities by supporting Canadians at various stages of their academic and professional careers in research or training undertaken in a Third World country.

Open to

- Canadian graduate students registered in a Canadian university.
 - (a) At the doctoral level in the fields of Agriculture, Food and Nutrition Sciences; Communications/Media; Health Sciences; Information Sciences; Social Sciences; Energy; Earth Sciences; and Engineering/Architecture.
 - (b) At the master's level in the fields of Health Sciences; Information Sciences; Communications/Media; Finance; and Administration.
- Young Canadian professionals in the fields of Communications/Media; Finance; and Administration.
- Doctoral or master's students in Social Forestry are encouraged to apply to the John G. Bene fellowship.

Program and Place of Tenure

Field research: Those awardees undertaking a doctoral or master's degree in the above fields must propose a program of field research in a Third World country. Normally, this research counts as partial fulfillment of a degree.

Professional placement: The professional placement for young Canadian professionals will take place with a research organization or training institution overseas. For candidates in the field of journalism, the applicant should be affiliated to an international or Third World newspaper or news agency.

Formal training: For candidates in the Health Sciences field at the master's level, the training may be in a developed country as long as the institution offers a solid program that is oriented toward the health problems of the Third World. Preference is given to those candidates who have previous working experience in a developing country. For those not having previous experience, an overseas component of at least 3 months must complement the training.

Duration of Tenure

Up to 12 months. Outstanding doctoral candidates may request additional support for a 2nd year.

Eligibility

- For graduate students:
 - (a) Canadian citizenship or permanent residence;
 - (b) Affiliation with an institution or organization where the research, training, or placement will take place;
 - (c) Excellent academic qualifications;
 - (d) Completion of course work by the time of tenure;
 - (e) Thesis proposal accepted by appropriate academic committee; and
 - (f) Student in good standing in a Canadian university.
- For young professionals, conditions (a-c) must be met.

Selection

Open competition. Final selection made by the YCR Selection Committee.

Number of Awards

Variable.

Value

Up to \$20,000 per award. In exceptional cases, doctoral candidates will be considered for an extension of 12 months with the total award not exceeding \$40,000.

Deadlines

- Mailing of applications: before January 1.
- Announcement of awards: April 1.
- Tenure: to be undertaken before March 1 of the following year.
- Application forms are available from the Fellowships and Awards Division of IDRC or Deans of Research and Graduate Studies in Canadian universities.

Further information and submission of completed application forms to:

Fellowships and Awards Division
International Development Research Centre
P.O. Box 3500
Ottawa, Ontario
K1G 3H9

July 1987

APPENDIX J

Announcement and Application Forms
Young Canadian Researchers Awards

STUDIES RELATED TO MEDICAL
STUDENT ELECTIVES

INTERNATIONAL HEALTH EXCHANGE PROGRAM

The International Health Exchange Program is designed to give Canadian medical students a first hand view of the health and health care situation under which the great majority of the world's population lives today. To that end, experiences should include clinical and community medicine and be well supervised to allow the Canadian student to learn while on the elective.

To augment that learning experience, the International Health Exchange Program requires that the medical student plan with the preceptor a small study or survey, specifically designed to examine in slightly more detail one problem or aspect of that health experience. It also is designed to introduce the student to the problem of observing, measuring, drawing conclusions in the field of biomedical sciences.

The format of such a study is relatively loose, therefore, the student and his preceptor have considerable latitude in the choice and approach of the subject matter. Headings under which a project outline could be written include:

- 1) Objectives 2) Methodology 3) Background to the Problem

Selected topics might include:

- Attitudes and practices of immunization
- Extra risk factors in surgery done in a developing country.
- Breast feeding practices.

The topics are merely provided as examples and that they are neither exhaustive nor compulsory.

The student will submit the results of this study along with the required report on the elective and a financial expenditure statement.

- d) a small research or survey-oriented project in which the applicant will be exposed to public health or clinical problems of the area (preferably non-urban) and analyse these.
 - e) involvement with Canadian overseas projects.
- 11) A written detailed report is required within 60 days of return to Canada. A report by the preceptor from the country involved is also required.



CANADIAN PUBLIC HEALTH ASSOCIATION

THE CANADIAN SOCIETY FOR TROPICAL MEDICINE
AND INTERNATIONAL HEALTH



LA SOCIÉTÉ CANADIENNE POUR LA MÉDECINE TROPICALE
ET LA SANTÉ INTERNATIONALE

ASSOCIATION CANADIENNE D'HYGIÈNE PUBLIQUE

INTERNATIONAL HEALTH EXCHANGE PROGRAM
PROGRAMME INTERNATIONAL D'ÉCHANGE DE PERSONNELS DE SANTÉ

G U I D E L I N E S F O R S E L E C T I O N

CANADIAN MEDICAL STUDENTS

- 1) Third or fourth medical year will be considered.
- 2) Obtain developing country contacts of preference.
- 3) Agreement in writing from both Canadian university and the developing country institution. The Canadian university will be responsible for screening applicants.
- 4) Electives of no less than 8 - 12 weeks.
- 5) Description of the program proposed with justification and elaboration of strengths.
- 6) Description of special project or survey to be undertaken while on elective.
- 7) Content, organization and usefulness of the educational experience.
- 8) Specification and justification of costs in Canadian dollars.
- 9) Undertaking by student and university to obtain appropriate immunizations and insurance coverage as well as to satisfy all travel and visa requirements.
- 10) Priority given to:
 - a) primary health care delivery
 - b) community medicine related (epidemiology, maternal child health, under 5's, preventive programs, e.g. immunizations, etc.). Purely clinical large hospital experience will be given low priority.
 - c) some clinical exposure is desirable.

.../2

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CANADIAN PUBLIC HEALTH ASSOCIATION

ASSOCIATION CANADIENNE D'HYGIENE PUBLIQUE



THE CANADIAN SOCIETY FOR TROPICAL MEDICINE
AND INTERNATIONAL HEALTH

LA SOCIÉTÉ CANADIENNE POUR LA MÉDECINE TROPICALE
ET LA SANTÉ INTERNATIONALE

INTERNATIONAL HEALTH EXCHANGE PROGRAM
PROGRAMME INTERNATIONAL D'ÉCHANGE DE PERSONNELS DE SANTÉ

A P P L I C A T I O N P R O C E D U R E S

CANADIAN MEDICAL STUDENTS

1. Electives are to be no less than 8 - 12 weeks.
2. Obtain developing country contacts 'of preference.
3. Obtain agreement from those contacts subject to obtaining funds (in writing).
4. Obtain approval and assistance from Canadian preceptor for the elective (in writing).
5. Develop a small research survey protocol with a preceptor (information attached).
6. Obtain and complete application form (include C.V.) and send to the International Health Exchange Program.
7. Canadian university and student to arrange immunizations, travel formalities, trip itinerary, insurances and arrange for accommodation.
8. Briefing mechanism will be provided where feasible.
9. Required within 60 days of the return to Canada from the elective is the following:
 - a) A written detailed report of the elective experience;
 - b) A report by the preceptor in the country of study;
 - c) A complete financial report with receipts.

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APPUYÉ PAR LE CENTRE DE RECHERCHES POUR LE DÉVELOPPEMENT INTERNATIONAL

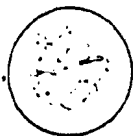
1335 CARLING AVENUE, SUITE 210, OTTAWA, ONTARIO, CANADA
K1Z 8N6 (613) 725-3769 — TELEX 053-3841

10) Priority given to:

- a) Primary health care*, community health (epidemiology, Maternal Child Health, preventive programs, (e.g. immunization, etc.). Purely clinical large hospital experience will be given low priority.
- b) Some clinical exposure desirable.
- c) A small research or survey-oriented project in which the student will be exposed to public health or clinical problems of the area (preferably non-urban) and analyse these.
- d) Involvement with existing Canadian overseas projects.

11) A written detailed report is required within 60 days of return. Report by the preceptor from country involved, is also required.

*Primary health care refers to basic health services such as clean water, waste disposal, immunization, adequate nutrition and treatment of common illnesses.



CANADIAN PUBLIC HEALTH ASSOCIATION

ASSOCIATION CANADIENNE D'HYGIENE PUBLIQUE



THE CANADIAN SOCIETY FOR TROPICAL MEDICINE
AND INTERNATIONAL HEALTH

LA SOCIÉTÉ CANADIENNE POUR LA MÉDECINE TROPICALE
ET LA SANTÉ INTERNATIONALE

INTERNATIONAL HEALTH EXCHANGE PROGRAM
PROGRAMME INTERNATIONAL D'ÉCHANGE DE PERSONNELS DE SANTÉ

G U I D E L I N E S F O R S E L E C T I O N

EXCHANGE NURSING STUDENTS

CANADIAN NURSING STUDENTS

- 1) Third or fourth undergraduate nursing year or graduate students will be considered.
- 2) Agreement in writing from both Canadian University and the developing country institution. The Canadian University will be responsible for screening applicants.
- 3) Electives of no less than 8 to 10 weeks.
- 4) Description of the elective proposed with justification.
- 5) Description of special project or survey to be undertaken while on elective - objectives, methodology, recipients of information.
- 6) Content, organization and usefulness of the education experience.
- 7) Specification and justification of costs in Canadian dollars.
- 8) Undertaking by student and university to obtain appropriate immunizations and insurance coverage as well as to satisfy all travel and visa requirements.
- 9) Previous demonstrated interest in development issues (Canadian or Third World).

../2 (over)

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APPUYÉ PAR LE CENTRE DE RECHERCHES POUR LE DÉVELOPPEMENT INTERNATIONAL

1335 CARLING AVENUE, SUITE 210, OTTAWA, ONTARIO, CANADA
K1Z 6N6 (613) 725-3769 — TELEX 053-3641



CANADIAN PUBLIC HEALTH ASSOCIATION

ASSOCIATION CANADIENNE D'HYGIENE PUBLIQUE



THE CANADIAN SOCIETY FOR TROPICAL MEDICINE
AND INTERNATIONAL HEALTH

LA SOCIÉTÉ CANADIENNE POUR LA MÉDECINE TROPICALE
ET LA SANTÉ INTERNATIONALE

INTERNATIONAL HEALTH EXCHANGE PROGRAM
PROGRAMME INTERNATIONAL D'ÉCHANGE DE PERSONNELS DE SANTÉ

A P P L I C A T I O N P R O C E D U R E S

EXCHANGE NURSING STUDENTS

CANADIAN NURSING STUDENTS

1. Electives are to be no less than 8 - 10 weeks.
2. Obtain developing country contacts of preference.
3. Obtain agreement from those contacts subject to obtaining funds (in writing).
4. Obtain approval and assistance from Canadian preceptor for the elective (in writing).
5. Develop a small research survey protocol with a preceptor
6. Obtain and complete application form (include C.V.) and send to the International Health Exchange Program.
7. Canadian university and student to arrange immunizations, travel formalities, trip itinerary, insurances and arrange for accommodation.
8. Briefing mechanism will be provided where feasible.
9. Required within 60 days of the return to Canada from the elective is the following:
 - a) A written detailed report of the elective experience;
 - b) a report by the preceptor in the country of study;
 - c) a complete financial report with receipts.

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K1Z 8N5 (613) 725-3769 — TELEX 053-3841



CANADIAN PUBLIC HEALTH ASSOCIATION



THE CANADIAN SOCIETY FOR TROPICAL MEDICINE
AND INTERNATIONAL HEALTH

ASSOCIATION CANADIENNE D'HYGIENE PUBLIQUE

LA SOCIÉTÉ CANADIENNE POUR LA MÉDECINE TROPICALE
ET LA SANTÉ INTERNATIONALE

INTERNATIONAL HEALTH EXCHANGE PROGRAM
PROGRAMME INTERNATIONAL D'ÉCHANGE DE PERSONNELS DE SANTÉ

G U I D E L I N E S F O R S E L E C T I O N

CANADIAN UNIVERSITY GRADUATE STUDENTS

1. M.Sc. and Ph.D. students will be considered.
2. Agreement in writing from both Canadian university and the developing country institution. The Canadian university will be responsible for screening applicants.
3. Research projects of no less than 10 weeks.
4. Description of the project with justification and elaboration of value.
5. Content, organization and usefulness of the educational experience.
6. Specification and justification of costs in Canadian dollars. Other sources of support.
7. Undertaking by student and university to obtain appropriate immunizations and insurance coverage as well as to satisfy all travel and visa requirements.
8. Priority given to community based or primary health care oriented projects.

EXAMPLES:

- community survey oriented projects
- vector control studies (microbiology, parasitology)
- health education
- environmental health
- involvement with ongoing Canadian overseas community based projects (i.e., nutrition, sanitation, irrigation)
- other health sciences disciplines working at primary health care level.

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K1Z 8N6 (613) 725-3769 — TELEX 053-0341



CANADIAN PUBLIC HEALTH ASSOCIATION

ASSOCIATION CANADIENNE D'HYGIENE PUBLIQUE



THE CANADIAN SOCIETY FOR TROPICAL MEDICINE
AND INTERNATIONAL HEALTH

LA SOCIÉTÉ CANADIENNE POUR LA MÉDECINE TROPICALE
ET LA SANTÉ INTERNATIONALE

INTERNATIONAL HEALTH EXCHANGE PROGRAM
PROGRAMME INTERNATIONAL D'ÉCHANGE DE PERSONNELS DE SANTÉ

A P P L I C A T I O N P R O C E D U R E S

CANADIAN UNIVERSITY GRADUATE STUDENTS

1. Electives are to be no less than 10 weeks.
2. Obtain developing country contacts of preference.
3. Obtain agreement from those contacts subject to obtaining funds (in writing).
4. Obtain approval and assistance from Canadian preceptor for the elective (in writing).
5. Description of project or studies to be undertaken to be submitted to the International Health Exchange Program.
6. Obtain and complete application form (include C.V.) and forward to address given below.
7. Candidate to arrange immunizations, travel formalities, trip itinerary, insurances and arrange for accommodation.
8. Briefing mechanism will be provided where feasible.
9. Required within 60 days of the return to Canada from the elective is the following:
 - a) A written detailed report of the training experience;
 - b) A report by the preceptor in the country of study;
 - c) A complete financial report with receipts.

SUPPORTED BY THE INTERNATIONAL DEVELOPMENT RESEARCH CENTRE
APPUYÉ PAR LE CENTRE DE RECHERCHES POUR LE DÉVELOPPEMENT INTERNATIONAL

1335 CARLING AVENUE, SUITE 210 OTTAWA, ONTARIO, CANADA
K1Z 8N6 (613) 725-3769 — TELEX 053-3841

International Health Exchange Program
A Joint Project
of the
Canadian Society for Tropical Medicine and
International Health
and the
Canadian Public Health Association
Supported by the
International Development Research Centre

The Canadian Society for Tropical Medicine and International Health and the Canadian Public Health Association are non-profit organizations of health professionals concerned with the improvement and maintenance of personal and community health. The two organizations provide an effective liaison for the exchange of information, experiences and personnel with other countries and avenues of communication for the mutual enrichment of national and international health care programs.

Canada has a considerable commitment in the international health field. In order to provide adequate manpower resources for international health activities it must also have health professionals experienced in developing health settings.

CANADIAN HEALTH PROFESSIONALS

The Canadian Society for Tropical Medicine and International Health and the Canadian Public Health Association have recognized an urgent need to improve the manpower pool component in the field of tropical medicine and international health in order to ensure sufficient human resources for Canada's foreign aid requirements. Opportunities for education in this field must be provided. A short term placement in a suitable training position in less developed countries is highly recommended. This would be especially valuable where prevention is such an important component. Health needs in international health are not necessarily limited to preventive medicine. A strong tropical disease research and diagnostic capability in Canada and familiarity with acceptable therapy for parasitic disease, for example, depends partly on the exposure of health professionals in specialties such as internal medicine, medical microbiology, pharmacology, and other basic science specialties to a Third World setting and a sensitization to the broader issues of international health.

Environmental health and sanitary engineers can be of considerable assistance to developing countries. The cultural, economic, administrative and logistic complexities of work in developing countries will strengthen the capabilities of such individuals for further foreign aid programs.

To answer the need and provide the opportunity the International Health Exchange Program was established to provide a well-structured educational exchange program between Canadian health professionals and developing country institutions. The Program will allow 3rd or 4th year Canadian medical students, recently graduated physicians, undergraduate and postgraduate nurses, graduate students in biological sciences, environmental health officers, sanitary engineers and other health professionals to a 2-3 month training period in Third World countries.

DEVELOPING COUNTRY NATIONALS

The health care system in Canada, the clinical, community medicine and research expertise, and the diversity of health problems we face, provide an excellent opportunity for placement of developing country trainees for specific, well structured educational experiences. An individual could be provided with a preceptorship in research in the clinical or basic sciences, a tailor-made postgraduate academic exposure or other selected training pertinent to his/her requirements in his/her home setting. Senior educators or officials involved in educational or community medicine research programs could also participate in the program.

Applications to the International Health Exchange Program are reviewed by a multi-disciplinary Selection Committee. Grants are awarded on a competition basis and judged on content, organization, and the relevance of the anticipated experience.

For further details and/or application forms please write to:

CSTMIH/CPHA
1335 Carling Avenue
Suite 210
Ottawa, Ontario
K1Z 8N8
(613) 725-3769
telex no.: 053-3841



Programme international d'échange de personnels de santé



Financé par le
Centre de recherches
pour le développement international

**Programme international d'échange
de personnels de santé**

**Un projet conjoint
de la**

**Société canadienne pour la médecine tropicale et
la santé internationale**

et de

l'Association canadienne d'Hygiène publique,

financé par le

**Centre de recherches pour le développement
international**

La Société canadienne pour la médecine tropicale et la santé internationale d'une part, et l'Association canadienne d'Hygiène publique d'autre part, sont des organismes à but non lucratif réunissant des professionnels de la santé qui s'intéressent à l'amélioration de la santé individuelle et communautaire. Ces organisations représentent deux points de contact efficaces pour l'échange d'informations, d'expériences et de personnels avec d'autres pays. Ils permettent ainsi l'enrichissement mutuel des programmes de soins de santé nationaux et internationaux.

Le Canada a engagé des ressources considérables dans le développement international du secteur santé. Cependant, pour pouvoir offrir une main-d'œuvre adaptée aux activités de santé internationale, le pays doit également disposer de professionnels de la santé possédant une expérience du monde en développement.

LES PERSONNELS DE SANTÉ CANADIENS

La Société canadienne pour la médecine tropicale et la santé internationale, tout comme l'Association canadienne d'Hygiène publique, est consciente de la nécessité, particulièrement urgente, d'améliorer la réserve de main-d'œuvre dans le domaine de la médecine tropicale et de la santé internationale, afin de garantir des ressources humaines suffisantes pour répondre aux besoins de l'aide canadienne à l'étranger. Il s'agit d'offrir la possibilité de se familiariser avec ce domaine durant des stages à court terme, dans des postes de formation adaptés, en pays en voie de développement. Cette formation est particulièrement enrichissante là où elle est axée sur la prévention. Toutefois, en santé internationale, les besoins ne se limitent pas nécessairement à la médecine préventive. La qualité de la recherche sur les maladies tropicales, l'aptitude à les diagnostiquer au Canada, et la connaissance de la thérapie des maladies parasitaires dépendent en grande partie de l'expérience acquise sur le terrain par les personnels de santé dans des domaines comme la médecine interne, la microbiologie, la pharmacologie et les autres disciplines scientifiques importantes dans le Tiers-monde; il est également nécessaire de mieux faire connaître les grandes contributions propres à la santé internationale.

Les spécialistes de l'hygiène du milieu et de l'assainissement peuvent apporter une aide considérable aux pays en voie de développement. Il est évident que la complexité inhérente aux caractéristiques culturelles, économiques, administratives et logistiques dans le Tiers-monde aura pour effet d'augmenter l'efficacité de ces spécialistes dans le cadre de futurs programmes d'aide à l'étranger.

Répondant aux besoins et offrant les possibilités requises, le Programme international d'échange de personnels de santé offre une bonne structure pédagogique aux échanges entre les personnels de santé canadiens et les organismes des pays en voie de développement. Ainsi, un stage de deux à trois mois dans des pays du Tiers-monde est offert aux étudiants en médecine canadiens de troisième ou quatrième année, aux médecins récemment reçus, ainsi qu'aux infirmiers et infirmières, diplômés ou non, aux diplômés en sciences biologiques, aux spécialistes de l'hygiène du milieu et de l'assainissement, et à d'autres personnels du domaine sanitaire.

RESSORTISSANTS DES PAYS EN DÉVELOPPEMENT

Étant donné la qualité du système de soins canadien, tant au niveau des services de santé communautaires qu'en institution et l'excellence de nos programmes de recherche, ainsi que la diversité des problèmes sanitaires que nous connaissons, le Canada offre un excellent cadre de stage aux étudiants des pays en développement recherchant une expérience pédagogique spécifique et bien structurée. Ainsi, un étudiant peut bénéficier d'un préceptorat en recherche fondamentale ou clinique, ou encore suivre des études universitaires "sur mesure" voire même subir un autre type de formation répondant aux besoins de son pays. Enfin, le programme accueille également les enseignants ou responsables intervenant dans les programmes de recherche en médecine communautaire ou en pédagogie médicale.

Les demandes de stage dans le cadre du Programme international d'échange sont étudiées par un Comité de sélection pluridisciplinaire. Les bourses sont accordées aux étudiants en fonction du contenu, de l'organisation et de l'utilité du stage demandé.

Pour obtenir de plus amples renseignements ou un formulaire de demande, écrire à l'adresse suivante :

**SCMTSI/ACHP
1335, avenue Carling
Suite 210
Ottawa (Ontario)
K1Z 8N8
(613) 725-3769
téléc : 053-3841**



International Health Exchange Program



**Supported by the
International Development Research Centre**

APPENDIX I

International Health Exchange Program
Announcement and Application Procedures

Summary of AUCC Report # 7
Canadian University International Development Projects
by International Issue and Canadian University
for 1983-1987, January 4, 1988.

Total Number of Health Related Projects 1983-87 69

New Projects 1986-1987 20

Percentage of Total Number of Projects
Carried Out By:

	%
University of Calgary	10.53
McMaster University	10.53
University of Toronto	9.21
University of B.C.	7.89
Memorial University	6.58
All Other Universities	55.26

100.00

Number of Projects by Health Specialty

Tropical Diseases	12
Infectious Diseases (general)	12
Public Health	9
Environmental	8
Nutrition	6
Training	6
Community Health/Family Medicine	5
Social	4
Child Health	3
Rehabilitation	3
Physical Therapy	1

69

Percentage of Total Funding by University

	%
University of Moncton	26.7
University of Laval	23.3
University of Toronto	8.3
Consortium	6.9
Memorial University	6.4
University of Calgary	5.4
Other	23.0

100.00

APPENDIX H

Summary of Report # 7
Canadian University International Development Projects
by International Issues and Canadian University
for 1983-1987, January 4, 1988

Développement social/Social Development

. Santé/Health and Population.....	13
. Education.....	20
. Sciences sociales/Social Sciences.....	23
. Habitat/Human Settlements.....	6
. Communication.....	5
. Soutien institutionnel/Institutional Support.....	6
. Politique/Policy.....	1
. Gestion/Management.....	2
. Développement social (général)/Social Development (General).....	2
	<u>78</u>

Infrastructure

. Energie/Energy.....	3
. Eau/Water.....	4
. Architecture.....	3
. Construction.....	1
. Transport/Transportation.....	1
	<u>12</u>

Autre/Other

. Secteur non-spécifié/Sector Unspecified.....	8
	<u>8</u>

STATISTIQUES GÉNÉRALES SUR LES DEMANDES DE BOURSES
1987-88
CIDA AWARDS APPLICATION BREAKDOWN

Nombre total de demandes/Total applications.....	158
Anglophones.....	115
Francophones.....	43
Hommes/Men.....	96
Femmes/Women.....	62
Dossiers incomplets/Files incomplete.....	14
Dossiers ne répondant pas aux critères d'admissibilité/Files which do not meet criteria.....	50
Dossiers rejetés après analyse des spécialistes/ Files rejected after professional assessment.....	53

PROVINCES

. Terre-Neuve/Newfoundland.....	1
. Nouvelle-Ecosse/Nova Scotia.....	2
. Nouveau-Brunswick/New Brunswick.....	1
. Ile-du-Prince Edouard/Prince Edward Island.....	1
. Québec/Quebec.....	53
. Ontario.....	45
. Manitoba.....	11
. Saskatchewan.....	4
. Alberta.....	15
. Colombie Britannique/British Columbia.....	19
. Territoires du Nord-Ouest/North-West Territories.....	0
. Non-spécifiés/Unspecified.....	6
	<u>158</u>

SECTEURS/SECTORS

Ressources naturelles/Natural Resources

. Agriculture.....	34
. Foresterie/Forestry.....	9
. Pêche/Fisheries.....	4
. Inventaire des ressources/Resource Inventories.....	2
. Services industriels/Industrial Services.....	8
. Environnement/Environment.....	3
	<u>60</u>

OBJECTIVE

To develop a body of Canadians competent and expert in the field of international development.

ELIGIBILITY

These awards are available to Canadian citizens who:

- have completed an undergraduate program of studies (degree or diploma), and
- have indicated, through their own education and experience, a definite commitment to and suitability for a career in international development work.

Applications from candidates wishing to use this award to pursue a PhD program are not eligible.

SELECTION OF THE AWARDS

Applications are reviewed by a selection committee made up of representatives of CIDA and other organizations and agencies involved in international development. Approximately 10 awards are available for the year 1987-88.

PREFERENCE

Preference will be given to applicants who:

- have clearly demonstrated through their own related work experience and/or academic background that they are both suited for and committed to pursuing a career in international development;
- have demonstrated, to the extent possible, that there is a significant demand in the international development field for the type of knowledge and expertise which they seek to obtain as a result of their proposed program;
- have indicated that a significant component of their proposed program involves fieldwork in a developing country.

The candidate's work experience may have been gained through public or private international or domestic development programs.

TERM AND TENURE

Awards must start in the calendar year in which they have been granted and will normally be tenable for a period not to exceed two (2) years. The candidate must specify in the application whether the proposed program is for a 1- or 2-year period. Continuation from a first to a second year will be subject to a review of the award holder's progress and performance. If an academic portion is included, it should be

tenable in Canada and/or a developing country. An academic program in any other country may be approved if it is not available in Canada; this fact must be documented by the applicant.

VALUE

The value of each award is up to \$15,000 per annum. The award is payable to the recipient on a non-accountable basis and is intended to cover expenses related to the program. Sixty per cent of the annual value of the award is paid at the beginning of the program. Monies disbursed by CIDA to the recipient of an award are subject to Canadian tax laws, and income tax will be deducted at source.

(Award recipients may be subject to the tax laws of the country in which the study or research is undertaken.)

THE PROGRAM PROPOSAL

Note: Because of the nature of the CIDA award, particular emphasis is placed on the information provided by the applicant under this heading. The proposal made by the applicant is the major factor in the selection of award winners.

Each applicant must develop a program of one of the three following types, to cover a one-year period, or a two-year period (where applicable):

- A professional on-the-job training program involving extensive project related fieldwork in one or more developing countries.
- A practical work/study assignment in a public or private (including non-government) organization or agency involved in international development work, with a substantial period of fieldwork in one or more developing countries.
- A development oriented academic program combined with a substantial period of practical fieldwork in one or more developing countries.

Note: "Extensive" and "substantial" are usually defined as a minimum of three months per year.

The program proposed by the candidate must have a clearly practical orientation and cannot be used for purely academic studies. The program must be described as clearly, as completely and as concisely as possible and must include a chronological summary of planned activities. Candidates are required to state their academic and professional work experience in both their program proposal and the objective of the CIDA award program as stated above.

It is also recommended that the candidate seek and obtain written approval on the part of the host country

and organization and/or academic institution in which he/she intends to pursue the proposed program.

CANDIDATE'S REPORTING REQUIREMENTS

The selected candidate will be required to submit periodic progress reports as well as a comprehensive final report by a form consistent with the nature of the award program.

PROGRAM SUPERVISOR

Each candidate must secure the participation of a program supervisor who is an international development specialist and a prominent expert in the candidate's proposed field of specialization. The supervisor should, to the extent possible, be actively and directly involved in the candidate's program from the design through to the evaluation of the project. He or she will be expected to submit a detailed assessment of the candidate's proposed program, a letter of reference outlining reasons for supporting the candidacy and mid-project and end of project evaluations of the candidate's progress and performance.

PREFERRED FIELDS OF SPECIALIZATION

Priority will be given to applications which will lead to the growth of Canadian international development expertise in the following fields of specialization: tropical agriculture, food production and distribution, tropical forestry, fisheries, energy, transportation, communications, development economics, human resource development, women in development, inter-cultural management and communications, rural development, health, nutrition, population, human settlements and small enterprises.

INTENTION ON COMPLETION

As the purpose of this program is to develop a body of Canadians competent and expert in the field of international development, applicants are asked to indicate how they intend to utilize the knowledge and expertise they will have gained upon completion of their award program.

REFERENCE

Each candidate must provide letters of reference from three sources. As indicated above, one of these letters must be from the candidate's proposed program supervisor and at least one other must be from a person under whom the candidate has worked and/or studied.

References are asked to assess the proposed program as well as the candidate's ability to carry it out. References are requested to use the form letters which are attached to the application and to send these directly to CIDA.

TRANSCRIPTS OF MARKS

Candidates must ensure, at their own expense, that official transcripts for their undergraduate and/or graduate program(s) of studies are forwarded to CIDA.

CITIZENSHIP

Canadian citizenship is a requirement for these awards. Proof of citizenship must accompany the application form, e.g., a copy of the applicant's birth certificate or citizenship certificate.

OTHER INCOME

No candidate is to be in receipt of any scholarship, award, subsidy, bursary or fee from any other federal government department or agency for the period during which the award is in effect.

GENERAL

Application forms, if not available locally, can be obtained from the secretary of the CIDA Awards Program for Canadians. Completed applications and all supporting documents must be received at CIDA at the address indicated below by 12 noon February 27, 1987. All information submitted by a candidate may be subject to verification by CIDA. Offers of awards will be made to selected candidates in June, 1987.

ADDRESS

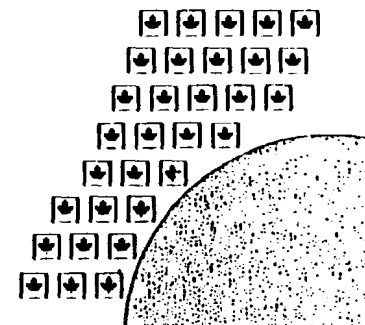
The Secretary
CIDA Awards Program Committee
Technical Cooperation Services Directorate
Professional Services Branch
Canadian International Development Agency
200 Promenade du Portage
Hull, Quebec
K1A 0G4



Agence canadienne de
développement international

Canadian International
Development Agency

BOURSES DE L'ACDI OFFERTES AUX CANADIENS



Canada

APPENDIX G

CIDA Awards for Canadians:
Program Announcement and Application Breakdown

APPENDIX F

List of Universities Contacted

University of Calgary
Dalhousie University
MacDonald College of McGill University
University of Manitoba
McGill University
McMaster University
Universite de Montreal
University of Ottawa
Queens University
University of Saskatchewan
University of Sherbrooke
University of Toronto

Other Documents

1. Report of The Feasibility Study on the Role of Networking in International Health, by L. Berlinguet, M. Kerr and A. MacKinnon.
2. CIDA's Scholarship Program for Canadians: Its Background and Development, 1971 to 1984.
3. Canadian Universities' Role in International Health, (Health for all by the year 2000), by D. Shires, L. Mensah, and D. O'Brien (eds.), (Halifax: Lester Pearson Institute for International Development, 1986).
4. Entrepreneurs in Education: A Study of the Capacity of Canadian Institutions to Respond to Increasing and Changing Human Resource Development Requests from Developing Countries, (Kanchar International, 1987).
5. List of Canadian University International Health Development Projects for 1983 to 1987, The International Division of the Association of Universities and Colleges of Canada (AUCC).

APPENDIX E

List of Documents and Other Sources of
Background InformationInternational Health Exchange Program

1. Computerized list of former award holders along with most recent mailing addresses.
2. Draft Report of International Health Exchange Program 1983-1987 Evaluation and Questionnaire Analysis.
3. IDRC Project Summary (including program objectives and budgetary details) (File 3-P-87-1002).
4. Correspondence between IDRC, FAD and IHEP relating to the award program.
5. 1986 Year End Report (statements of goals and objectives as well as budgetary information).
6. Copies of four student research reports and reports of host country preceptors.
7. Program announcement and other publicity.
8. Sample application forms, instructions for application and guidelines for selection of medical students, nurses and other health professionals.
9. Summary of the IHEP statistics for July 1986 to January 1988.
10. Summary of CPHA International Health Manpower Register.

The Young Canadian Researchers Award

1. A 1987 list of former award holders containing information about most recent address, degrees obtained, university affiliation.
2. IDRC Program Summary (descriptions of goals and objectives as well as budgetary details) (3-P-87-1001).
3. Copy of 1986 YCRA Program Survey by Mr. Patrick Doherty.
4. Copy of Brief by Ms. Francoise Coupal pertaining to the Doherty Report.
5. Nineteen University of Calgary student reports including host country supervisor reports.
6. Copies of student application forms.
7. Copies of the 1987 YCRA program announcement and other publicity.

APPENDIX D

International, Governmental, and
Non-Governmental Organizations Contacted

IDRC
CIDA
The Canadian Society for Tropical Medicine and International Health
The Canadian Public Health Association
The Canadian Council for International Cooperation
The Public Service Commission of Canada
The Ministry of External Affairs, Government of Canada
The Province of Quebec Human Resources Division
The Medical Research Council of Canada
The Association of Universities and Colleges of Canada
WHO
The World Bank
UNICEF
UNDP
UNEP
The International Red Cross
Canada World Youth
CUSO
WUSC
CARE Canada
OXFAM
Catholic Relief Services

APPENDIX C

Interview Guide: Supervisors

1. When is the best time to offer an elective in international health in an undergraduate program? Why?
2. What kind of students do you encourage to apply to the program?
3. Has the program had a positive impact on the interest of medical students in International health?
4. What do the recipients do afterward?
5. Do the host preceptors send evaluations? Are these required or volunteered?
6. Is there a shortage of Canadian expertise in international health? In what domains? Why?
7. Can the research requirement for the award be strengthened? How?

- to determine whether and in what ways the programs could be changed to become more cost-efficient, more effective and more closely articulated with IDRC activities;
- to examine the implication of the recent changes to the eligibility criteria and selection procedures of the YCR awards programs or the continuation of HEP/YCR support to the medical schools; and,
- to find out what (if anything) is unique about IDRC's contribution to stimulating interest in development among Canadian health professionals.

3. The assessment of the premises of the programs:

- to examine the basic premises of the HEP/YCR programs;
- to determine to what extent the HEP/YCR has met the first objective of contributing to the pool of Canadian health/medical professionals who have a concern/career commitment to health and development bearing in mind the limited time the program has been in operation;
- to appraise the output of health professionals and identify the training capacities and strength of Canadian institutions and how well these have been represented in HEP/YCR awards;
- to determine what factors influence decisions to take up careers in development, what background factors predispose individuals to such careers, how important support is for thesis and dissertation fieldwork to a long-term professional commitment;
- to suggest ways eligibility criteria, selection procedures and program objectives can be modified to increase and/or to direct Canadians into fields in which the needs are the greatest and in which Canada has the capacity to make an international contribution;
- to ascertain the level of interest among the eligible population for the awards; and,
- to recommend that IDRC continue or discontinue support or recommend a different approach.

*** *** ***

APPENDIX B

Award Holder Interview Guide

1. When did you receive the YCRA or IHEP award?
Year _____
How long was it for? _____
Where was the place of tenure? _____
2. Was this your first such award? If not, please describe others.
3. How did you first hear about this program?
Did you seek out this information?
Did you hear about the program from others? From whom?
4. How or why did you first become interested in international health?
5. Could you describe an ideal applicant?
6. What would you do to improve the selection of candidates?
7. How could administration of the program be improved?
(length of the award, placement and supervision, disbursement of funds, etc.)
8. What was the subject of your project?
Did you have sufficient time to carry out the project?
Did you change your research plans? How, why?
Did you receive adequate supervision in the field?
Did you receive adequate supervision from your institution?
9. What, if any, effects has this award had on
 - Your career plans (long, short term)?
 - Interest in development?
10. What advice would you give to others who receive this award?

1. The management and organization of HEP and YCR and their impact on the careers of recipients:
 - to consider how successful these programs have been in stimulating an interest in Third World issues and a commitment to careers in development among Canadians in health fields;
 - to ascertain the impact/influence of the HEP/YCR awards on Canadian recipients;
 - to evaluate the organization, administration and management of the awards;
 - to appraise the appropriateness of the mixture of health professionals supported by the grants (i.e. doctors, nurses, midwives); and,
 - to examine the fairness and appropriateness of the selection procedures and the dissemination of awards.
2. The articulation of Programs with other IDRC activities and other Awards Programs:
 - to assess the effectiveness of the YCR program and HEP in the context of IDRC objectives and activities;
 - to make comparisons with other awards programs having similar objectives such as CIDA's program of awards for young Canadians;
 - to determine to what extent HEP and YCR funds to McMaster, Calgary and Montreal are complementary to other division's programs and necessary to augment these efforts to increase the number of Canadian health professionals with a career commitment to international development;
 - to elicit information from HSD and COOP concerning the connection between HEP/YCR programs and IDRC supported institutional linkages between Canadian universities and institutions in developing countries;
 - to assess the extent to which eligibility criteria and candidate selection practices reflect divisional priorities and assessments of the strengths of Canadian training in health fields, demands for Canadian expertise and the research and training needs of developing countries;

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APPENDIX A

Terms of Reference

3.3.2 Administration of the Short-Term YCR Program

Several (three) former short-term YCR award holders did not know that the award had any link to IDRC, and felt that they had received it through their department of Community Health, from its director. The length of tenure was mentioned as an aspect of the program that needed change, although no suggestions were made as to how this could occur in a medical program that only allows for a six week elective.

Three students mentioned that the project proposal took too long to complete; one said that it "imposed a disproportionate burden on otherwise busy medical students who should have been studying." Another student described preparation of the proposal as being a "monstrous" task. Despite these criticisms, none reported that carrying out the research was particularly difficult. This was facilitated by the host country preceptors who usually provided much valuable assistance to the award holders. All were motivated by the requirement that a project report be presented to their medical class upon return from the field.

Students at universities like Calgary whose community health electives are less than two months long are presently ineligible for IHEP support. However, the brevity and timing of the overseas elective does not seem to adversely affect the quality of their work or their subsequent interest in careers in international health. It is for this reason that we have recommended that the eligibility criteria for the IHEP be changed to provide opportunities for students such as those at the University of Calgary and at other institutions whose medical programs do not conform to the usual pattern.

little time upon return for reflection on the experience. Nevertheless, the courses offered in Community Health at the University of Calgary appear to be an effective means of introducing students to the field of international health. Former award holders reported that they first heard of the YCR award program in these classes. Thus, the courses provide a forum to disseminate information about the overseas elective, directing students to appropriate personnel for application forms and supervisory assistance. Each award holder is required to make a presentation to the class upon his or her return, in addition to writing the project report. This feature of the Calgary-based award program serves to inform other students about Third World health conditions.

Although this program may be instrumental in tapping interest in international health, most respondents reported that their motivation to seek the award stemmed from long-standing interests. A typical example was a medical student whose father, a church minister, "brought home many missionaries who talked of their experiences." This interested him in a possible career in development. We have the impression, however, that students may be encouraged to apply for the award because such an overseas experience is regarded as an essential component for anyone contemplating a career in community health. For example, one recipient said that he went to see the health care system (in a West African country), not to see if he wanted to begin a career in international health. He added, however, that his interest in West Africa had increased as a result of spending time there.

Like the IHEP respondents, several remarked that the experience developed their clinical skills. A recent graduate who went with her husband to southern Africa reported that she felt better able to practice family medicine because of the experience in treating childhood diseases. Most short-term YCR recipients expressed a desire for further experience and training. While most were completing their studies and had no plans to continue their studies or work in international health, one who had spent time in Panama, was planning to return to another developing country for more experience. But, he "kept running up against a brick wall" in securing funding, and has been unsuccessful. He has decided instead to enroll in a graduate program in Third World health policy offered at an eastern US university.

programs are held every few weeks for project consultants who require information about the regions to be visited. One of the four we contacted is a frequent advisor to IDRC's Health Sciences Division. Such involvement with IDRC should, perhaps, be more common.

Former YCR award holders can be of much assistance to IDRC. They could advise the Fellowships and Awards Division about new applications; in particular, helping to judge the relevance of research topics and the suitability of institutional placements. This was identified by two respondents as an important contribution they could make.

The YCR awards program has also funded professionals in the fields of journalism, finance and administration as well as undergraduate medical students for whom the award is available for short-term electives in Third World countries. That is, the short-term YCRA is available to certain categories of individuals who may not be enrolled in post-graduate degree programs.

3.3.1 Impact of the Short-Term YCR on Former Award Holders

Initially, funds were given by Fellowships and Awards Division to several Canadian universities to support professional and postgraduate elective studies of physicians and medical students. Now administered only by the University of Calgary, where 21 medical students have received the award, this program mainly funds a six week elective in Community Health. While the objectives of the short-term YCR program at Calgary are very similar to those of the IHEP, the value of the awards tends to be somewhat less at about \$1500.

Interviews with nine award holders and two academic supervisors provided information about the impact of the award on career plans. The majority (7) of short-term YCR recipients were still enrolled in the undergraduate medical program at the University of Calgary. Although their views were not strikingly different from those offered by former IHEP holders, there were a few notable differences. The medical program at the University of Calgary is "intensive" with three years of training rather than the usual four or five. Students have only a brief six week period available to take an overseas elective. The result is that the trip tends to be "slotted in" to an otherwise tight schedule, allowing

International Health. For those living elsewhere it was suggested that interviews be conducted by former award holders.

Questions about the applicant's research projects led to discussions about the length of award tenure. Ten former award holders (but only two supervisors) thought that the length of tenure of the award was too short. One medical student did not believe that "publishable" research could be carried out in two or even three months by a student who has not yet received a Master's degree and who has no familiarity with developing country conditions. Despite these observations none of the former award holders objected to the requirement that they submit a project report upon return. As one put it, "It is the least I can do in return for being given such an opportunity."

3.3 The Young Canadian Researchers Award

According to the Brief on the Young Canadian Researchers Award by Ms. Francoise Coupal, the main purpose of the YCR is to support research undertaken at the doctoral or Master's level in Third World countries by Canadians registered at a Canadian university. It is this program that we refer to as the long-term YCR award. Awards are normally made for a 12 month period and are renewable for a second year.

Four of the 11 former long-term YCR holders in the health sciences were interviewed. Two are enrolled in doctoral programs, at the University of Calgary and at the University of Toronto. Two are established researchers in international health.

Former YCR award holders represent an important resource to international and national organizations. However, one recipient who is presently finishing her Ph.D. and holds an undergraduate degree in Anthropology wondered: "Why doesn't IDRC or CIDA use us?" Another, one of the first YCR recipients, published several articles during the tenure of his award, before returning to Canada. When these papers were completed he sent copies to IDRC but did not, he said, receive an acknowledgement. He now practices pediatrics in Ottawa, operates a tropical medicine clinic and participates in Third World orientation programs sponsored by CIDA. These

about the number of awards available so that supervisors do not prepare too many. We get their hopes up and cannot spend inordinate amounts of time with them."

Later he added:

"We spend a lot of time helping them to establish links with Third World institutions. This is possible often because of our on-going research with these people. So it is embarrassing to have to tell them that the student will not come."


This physician felt that his recommendations were sometimes "ignored". This may simply be an indication that the IHEP selection process is consistent and fair.

The respondents were divided about the most important criteria in selecting individuals for the award. Five felt that interest and motivation were the most important considerations while the other six thought that academic standing was more important. (According to program administrators academic standing becomes an important consideration when it is particularly low.)

When former award holders and supervisors were asked how they would administer the program, a number of suggestions were offered. The most frequently mentioned were the need for an orientation for award holders, the importance of an interview in selecting candidates, extending the length of tenure of the award, and strengthening the project proposal. Although the need for some kind of orientation was mentioned by two supervisors and several former award holders, we feel that this can be most efficiently dealt with by supplying award applicants with the names and addresses of former award holders who have spent time in the applicant's region of interest. In addition, as more than one former award holder pointed out, the project proposal acts as an orientation by informing the applicant about many aspects of the region to be visited in addition to the specific topic to be researched. Three mentioned that it was helpful to focus on a particular topic and that there should be sufficient time to undertake the study the applicant proposed.


The suggestion that the application process include a personal interview was made by respondents who were not living in the Ottawa region. One suggested that applicants living in Toronto or Montreal could travel to Ottawa for an interview at the Canadian Society for Tropical Medicine and

- d) a small research or survey-oriented project in which the applicant will be exposed to public health or clinical problems of the area (preferably non-urban) and analyse these.
 - e) involvement with Canadian overseas projects.
- 10) A written detailed report is required within 60 days upon return to Canada. Report by the overseas preceptor involved is also required.



CANADIAN PUBLIC HEALTH ASSOCIATION

ASSOCIATION CANADIENNE D'HYGIENE PUBLIQUE



THE CANADIAN SOCIETY FOR TROPICAL MEDICINE
AND INTERNATIONAL HEALTH

LA SOCIÉTÉ CANADIENNE POUR LA MÉDECINE TROPICALE
ET LA SANTÉ INTERNATIONALE

INTERNATIONAL HEALTH EXCHANGE PROGRAM
PROGRAMME INTERNATIONAL D'ÉCHANGE DE PERSONNELS DE SANTÉ

G U I D E L I N E S F O R S E L E C T I O N

CANADIAN POST-GRADUATE PHYSICIAN

- 1) Post-graduate residents (2nd or 3rd year) in fields relevant to Third World health care.
- 2) Agreement in writing from both Canadian university and the developing country institution. The Canadian university will be responsible for screening applicants.
- 3) Electives with no less than 10 weeks.
- 4) Description of the program proposed with justification and elaboration of strengths.
- 5) Description of special project or survey to be undertaken while on elective.
- 6) Content, organization and usefulness of the education experience.
- 7) Specification and justification of costs in Canadian dollars.
- 8) Undertaking to ensure immunization, insurance, travel and visa requirements are met..
- 9) Priority given to:
 - a) primary health care delivery
 - b) community medicine related (epidemiology, maternal child health, under 5's, preventive programs, e.g. immunizations, etc.). Purely clinical large hospital experience will be given low priority.
 - c) some clinical exposure essential.

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K1Z 8N8 (613) 725-3769 — TELEX 053-3841

STUDIES RELATED TO NURSING
STUDENT ELECTIVES

INTERNATIONAL HEALTH EXCHANGE PROGRAM

The International Health Exchange Program is designed to give Canadian health sciences students a first-hand view of the health and health care situation under which the great majority of the world's population lives today. To that end, experiences should include clinical and community health and be well supervised to allow the Canadian student to learn while on the elective.

To augment that learning experience, the International Health Exchange Program requires that the student plan with the preceptor a small study or survey, specifically designed to examine, in slightly more detail, one problem or aspect of that health experience. It also is designed to introduce the student to the problem of observing, measuring, drawing conclusions in the field of community health.

The format of such a study is relatively loose, therefore, the student and his preceptor have considerable latitude in the choice and approach of the subject matter. Headings under which a project outline could be written include:

- | | |
|----------------|------------------------------|
| 1) Objectives | 2) Background to the Problem |
| 3) Methodology | 4) Summary and Conclusions |

Selected topics might include:

- Attitudes and practices of immunization
- Growth monitoring
- Perceptions of health education messages
- Breast-feeding practices
- Family planning

The topics are merely provided as examples and they are neither exhaustive, nor compulsory.

The student will submit the summary and conclusions of this study and a financial expenditure statement.



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AND INTERNATIONAL HEALTH

LA SOCIÉTÉ CANADIENNE POUR LA MÉDECINE TROPICALE
ET LA SANTÉ INTERNATIONALE

INTERNATIONAL HEALTH EXCHANGE PROGRAM
PROGRAMME INTERNATIONAL D'ÉCHANGE DE PERSONNELS DE SANTÉ

A P P L I C A T I O N P R O C E D U R E S

CANADIAN POST-GRADUATE PHYSICIANS

1. Electives are to be no less than 10 weeks.
2. Obtain developing country contacts of preference.
3. Obtain agreement from those contacts subject to obtaining funds (in writing).
4. Obtain approval and assistance from Canadian preceptor for the elective (in writing).
5. Description of project or studies to be undertaken to be submitted to the International Health Exchange Program.
6. Obtain and complete application form (include C.V.) and forward to address given below.
7. Candidate to arrange immunizations, travel formalities, trip itinerary, insurances and arrange for accommodation.
8. Briefing mechanism will be provided where feasible.
9. Required within 60 days of the return to Canada from the elective is the following:
 - a) A written detailed report of the training experience;
 - b) a report by the preceptor in the country of study;
 - c) a complete financial report with receipts.

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INTERNATIONAL DEVELOPMENT RESEARCH CENTRE

CENTRE DE RECHERCHES POUR LE DÉVELOPPEMENT INTERNATIONAL

MEMORANDUM/NOTE DE SERVICE

4573.3
8536-00010
Paper → Red Lovers
4.4.8

TO/A: Gerry Bourrier

DATE: 24 November 1986

FROM/DE: Chris Smart

SUBJECT/OBJET: **YOUNG CANADIAN RESEARCH AWARDS: A REVIEW**
=====

With this memo I am reporting to you on the results of the survey we have conducted in the division of the Young Canadian Research Awards (YCRA).

FAD undertook this survey to fulfill a commitment made in the most recent project summary for the project. The Division believed that after five years it was time to evaluate this program of awards. Perhaps an evaluation is too strong a description for what we set out to do. A review of the YCRA is a more appropriate description. An evaluation would have required a systematic follow up of a sample of award holders to see, at closer quarters, just what the impact of the YCRA had been on careers in particular and/or on the awardees' attitudes toward international affairs in general. The relatively recent nature of the program and the fact that even the earliest young Canadian researchers (YCRs) have not settled into their careers discouraged this sort of indepth approach. We have been able to canvas the sample of YCRs to date to draw, what I think, are encouraging conclusions and some interesting indicators of how we might better use the resources available for the program.

When we first set out to do the review we intended to base it on an analysis of a questionnaire administered by Patrick Doherty. With her arrival in the division, Françoise Coupal suggested that she prepare a Brief based on a systematic look at the award to see what she could learn of its history and operation from an examination of the files and of the data in FADMIS. When encouraging Françoise to go ahead with her study, I was aware that there would be considerable overlap between the two activities. I encouraged her to proceed because it was a very good way for Françoise to get a grip on the YCRA before the rush of the new competition hit her and since a second line of enquiry would help us to see whether observations common to both studies would support or contradict each other.

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Attached to this memo are the results of these two examinations of the YCRA. Rather than indulge in a lengthy report I have chosen to summarize the data retrieved from the survey under several key questions and to draw observations which follow from the numbers. Françoise's Brief, included as she wrote it, stands as a tidy summary of her findings.

With this memo I draw the main conclusions from the combined documents and suggest an option the Division might consider for the future of the YRA.

Conclusions

The principle question we directed at the YCRA was the extent to which it encourages young Canadians to direct their careers or at least an aspect of their careers, towards international development and, ideally, towards development related research.

If the sample is at all representative of the YCRs as a whole, we can be encouraged by the fact that the majority (61.5%) maintain some involvement with international development. We cannot be too self-congratulatory, however, because we must keep in mind that the majority of the YCRs (we do not know exactly how many) are still in school and have not passed the crucial test of a successful passage from a scholarly interest to a bona fide career involvement in international development. The survey shows that only 23.1% of the respondents claim to be employed. Keeping in mind the above caution, it is also encouraging to see that the majority (61.5%) say they are involved in research. Again we have no way of knowing whether this is a full-fledged career involvement or a graduate student's obligatory interest research.

On one or two occasions in the past a concern was expressed that the YCRA was likely to appeal to students who had come originally from the LDCs; who, as new Canadian citizens, might use the program to visit their homelands. The survey has laid this concern to rest. Of those respondents who chose to answer a question about their place of birth (21 of 26 responded) 80.8% were born in Canada.

The second principle test we wished to apply to the YCRA was the extent to which it could claim to influence young Canadians to consider, if they had not given it previous consideration, becoming interested in international development.

If we were looking for the chance to congratulate ourselves on having a program that brought the previously unaware into first time contact with development, the survey leaves us hanging. Fifty percent of the respondents indicated that the YCRA was their first exposure to international development. In other words it does as often as it doesn't - a classic split decision.

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The possibility that the YCRA might be particularly attractive to young Canadians who had had a previous development experience with the NGOs does not appear to be the case.

Much more encouraging is the degree to which the YCRs believe that the program had an impact on their choice of career. Although only 15.4% were able to claim that the YCRA had provided an immediate access to their chosen career (a figure that again may reflect the fact that many of the YCRs are still studying), 65.4% said that the YCRA had influenced their career choice.

With these two questions answered we could conclude this report since they were the questions we were primarily interested in answering. However, data on the educational qualifications of the YCRs, on how they learn about the awards and what methods they use to find out about the awards along with data presented in Françoise's brief throw an interesting light on an aspect of the award that has puzzled us for some time.

From the start the YCRA competition has been under subscribed. The full annual complement of awards has never been made. Staff believed that the reason for this rested with ineffective advertising. The practice was to send YCRA kits to the deans of graduate studies in each of the universities asking them to bring the competition to the attention of their graduate students and to distribute the material as the requests came in. Two years ago FAD made an extra effort to supplement the general distribution to the deans by sending kits to the heads of departments and schools in the fields that are represented by the Centre's areas of concentration (agriculture, health, social sciences, etc). There was no appreciable improvement in the number or quality of the returns. This year we have advertised the YCRA in University Affairs and it remains to be seen if there will be an increased demand.

The survey results lead me to believe that no amount of advertising will increase either the quantity or quality of the applicants. The present approach is based on the premise that advertising the YCRA will attract a number of graduates into international development and that the more people we reach with news of the award, the more applications we will receive. **The survey has shown that we do not attract people into development who have not previously begun to think in this direction.** In other words the YCRA is only of interest to those graduates who have already thought about the possibility of work in international development and who are looking for ways and means to support the extraordinary costs involved, we are in fact reaching for a very small and self selected group. I do not know in absolute or relative terms how large or small this group is but if one thinks of the filters it must pass through it cannot

be very large. Of the total population of graduate students we filter first for Canadians; next we filter for the fields IDRC wishes to support (agriculture, health, selected social sciences, etc.); then we filter for the PhD (MSc for Health); and, finally we filter for those who have thought sufficiently about the thesis topic to be able to designate a country and demonstrate a connection with an LDC institution. The YCRA review shows that not many candidates come through these filters.

The data presented in Françoise's brief supports the above conclusion. Of the total number of awards, 49% have been made outside the competition. This indicates to me that FAD has intuitively set aside the restraints of the competition (i.e. recognized the rather select and miniscule nature of the sample it reaches) and has funded opportunities which have presented themselves and which, within the spirit of the YCRA program, have allowed the Centre to encourage involvement in development by young Canadians. (This has been primarily in the health fields where the elective has been an opportunity to expose students and the challenges of development for their profession. More recently we have found the TUNS elective in architecture to present the same opportunity. The Gemini award which is a special category of the YCRA for journalists has been a tacit recognition of this same circumstance. One area where we have not found an opportunity to overcome the constraints of the competition is in the field of Administration.)

As a result of FAD's study of the YCRA **my major conclusion is that in its present form the program is overfunded.** FAD implied this in the most recent project summary where it asked the Board's approval to use funds left after the competition is satisfied to continue to support the "odd" but interesting opportunities we have supported in the past.

That portion of the YCRA which is reserved for Canadians who have been involved in COOP projects is also under subscribed.

I will complete my listing of the conclusions and return to this point to examine what it might indicate for the future of this program.

Several secondary questions which tested the distribution of the YCRs by field and region of interest were common to both the Survey and the Brief. The findings of both reinforce each other.

LARO is the preferred region for the location of YCRA field work and MERO is the least visited of the six Centre regions. The YCRs choice of country is most likely to be influenced by a university connection: not a surprising conclusion given that the student is most likely to have research interests shaped by his or her academic milieu.

The evidence is sparse and inconclusive but it seems that those students who can claim they have sustained an interest in international development after the YCRA experience appear likely to maintain an interest in the region they were introduced to by the YCRA.

Both the Survey and the Brief indicate that the majority of YCRs come from the Health Sciences. This bias has been explained above as a consequence of the awards made to medical students. The Social sciences are favoured in the set of awards granted through competition.

One glaring observation is the complete absence of awards to young professionals in administration and management. A special effort to rethink the sort of person we have in mind here and to target the information to the institutions or organizations which might have candidates interested in this field must be made. This is a particularly ironic turn of events when we think of the new concern for expert management in all aspects of the project, program and institutional management.

The general perception of the YCRs is that they benefit from the award: 92.3% considered the effort put into the award as a personal accomplishment; 76.1% it as an academic accomplishment; 88.8% considered the YCRA highly suited to their research and educational needs.

Few of the respondents were able to refer us to programs similar to the YCRA and the few agencies and programs that were mentioned do not, to our knowledge, offer what the respondents claimed they do. The YCRA is a unique awards program in Canada.

The YCRs believe the administrative aspects of the awards to be acceptable. There were very few complaints and these criticized features of the YCRA that are an integral part of the training experience: appeals for increased Centre assistance with travel and field logistics are aspects of the experience that would be lost if the Centre were to become involved.

In my opinion this is as much as we can draw from the review. Any more profound evaluation must await the accumulation of a larger pool of YCRs who have had time to settle into their careers.

Implications for the future of the YCRA

The most important conclusion of this review is the fact that the YCRA may be over-funded and that resources can be reallocated to other though related activities without denying the ideal YCRA candidate the opportunities provided by the program. Earlier in this memo I discussed at length the evidence which supports this view because I think it has a bearing on what FAD might do to respond to the suggestion made at the October meeting of the Board of Governors that the Centre provide support for the field work of LDC graduate students (visa students) studying in Canada.

When this form of support was discussed in the past, I know that it was the division's intention that eventually the funds available to the YCRA and the visa students would be equal. Both were to be funded at a level of \$ 450 000.

This principle might be applied in reverse: rather than wait for new money for the visa students, FAD could split the existing YCRA funds between the two groups. Further FAD would not present these programs as two separate initiatives but as a single program of awards that might be named: **YOUNG RESEARCHERS IN CANADA AWARDS.**

I propose this option for discussion within the Division.

A REVIEW OF
THE YOUNG CANADIAN RESEARCHERS AWARD

The Young Canadian Research Awards (YCRA) has been funded since 1982. The objective of this award is: "To facilitate the involvement of younger Canadians in research on Third World issues".

Those responsible for managing the award have felt for some time that there are aspects of the award that are not well understood. A closer look at the award at this time would indicate where adjustments to the concept and management of the YCRA might be made.

The review has two parts:

Part 1

A Survey based on an analysis of data collected through a questionnaire sent to past award holders (referred to as young Canadian researchers (YCRs)); and,

Part 2

A Brief based on statistics available from FADMIS and YCRA files.

APPENDIX L

Sample of Student Report:
International Health Exchange Program

SURVEY REPORT

Study of Health in Taiwan

Research Conducted During a
Two Month Nursing Elective

HCH

Hualien, Taiwan

Submitted in partial fulfillment of the requirements for
The International Health Exchange Program

Submitted to: The Canadian Public Health
Association

Date: April 16, 1986

Name: Naomi Penner

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Introduction

"To seek, to know, and to understand designated cultures - with their values, beliefs, and daily living patterns - is probably one of the greatest challenges for students of human behavior" (Leninger, 1978, p. 7). Not only does this hold true for one engaged in purely academic anthropological study, but also for other specially trained workers finding themselves working and living in a foreign country such as nurses. They are challenged to discover the meaning of health and unique health concerns in a society often vastly different from their own in order to become effective and informed caregivers. This paper presents a rather general discussion of some of the current health and social concerns in Taiwan as researched by a fourth year University of Manitoba nursing student while on a two month overseas elective experience which included the opportunity for both clinical and public health exposure. The Wennonite Christian Hospital (WCH) in Hualien, Taiwan was the sponsoring institution.

Limitations of Study and Information Sources

The research is largely descriptive. Due to language barriers and limited access to major centers or government institutions having health information other means of obtaining relevant information were used. These included the following:

- 1) key informants i.e. local citizens or professionals as well as foreign service workers;
- 2) the hospital library which contained a few English journal titles;
- 3) private book collections;
- 4) local media;
- 5) government statistics and reports obtained through hospital administrator and
- 6) participant observation in clinical and community settings.

It became evident during the course of study that in two months one could only hope to "scratch the surface" in attempting to recognize and understand the numerous cultural differences regarding values, beliefs and attitudes towards health held to by the local people. The writer attempted to maintain an objective, unbiased view-point; however, ethnocentrism may surface occasionally.

Part I
Taiwan Health: An Overview

An overview of Taiwan Health system reveals that the government is indeed concerned with the goal of attaining "health for all by the year 2000" as proposed by the Alma Ata Charter in 1978. Numerous impressive strides in health care have already been made. For example, deadly epidemic diseases such as smallpox, cholera and plague which were so prevalent at the end of World War II are no longer a concern due to massive public health projects to eradicate them. Malaria too, which is still a serious problem in many subtropical and tropical countries, has virtually been wiped out (Island of the healthy, no date, pp. 3-4). In fact, persons travelling to Taiwan from Canada are not required to receive any special immunizations prior to coming. Only typhoid shots are recommended due to the problem of drinking water quality i.e. though chemically treated in most areas it still must be boiled before drinking due to pipe corrosion and potential contamination.

Of all public health measures, the establishment of primary health care networks has a great implication on the development of public health programs in the Taiwan Area. In 1945, there were only 15 health stations in the whole island. This number had increased to 362 in 1966, and by 1975, every township had one health station. (National Health Administration, 1983, p. 11) See Appendix A for distribution of health stations.

The government health organization is one such that medical services are offered through various departments and ministries i.e. Defense, Economy, Education and Health. This has led to much confusion, ineffective communication and sometimes duplication of services. Thus, one of the goals of the National Health Department is to "coordinate all medical institutions in each medical region to have a good mutual functional cooperation and manpower assistance and exchange" (Li, 1984, p. 5). Please refer to Appendix B for a simplified diagram of Taiwan health system as explained by Mr. Gao, MOH hospital administrator.

** Health agencies in the Taiwan Area are organized at four levels: national (the various ministries), city and province (Taiwan provincial, Taipei and Kaohsiung city health departments), county and city (health bureaus), and the township (health stations)

** Brackets are mine.

. . . .In the remote and aboriginal areas, 521 health rooms scatter round. (National Health and Administration, 1983, p. 7)

While participating in public health the student had the opportunity to visit some of these health rooms in the tribal villages. Some observations made are the following:

- 1) each village may not have its own health room. One room may have to service several villages which are geographically distant (> 10 miles);
- 2) usually only one government public health nurse services each room and may reside away from the village community;
- 3) only a few of the government workers have aboriginal roots themselves and are able to communicate adequately in the local tribal dialect;
- 4) public health education, though mandated by the government, is often not viewed as a priority by the workers.

In reference to #5 it is reported by NCH public health staff that the government is beginning to realize the importance of staffing village health rooms with local people and thus is making greater efforts to train them. NCH has been very successful in hiring some of the educated tribal mountain people i.e. from Toroko and Aris tribes, and is using them effectively especially in public health.

Both government and individuals are placing a higher priority on health as reflected in increasing medical expenses per family and government health expenditures (See graph in Appendix C). However, the amounts spent are still in sharp contrast to Canada. In 1971 the Canadian government spent \$506.11 per capita annually (Lalonde, 1974, p. 27) whereas Taiwan, almost twelve years later still only spends the equivalent of \$16.25 U.S. per capita annually (about \$12.00 Canadian). (National Health Administration, 1983, p. 2). This doesn't take into account the cost of living differences though.

one of
Possibly the most significant indicator of level of health care in any country has to do with its accessibility in terms of the direct cost to consumers. For the most part this is no longer an issue in Canada as we have comprehensive insurance coverage. However, in Taiwan this is still a major factor in determining who receives progressive health services. The government of Taiwan has projected the year 2000 as their goal for providing universal comprehensive insurance coverage. Already a number of insurance schemes are in place i.e. Armed Forces, civil servants, teachers,

laborers and, most recently, farmers. Please refer to news article in Appendix H - Health Insurance for Everyone).

At present less than half the patients received by MCH in Hualien are insured. Being a mission hospital it seldom, if ever, turns away a needy patient who is unable to pay. However, it is not uncommon for larger government centers to refuse service to an uninsured individual who cannot afford costly treatment, regardless of the emergency. For example, a severely burned patient was transported from MCH to a major hospital in Taipei only to be refused treatment because of her inability to pay.

A summary of further significant statistical data yields the following:

- 1) Death rate decreased 13.4% from 1947 - 1984 (see Appendix D for chart on population trends):
- 2) 1983 birth rate 20.55 while death rate was 4.87 (per thousand).
- 3) Infant mortality rate in 1974 was 14.08 (per thousand). This is significantly lower than the Canadian infant mortality rate of 17.5 recorded in 1971, just three years earlier (Lalonde, 1974, p. 19). (One wonders whether this lower rate reflects the use of nurse midwives more extensively in Taiwan).
- 4) Only about 3% of G.N.P. was committed to social affairs, relief and health expenditures in 1983-1984. (I am not quite sure of this statistic as I tabulated it myself using two different sources and tables). In comparison, health expenditures in Canada during 1971 were already 7.1% of G.N.P. (Lalonde, 1974, p.27).
- 5) Only 8.04 physicians and herb doctors/10,000 population in service by the end of 1984. In Canada there were 17.2 doctors per 10,000.
- 6) Taiwan registered nurses and midwives equals 11.93/10,000 while Canadian statistics reflect a much higher ratio of 60/10,000.
- 7) Number of hospital beds in Taiwan by the end of 1983 were 30.9/10,000 which contrasts to Canadian statistics of 57.3 per 10,000 (Lalonde, 1974, p. 27).

"The ultimate goal of the health department (Taiwan) is to have 40 hospital beds and 10 MDs per 10,000 people . . ." (Li, 1984, p. 5).

*Please note that all statistics quoted in this paper are taken directly from official sources or articles that quoted government statistics, unless otherwise indicated.

Part II
Survey of
Factors Influencing Health and Welfare

Rapid Growth

A concern of major dimensions at present, in terms of social and economic welfare for Taiwanese, has to do with population growth on such a small island. It is regarded as one of the most densely populated regions of the world. 19,012,512 people live on an island not much larger than Vancouver Island (14,000 square miles). Only about 50% of that is habitable i.e. the coast line due to a high mountain range cutting through the center. Population density at the end of 1983 was 520.4 per square kilometer. The average number of persons in a family was 4.48 in 1984 (data obtained from official government sources).

Island-wide family planning began in 1964 and has been so far fairly successful in reducing natural increase by a few percentage points every year. Nevertheless, there is still much concern expressed by government and media that overpopulation will occur if birth control practices are not sufficiently utilized (See article in Appendix H - Checking Population Growth). The implications of this are obvious as relates to exhausting resources.

Longevity and Age Distribution

Not only is increasing population a concern but also longevity. As a consequence of improving health care and other factors people are living longer. Presently the average life span for women is 75.9 and men 66.3 years. (Refer to news article in Appendix H - Life Span to Increase by 2000) This is less than the Canadian averages by about four years for both males and females. 1984 statistics indicate that Taiwan's population is composed of a high percentage of young people i.e. 50% under the age of 25. Only 4.61% of total population are greater than 65 years (Please see Appendix D - Age Composition Chart).

Although currently there is a small percentage of the population dependent at some point in the future (40 - 50 years) Taiwan may experience a crisis point because of the overwhelming number of elderly and few offspring to adequately support. One did not find any evidence to suggest that there is such a thing as old age security or pension programs. The other problem of having so many young people is that the competition for jobs is fierce and apt to cause much stress. The high incidence of heart disease, hypertension and other stress-related illnesses (they are listed in the top ten

causes of death - Please refer to Appendix E for national statistics and comparative MCH data) may be indicative of this type of trend.

Developmental Progress - Industrial

One is quite impressed when considering the extent of economic and industrial growth that has occurred in Taiwan since World War II. Taiwan was primarily agriculturally based during Japanese rule. When Chinese Nationalists took control post-war, they determined to make it a commercialized, industrial state based on the "Three Principles of the People: . . . Nationalism, Democracy and Social Well-being" - a mixture of both Western and Eastern (Confucian) ideals (The Republic of China, 1983, p. 7).

Today at least 43% of the population live in one of the principle towns i.e. population more than 180,000. The three leading industries in terms of numbers of people employed are:

- 1) Manufacturing;
- 2) Agriculture, forestry and fishing and
- 3) Commerce. (Far East and Australia, 1984, p. 313)

Although no official national health philosophy comparable to our Canadian Health Field Concept was identified in the review of available literature, it seems plain that social welfare policies, proposed national health insurance scheme and the establishment of an island-wide medical network indicate this area has not really been neglected in Taiwan's scramble to become recognized as an industrial world competitor. After all, developmental progress can also be partially measured by the extent of comprehensive and efficient health programs in existence i.e. prevention of childhood diseases by giving free immunizations.

On most world maps Taiwan is still only recognized as a developing nation; however, Taiwan government sources indicate otherwise:

When the Ten Projects plan was announced, its overall goal was to raise the nation from the status of a developing country to a place among the developed countries. That goal has been achieved . . . a fully developed nation has been created from a completely agricultural society in thirty-five years.

(The Republic of China, 1983, p. 15)

An article published in China News Daily however, suggests that this goal has not yet been reached but will by the year 2000 based on economic standards and per capita income (Please refer to news article in Appendix H)

- Forecast of long-term development). Another article published in the China Post commented that economically, Taiwan is currently displaying more growth than average growth of developed nations despite the low world trade growth (See Appendix H - Economic standing); however, this is not occurring without possibly serious complications in the industrial sector i.e. the highest unemployment rate recorded in 10 years (please see article in Appendix H - Rising Unemployment). Again, stress-related illnesses may reflect this trend as well as poor living conditions and crowding observed in many areas of the major cities such as Taipei.

Developmental Progress - Social

Stoez (1977) maintains that development is not urbanization, industrialization, modernization or Westernization but is "the process by which persons and societies come to realize the full potential of human life in a context of social justice" (p. 3). In this sense Taiwan is still involved in the process of development and, for that matter, so are most other nations. Taiwan has demonstrated significant progress though according to this definition. "In keeping with the Third Principle, social order, relative equalization of social wealth has been achieved. The gap between the top 20 percent and the lowest 20 percent of incomes has been narrowed from 15 to 1 in the 1950's to about 4 to 1 in 1979" (Far East and Australia, 1984-85, p. 285). Several news articles in Appendix H demonstrate that the government is indeed concerned about the social condition of the people and is taking concrete measures to ensure that this progress continues (please see articles - Keep prices stable, Elevating the quality of life, Make better use of human resources).

Role Changes

Chinese women are enjoying new found independence and career opportunities. They have had to undergo stressful role changes to keep up with the rising tide of an industrial, mechanistic and computer-age society. But along with this more demanding lifestyle comes an increase in societal status and political influence (Please refer to news articles in Appendix H - Women's Day, Women's roles undergoing change). Also, while women are being taxed more than ever by the demands of a complex society, they are becoming more health, nutrition and weight conscious - again paralleling similar trends in Canada and the United States (see article in Appendix H

- Survey shows women enjoy better lives).

Unfortunately these role changes are not occurring without some significant setbacks to Taiwan society. For example, another analysis of women's changing roles and status in Taiwanese modern culture correlates the rise of juvenile delinquency to the shaken family system and emphasizes that the woman's role in the home must remain a priority in order to negate this effect (please refer to article in Appendix H - Women's role and status in society). Recognizing some of these difficulties, the Executive Yuan has even developed a plan to "enhance social harmony through the promotion of home discipline" stemming from a Confucian political orientation (see news article in Appendix H - Promote home discipline).

Modern urban living is forcing many families to disrupt traditional extended family unit structure in order to cope with societal changes. In efforts to stabilize the family, the government has suggested building extended family units - thereby assuring young children of adequate care while the mother is working as well as decreasing the trend of elderly abandonment (refer to news article in Appendix H - Public housing planned for extended families).

The elderly and young children are beginning to suffer as a result of an increasingly complex and impersonal society. It is not uncommon, for example, that young children are left with the aging grandparents in a distant city for years at a time so that their parents may work. This is an obvious stress for both the children and elderly. Further, as families become taken up with the pursuit of wealth and careers they may abandon the grandparents to their own resources contrary to long-practiced Chinese traditional values. During the course of study a few community centers for the aged were visited i.e. Veterans' Center as well as a communal for single men without family support. It seems apparent that in the future nursing homes may be necessitated because of societies changing priorities and attitudes. On the positive side it was observed that family members often took dying aged parents home from the hospital in order to promote a comfortable death in familiar surroundings. This practice is in keeping with traditional care and respect of family members.

Lifestyle and Attitudes

Taiwanese teenagers appear intent on adopting American trends as evidenced by their clothing styles, music and habits. It is common to

see both young men and women smoking. Schools strictly prohibit smoking; however, other public policies remain lax i.e. smoking in buses and restaurants. A recent national survey showed that teenage smokers have increased by more than 20%. The significance of these statistics is obvious in light of long term health risks such as heart disease and hypertension, two chronic conditions which are on the rise in Taiwan (please refer to news item in Appendix H - Prof. urges warning young of hazards in smoking). Limited information was available regarding school health curriculum but from what was gathered it does not seem that there is a specific preventive health focus in the school system. As well, subjects taught in health class are often left up to the discretion or bias of individual teachers. An interview with a school principal about smoking education yielded this comment "The parents are the ones who need to be taught about smoking not the children". A literal translation of a warning appearing on a cigarette package stated "Because of your health don't smoke too much". It was not determined who was the author of this warning. The public health consultant at MCH, Ms. E. Willms, commented that the government stands to profit much from tobacco and alcohol sales; therefore, they do not actively discourage these habits.

Taiwanese driving habits leave much to be desired (this is an understatement!). Accidents are the third leading cause of death in Taiwan as well as at MCH (See Appendix E). Traffic accidents account for a large number of these fatalities. The biggest contributing factor seems to be the lack of enforced traffic laws and reckless driving attitudes. Persons disregard speed limits, no passing lines and personal safety such as wearing helmets or seatbelts. Traffic lights have been in existence for over ten years in most places; however, there are still a great number of uncontrolled major intersections. The rule of the road is "Right makes Right". Most people drive motorbike which also serves as the family vehicle. A frequent sight is an entire family (four or five persons including young children and babies) all piled onto one motorcycle. There is no rule to how many vehicles (motorcycles and cars) that will fit into one lane width at a time. Horn honking is probably the single most preventive action taken by drivers. Pedestrians do not enjoy the privilege of right of way as they do in Canada even though white lines may indicate a crossing zone. It basically amounts to "survival of the

one with the best reflexes"! (In fact unofficial sources have related that because the driver of the vehicle is financially responsible for anyone he hits it is far better to back up and drive over the person again to make sure he's dead and free oneself from any longterm obligations.)

Government efforts aimed at reducing road hazards were observed to be the following:

- 1) posted speed limits i.e. 40km/hr in towns, 60km/hr on highways;
- 2) center lines indicating passing and no passing zones (orange);
- 3) paved shoulders to accomodate motorcycle traffic;
- 4) mirrors at sharp corners ;
- 5) cement guard rails around hazardous corners;
- 6) traffic lights and other warning signs;
- 7) white lines for pedestrian zones;
- 8) yellow and black stripes around poles lining the highways and streets and
- 9) well-marked rail crossings and speed bumps prior to crossing.

In general there just does^{not} seem to be the raised health consciousness that we see in the West. Persons may be alerted to health risks of a certain habit i.e. chewing beetle nuts, or situation i.e. no hard hats on construction site, but seem to have a careless attitude. At one cement factory visited a few cases of lung fibrosis had appeared yet many of the workers still refused to wear masks and the company did not enforce this safety measure.

A consensus among health workers at MCH was that there is a great need for effective public health education and follow-up. A wide variety of pamphlets are available through public health stations with information about all aspects of health i.e. breast self exams; however, more direct teaching and demonstration sessions are required to improve concern for health and compliance. MCH has been particularly progressive in this area as compared to government workers. One of the problems encountered in arranging teaching time with the people is that work takes up most of the day and people retire early in the evening and like to be undisturbed. MCH has worked around this by frequently sending out public health staff on Sundays to teach people who have attended church (at the request of the people). At the Tuli Mountain clinic (an MCH outpost) persons visiting for blood pressure check-ups were asked to remain for a teaching session

*Please see accompanying folder for examples of available pamphlets.

regarding hypertension and diet control. A sizeable group of about 70 villagers remained after clinic visits to hear a one hour presentation and participate in a question review period after. Soap bars were awarded those who contributed correct answers. These are a few examples of some of the public health education efforts by MCH and probably do not reflect those of the larger health community.

An area of particular concern that surfaced frequently was that of medication control. A study conducted in the Phillipines on the misuse of drugs points to a very valid expressed concern among physicians and public health workers at MCH.^{in Taiwan} Economic factors, noncompliance, ignorance and limiting government insurance schemes inhibit the physician's effectual prescribing of medications, especially antibiotics. Tan (1985) describes the resulting hazards commonly observed:

Antibiotics . . . are perceived as cure-alls . . . low income patients can afford to purchase and consume, only two or three capsules with each illness, whether or not the use of the antibiotic was appropriate . . . increase the risk of super infections as well as the emergence of antibiotic resistance. p. 11

Such consequences are a very real concern and source of frustration for hospital and public health staff. As well drug laws and control measures, though they exist in Taiwan, are frequently blatantly ignored by pharmacists and patients have the opportunity to self-medicate or acquire abusive drug habits. One method that MCH has used to reduce self-medication is not to print the drug name on the package given to the patient at the hospital. In this way they feel they can maintain closer observation on the patient's medication regime as he will be unable to order his own medication from a private pharmacy. Such strategies go against the ideals of patient education; however, at present are the most effective means of preventing more serious consequences.

Cultural and Religious Traditions

A survey of the factors affecting health and welfare in Taiwan would not be complete without discussing this very important topic. Cultural and religious traditions definitely have an important role to play in health issues. The principle religions in Taiwan are Buddhist, Taoist and

aboriginal folk religions. A common observation made during public health visits was the god shelf. This was a shelf on which believers placed their idols and objects of worship and burned incense. An example of the important role gods play is the following. A man contracted a severe skin disease of unknown etiology. He knew he would have to go to a hospital for treatment but did not know which one so he looked at the direction his god was facing and went to a hospital in that direction. However, once admitted to that particular hospital he didn't recover so again he observed which way his god was facing (he brought it to the hospital with him) and went to a different hospital in the new direction where he received more adequate care (MCH). (This time he left the god at home!)

Kemec (1980) makes the comment: "People living in traditional societies usually make no distinction between preventive and curative medicine" (p. 8). In Taiwan Chinese traditional medicine i.e. herbal medicine, acupuncture plays an important role. In Hualien city alone there are about 150 Chinese medicine stores. There are no drug standards set for herbal medicine but they are not usually very potent. To many people a really good doctor is one who can tell at a glance or just by feeling the pulse what is wrong with the patient. Thus, patients often exhibit impatience or lack of confidence with the physicians who attempt to do a more complete physical before diagnosing condition. A problem frequently encountered at MCH was that patients would arrive just to receive a "shot" - the magic cure-all regardless of the nature of the illness. Health education attempts by staff often proved ineffectual and doctors would resort to placebos to placate the patient and avoid the risk of him visiting another doctor who might administer unnecessary medication. Apparently it is quite common for registered nurses or doctors to rent out their licences to pseudo health-practitioners; therefore, there is a fair amount of "quackery" going on.

Another example to demonstrate the effects of beliefs on health is the following as explained by MCH hospital chaplain, Pastor Lin. There is a certain taoist philosophy that states man is in harmony with the Universe and is composed of five elements. A fever is viewed as being fire in the body (one of these elements) which can only be quenched with water (another element). This serves as an example to show where Chinese medicine is comparable with Western i.e. drinking fluids for fever.

Briefly, some other commonly held beliefs are the following. Illness may exist because a god is disturbed with you. The number four is rarely seen in hospitals i.e. no fourth floor, as it sounds very similar to the Chinese word for death. Certain days are assigned special superstitious significance and as a result patients will often not have surgery or see the doctor if that day conflicts with their belief. Patients are often taken home to die dressed in their own clothes so that they will be in familiar surroundings and the spirits won't get confused.

A traditional form of exercise, Tai Chi, is still widely practiced. Early in the morning people gather in parking lots, school fields and other open spaces to practice their trance-like movements. "Devotees of tai chi are quick to testify that it has helped soothe their nerves, improve their blood circulation and reinvigorate their skin. Some claim tai chi can also cure rheumatism, high blood pressure and insomnia" (Please refer to news article in Appendix H - Chinese turn to tai chi for exercise).

Cultural food practice is yet another factor influencing health. Chinese people eat a very wide variety of foods i.e. all forms of sea life, flowers, vegetables, meats, cereals, fruits. A lecture delivered by an RHN dietician, Miss Chang, provided the following information. Contracting Hepatitis B often results from eating with contaminated chopsticks as well as eating out of communal dishes. The safety of foods is in question because of overusing food additives. There is a national food and drug bureau but its role is unclear. There is an increased salt consumption which potentiates hypertension. Milk consumption is low partially due to lactose intolerance especially in the aged. A survey of food intake in 1980-1981 also showed insufficiencies of Vit. B₂, A, E and Calcium leading to angular stomatitis. Many children go to school without breakfast. 39% of school boys in the city are obese because there is too little space. Anorexia is becoming a growing problem among teenage girls and college women. CVA and heart disease and arteriosclerosis are related to high consumption of saturated fats. Gastric cancer is linked with ingestion of salted fish. Hepatoma is often the result of α -toxin in the mold on rice, peanuts and corn. The chewing of beetle nuts is linked to oral cancer and deteriorates the teeth. These are a few examples to demonstrate some of the health concerns linked to Chinese food practices.

i.e. lack of
exercise
areas

Environment

"A conference was opened recently in Taiwan to review the work the government has been doing to protect the environment" (see news article in Appendix H - Stepping up environmental protection). Pollution due to heavy industry has become a growing health risk factor.

Taiwan's industrial structure has altered considerably since 1960. In that year light industry made up 60% of industries contribution to the net national product and the remainder (comprising chemicals, machine tools, metals, construction, etc. accounted for 40%. By 1977 light industry had fallen to 48%. (Far East and Australia, 1983, p. 286)

As one might realize, environmental policies have a growing importance in keeping up with these industrial changes as well as large population. Detailed regular statistics are recorded by the government regarding pollution, sanitation, sewage and other environmental factors which influence health. Statistics showing yearly variation of air pollution in Taiwan area demonstrate that suspended particulates increased in some cities while in others there was a significant decrease for the period of 1969-1975. (This may not reflect government action to improve the air in these cities but rather changes to technology-intensive industries) The highest amounts occurred in Kaohsiung County at $305.57 \mu\text{g}/\text{nm}^3$ while Taipei, the capital, recorded the lowest, $125.55 \mu\text{g}/\text{nm}^3$. Hualien County exhibited a middle figure of $227.31 \mu\text{g}/\text{nm}^3$. Dust fall showed a decrease in all cities and counties except for Taipei which had a dump of $16.68 \text{ T}/\text{km}^2/\text{mo}$. - at least twice as much as any other locality (Statistics quoted are from General Health Statistics, 1975, Table 61, pp. 296-297).

Garbage is collected regularly in the villages and larger centers i.e. every day in Hualien city. Hualien dumping ground was visited by the student. It was approximately 1 km^2 located well away from the populated areas, next to the shoreline. Garbage was burned and the ashes pushed over the cliff. At this particular site a herd of cows was seen "grazing" in the garbage piles. One wonders as to the health safety of this as these animals are frequently handled by their owners. A concern expressed by local citizens was that garbage collectors failed to pick up any garbage that had fallen out of ripped bags thus making an unsightly mess and inviting rats. Most trash is put in thin bags not garbage

cans as metal cans are too heavy and rust quickly in the humid climate and plastic trash cans get blown away by frequent heavy winds. Very often trash collects in the binjas (narrow concrete gutters along streets and sideroads which also sometimes is a breeding ground for mosquitoes). As part of their ongoing development work the government as well as private organizations such as MCH have instructed some village communities in building compost piles; however, an observation in some mountain villages was that the garbage was carelessly dumped along the riverbank instead of burying or burning it in constructed pits. Interestingly, much of the garbage consisted of junk food wrappers and cigarette packages giving some insight into the nutritional and health risk habits of the villagers.

In large cities and towns flush toilets are the most common method of sewage disposal. Sewage in rural and mountain villages is often disposed of in septic tanks and absorbed as fertilizer in the fields. Both flush toilets and three-pit latreens are used. One of the problems encountered when the government began introducing flush toilets, especially in the more isolated communities, was that children didn't know how to use them properly and would clog them with stones. This provides an example to show where foresight and prior instruction could have eliminated or minimized such complications. Children still often squat and defecate in the binjas and then run barefoot in them becoming very susceptible to hookworm infestation.

Drinking water continues to present problems both in quantity and quality and varies in these respects from one region to the other. All water must still be boiled to insure safety and prevent contamination by microorganisms. Although most water is chlorinated it remains unsafe due to pipe corrosion (please refer to news item in Appendix H - Make it available to all first). According to the information acquired none of the water (urban or rural) is fluoridated. An MCH dentist commented that instituting this measure, along with more public health education on oral hygiene, would greatly reduce the high incidence of cavities presently seen in young children. Other health care workers interviewed also suggested that the high number of kidney disease patients was partly due to the fact that Taiwanese people have a low water intake because it is too much bother to boil water. Others linked certain gastro-intestinal and esophageal problems to the constant ingestion of hot

liquids.

In mountain village communities (at the base of the mountains) the government has assisted in projects to pipe the water from mountain reservoirs but it is not always treated. Further, many people just don't want to take the time or effort to boil and consequently they run the risk of drinking water contaminated with parasite ova. In one Toroko village community a world vision health project, in cooperation with MCH, appeared successful in reducing the incidence of parasite infection (i.e. Ascaris, , Hookworm) through a medication program; however, a barrier to long-lasting success is that many people don't comply with the medication regime and continue to drink unboiled water or don't take the time to clean fruit and vegetables properly.

Summary of Factors Influencing Health and Welfare

It is hoped that this general survey of factors influencing health and welfare in Taiwan has brought to light some of the issues that face its citizens. Rapid growth, longevity, young population, industrial and social development, role changes, risk-taking habits, traditional practices and beliefs and environmental concerns all form a piece of this health mosaic. Throughout, one has attempted to show examples of government involvement in alleviating some of these growing concerns and suggest areas for change or improvement. But much of the responsibility still rests with the individual. Public health education seems to be the priority need at present. This was emphasized constantly by MCH staff who would like to see positive health changes in the community, especially among the aboriginal mountain people whose needs were frequently mentioned in the previous discussion as they are the target population for MCH. Government workers are beginning to pay more attention to this essential area; however, progress is slow and unchecked. Dr. Ho of the Shulien public health station close to Hualien (this station won an award in 1985 for being the best health station in Taiwan) related some of the current education programs in place in his region. A summary of this discussion is contained in Appendix F. An article appearing in Central News Daily indicates the government's overall direction in promoting national development in Taiwan's complex society (please refer to Appendix H - Guidelines on Social Development). Please refer to Appendix E, ii-4-a to c for top ten causes of death, top ten diseases of inpatients and outpatients.

Part III Paraquat Poisoning

The third part of this paper will discuss one specific health concern in greater depth. Suicide by paraquat poisoning was the chosen topic for the following reasons:

- 1) It reflects the previously discussed trend towards increasing societal stress in Taiwan (Please refer to Appendix H - Local study shows the relation of stress and illness);
- 2) It is a unique form of suicide not commonly seen in Canada;
- 3) A target population could be identified;
- 4) Sufficient information was available upon which to base this report.

In general, Taiwan suicide rates are ranked quite high in comparison to other world statistics..

Table 1. Suicide Rates by Nation, 1968 (per 100,000 population)

Ireland	2.4
Italy	5.3
Northern Ireland	6.6
England	9.4
U.S.A	10.7
Taiwan	13.2
Japan	14.4
Austria	22.8

(cited from Softness, 1980, p. 1)

Many reasons have been suggested for this trend but increasing societal stress, role changes, disrupted traditional family life, job and school competition and displacement account for most. Suicide and self-inflicted injuries rank #5 as causes of death at MOH. This is significantly greater than the national Taiwanese statistic of tenth rank (see Appendix E, ii-4-a).

In Hualien county paraquat poisoning is the most commonly employed suicidal technique. This report is based upon two existing separate studies of the problem, carried out by staff physicians and a visiting medical student at MOH during the period 1979-1980. Ongoing studies are presently being carried out to update the information but that new data was not available at the time of this writing.

The nursing student was first alerted to this problem upon arrival at MOH during Chinese New Year in February. At this time six new patients

were admitted for paraquat ingestion. The severity of the complications is explained by Smith cited in Vaziri, Ness, Fairshier, Smith and Rosen, 1979):

Paraquat (1,1'-dimethyl -4,4' -dipyridilium dichloride) is a widely used, effective herbicide that is marketed as an aerosol, granule, or 20% to 40% liquid concentrate. When accidentally or purposefully ingested by man, the concentrated liquid compound is a highly toxic, multisystem poison capable of causing injury to the lung, kidney, heart, CNS and other organs. (p. 172)

The two separate studies carried out at MCH in recent years yielded similar conclusions. Significant epidemiological findings from both studies are included in Appendix G. A summary of some of these follows. Chen, Chen, Hsu and Epp (1980) found a total of 67 patients admitted to MCH "with poisoning due to suicidal and accidental ingestion of paraquat" (p. 1). Softness (1980) examined all cases of poison ingestion in a 1 year period and identified persons at risk for accidental or suicidal poisoning. Married women in the 15-25 and 45-55 age brackets were at highest risk for suicide. Paraquat was found to be the most commonly used agent (See Figure 1 and 4 in Appendix G). The most commonly given reasons were marital quarrels (Fig. 5).

Chen, Chen, Hsu and Epp (1980) found that mountain people were seen twice as often as plains people for paraquat intoxication (p. 4). These authors also identified the mountain people by village and noted some striking contrasts between regions; however, research to demonstrate reasons for these differences has not been documented yet.

Accidental ingestion also accounted for 16% of clients in Softness' (1980) study. "The causes . . . were evenly divided among pure 'accident', contamination of food (near sprayed farmland) and ethanol intoxication. There were no significant sex differences" (pp. 3-4). As well Softness attempted to correlate incidence according to time of year. His findings show a general increase in the latter half of the year (Appendix G, Fig. 3). But hospital staff verified the student's observation that incidence peaks during holiday season similar to trends in Canada and U.S. during Christmas and New Years. A hospital worker reported that on average two new cases are admitted every week. Mortality rates are 25% for accidental ingestion

and 46% for suicide attempt (Appendix G, Fig. 6). It is clear then that paraquat poisoning, especially due to suicide attempts, is a very central concern at MCH. While involved in public health the student was exposed to a 'typical' case. A young married Toroko village woman attempted suicide using paraquat because she and her husband no longer got along. She claimed he abused her and had an alcohol problem. In this family the woman was more educated than the husband and this was viewed by the public health nurse as one of the sources of the marital disharmony. The woman left the bottle of paraquat on the table and her husband drank it when he was intoxicated. Both survived the ingestion but received serious esophageal burns.

As a group the mountain people clearly comprise the target population. In many ways they can be compared to the Canadian Indians i.e. they are a displaced people who don't quite fit into Taiwan society and are plagued with many health (i.e. alcoholism, tuberculosis) and social problems (i.e. poverty). They are the original inhabitants of Taiwan arriving over 300 years ago (origins unclear but Malayo-Polynesian roots have been suggested). Vicedom (1967) describes some historical and cultural background to the tribes:

For centuries the tribes had the island to themselves. They farmed the plains and hunted in the forests. . . . they gave way (in the 17th century) to the Chinese and retreated into the foothills. . . later . . . up into the high mountains. Even there they did not find peace. The Chinese . . . followed them; they took every piece of suitable land for rice-growing, and hunted animals and chopped down camphor trees in the forests . . . They reverted to head-hunting as a means of tribal defense. . . . Japan (during the 1895-1945 occupation) managed, through persuasion and the use of force to abolish head-hunting. . . . Since the coming of the Chinese and to a greater degree under Japanese rule, the tribes have been under constant pressure from circumstances beyond their control. They have been forced to adapt themselves to strange patterns, with no peace or time in which to make considered decisions. . . . It is the aim of the present government to assimilate the tribes into Chinese society. (pp. 4-11)

Please also refer to article in Appendix H - Aborigines losing traditional way of life.

At present the government has relocated most tribes at the foot of the mountains in small villages. Some still prefer to live in the mountains and only return for the weekend to the village where they attend Church (most tribes have been Christianized). In total the mountain people comprise not more than 5% of the entire population of Taiwan. Each tribe has a different language and this has presented some problems in terms of health education. However, the government is taking certain measures to resolve this problem i.e. 23 years ago the government established a scholarship for Aborigines to enter medical college (they are allowed a lower passing mark on the entrance exam) under the agreement that they would then go back to their own communities to serve for at least 10 years. Dr. Ho from the Shulien public health station (he was previously mentioned on p. 16) is one such graduate, being a member of the Toroko tribe. A similar program for nurses was set up in Taichung 10 years ago. These graduates must serve at least 5 years in their own communities. Dr. Ho felt that one of the present problems with the mountain people is that they are becoming too dependent on the government, expecting free care etc. Thus the government station has drawn up a "poor list" and only these people receive needed care free of charge.

In terms of paraquat poisoning Dr. Ho felt that the situation is getting better for an interesting reason "The people are learning to be more responsible since the government is taxing them." The student is not quite sure of the correlation. Perhaps people are not squandering their money on alcohol as readily which is a causative agent in family disruption as well as accidental ingestion of paraquat but this is only speculation.

Softness (1980) suggested some strategies aimed at the primary health care level:

- 1) "educate people about . . . special mistake - proof storage bottles" (p.9);
- 2) "educate people about paraquat" (p.9);
- 3) social service involvement in family or marriage counselling aimed at problem solving skills (p. 9).

At the time of Softness' (1980) study less than 50% of suicide attempt cases were receiving follow-up by the social service department at MOH. A review of MOH hospital statistics for the month of December showed that

the social services department was still relatively uninvolved in this area i.e. personal or behavior problems were #6 and family problems #7 in terms of priority (Please see Appendix I)

The larger community also has limited services available in this area. However, one organization does exist specifically for suicide prevention and psychological counselling. The student visited the Hualien Life Line Association in downtown Hualien. It is a phone-in crisis center started in the 1960's and run by Catholics. It is the only one of its kind in Hualien and possibly Taiwan. Most of the ideas for it were taken from similar crisis centers in the U.S. The staff are currently training workers for other cities in Taiwan. Advertising is achieved via radio and paper and written brochures are planned for the future. Staff used to go into the schools but no longer do so (reason wasn't clear). The center receives about 2 - 7 calls per day. The major reasons given for its existence are the following:

- 1) increase family and social problems due to complex society;
- 2) increasing numbers of elderly being abandoned by family and
- 3) competition for students to get into secondary schools.

If people who phone in don't want to come to the center for therapy then two staff members will arrange to meet them. This last feature of the services offered would be especially beneficial for the mountain people; however, once again language barriers would present a major problem. As well most paraquat poisonings are committed very impulsively so that there may be no time to reach out for help. The key prevention then remains in identifying families at risk before-hand and providing adequate counselling services before the problems become insurmountable and suicide is viewed as the only escape. MCH as a private Christian institution needs to be focusing a lot more attention to this great need area than at present. As well the government should be alerted to this problem so that legislation can be effected which helps prevent such tragedies i.e. better labelling and lid closures, ^{limit} accessibility.

Summary

Three major topics were addressed in this paper. In Part I an overview of Taiwan health was presented in an attempt to demonstrate, using statistical data, the current level of health care in the

country as well as individual and government commitment to attaining "Health for All by the year 2000". It was suggested that Taiwan is indeed on its way to reaching this goal. In Part II factors influencing health and welfare in Taiwan were surveyed and some major health risks and concerns indicated. The discussion drew out two important points:

- 1) the growing complexity of Taiwan society and
- 2) the need for a raised health consciousness through better public health education efforts.

Finally, in Part III a specific health problem was discussed in detail. Paraquat poisoning, especially by mountain people, was found to be a unique concern in the Hualien area and at MCH. The target group was deemed to have certain historical similarities to the Canadian Indians^{as} these partially account for the health and social problems evident. Prevention strategies, were suggested and current efforts to alleviate the problem critically analyzed.

Conclusion

As stated at the outset of this paper a person entering another culture to work as a health professional is faced with many challenges. Throughout this two month experience in Hualien, Taiwan, numerous challenges presented themselves. Language barriers sometimes made it difficult to access relevant information but this obstacle grew smaller as time passed and people and surroundings became more familiar. Overall, the student remained quite impressed by the level of health care and services presently existing in Taiwan considering the short time in which it has had to develop these. There is, of course, tremendous opportunity for improvement especially in the public health education sphere. At present many nurses still do not recognize themselves as educators believing this to be the physician's responsibility. Both in the hospital and community nurses should be greatly encouraged to utilize existing resources and create new ways of reaching the population so that health knowledge and attitudes will be improved.

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APPENDIX M

Sample Report:
Short-term Young Canadian Researchers Award Holder

COMMUNITY MEDICINE STUDENT
ELECTIVE PROGRAM IN THE THIRD WORLD

Sponsored by the Department of Community Health Sciences,
Faculty of Medicine, The University of Calgary
and
The International Development Research Centre, Ottawa

MEDICAL AND COMMUNITY HEALTH SERVICES WITHIN
THE EASTERN HIGHLANDS PROVINCE OF PAPUA NEW GUINEA

LOCATION - KAINANTU HOSPITAL, E.H.P., P.N.G.

by Terry Amiel

BACKGROUND ON THE COUNTRY

Papua New Guinea (P.N.G.) occupies the eastern half of the second largest island in the world, lying north of Australia and just below the equator. P.N.G. has a population of close to three million people primarily of Melanesian origin although the people of the coastal regions are more closely related to those of Polynesia or Micronesia. People native to P.N.G. are referred to as Nationals while those of western extraction are called Expats. Expats number some 30,000 and are mostly Australian. There is also a small East Asian population comprised largely of Chinese and Filipinos. The western half of the island is called Irian Jaya (West Irian) which was occupied by the Indonesians following the departure of the Dutch in 1963. It still has a population of about one million Melanesians living in the rugged mountain regions.

P.N.G. is an independent country belonging to the Commonwealth with close political and economic ties to Australia which held P.N.G. as its territory until independence in September 1975. There are 717 recognized languages in P.N.G. -- 45% of all the languages in the world -- some of which have only a few hundred participants belonging to a particular isolated community but which require near total translation to be understood by neighbouring villages. This makes the administration of health care in the remote districts a challenge because the largely National medical teams visiting these areas are derived from various tribes through P.N.G. While the official language of business and government is English the common form of speech used to communicate between tribes is Pidgin English (Tok Pisin), a blend of English words with a Melanesian grammar form and with German, Indonesian, and local influences. Translation sometimes requires the presence of four or five individuals who have to be taken from village to village in order that the purpose for one's presence is understood.

The economy, as mentioned, is tied closely to that of Australia which through an annual grant provides approximately 25 - 30% of the National Budget. Another third is provided through mining and

exploration, mostly in copper and gold. The third portion of the economy is contributed to largely through agriculture. Since the 1970's coffee has become the country's largest cash crop, surpassing copra, and much energy has been put into its planning and production. Many villages and individuals have garden plots of coffee plants which supply their sole income.

VILLAGE LIFE

Most people of the highlands survive on subsistence garden farming and the occasional and seasonal provincial council work on such projects as road development and land clearing. The main crops of the highland villagers are sweet potato (kaukau), leafy cabbage, sugar cane, papaya, and various legumes. Chickens are kept, mostly for cooking, and pigs run free and unpenned throughout the countryside. The pig is not part of the normal fare but is usually kept for special occasions and for use as barter in dowries or for compensation between individuals or villages. More recently introduced but now becoming an integral part of the native diet in the highlands is tinned fish (mackerel) and rice.

Drinks in the mountain villages are usually hot and heavily sweetened and may be a mixture of tea and powdered milk or Milo, a synthetic powdered chocolate drink. Refrigeration and indeed electricity is to be found in only the most fortunate of townships and real milk is a rarity off the beaten track. Water is hauled from rivers and creeks lying on valley floors to the ridge-top villages in whatever convenient containers are at hand. Water for washing is at a premium at any time of the year including the rainy season during which it may rain for several hours a day. Most small villages are not equipped with rain catchment facilities and rely on the manual moving of water from the valleys to the village which may involve a descent and ascent of over a thousand feet over very rugged terrain. Due to the relative lack of clean wash water coupled with the recent introduction of clothing by the missionaries without instruction on the need to wash said clothes, there are almost constant infections such as scabies, impetigo, fungus, and tropical ulcers to be found on the children in the mountains. Where children are barely clothed or naked such cutaneous lesions are far less frequent.

Sanitary facilities do not exist in most remote areas. Outhouses (liklik haus, haus pekpek) are few and far between although open human sewage is rarely found. The frequent rains help to dissipate this amongst the exuberant foliage.

Houses are normally built of local materials. The walls of dwellings are made from a small bamboo-like plant (pitpit) which is flattened and woven into a windproof siding. The frame of the house is made from young hardwood timbers and the roof is a heavy thatch of the tall kunai grass. The traditional shape is a round house although western influence has introduced the rectangular form, especially for large congregations of people. Buildings of this form are sometimes topped with corrugated iron which is carried by hand to these secluded

spots. At these altitudes of over 7,000 feet the nights are cool, and the houses have no windows, a four-foot door and no chimney. A fire burns constantly in the centre of the house and provides both heat and cooking facilities. Around the fire are woven pitpit benches which double as seating during mealtimes and sleeping accommodations at night. Food and belongings are often hung from rafters to deter the presence of vermin and insects which cannot survive in the sooty, smoke-filled atmosphere above the level of the four-foot door which acts as the only avenue of escape for the thick smoke emitted by the fire. Almost all villagers suffer from respiratory complaints at an early age due to these humid, smoky environments, and by adulthood are barrel-chested individuals. The most common cause of infant mortality is pneumonia, contributed to by these living conditions.

Besides these close smoky living conditions there is a constant haze in the air of smoke from the bush fires which cover the landscape as the Nationals clear ground during the dry season. As well, the smoke of the tobacco sticks (black tobacco rolled in newspaper) permeates the air and, accompanied by the smell of cooking fat in close quarters, lends a particularly pungent odour to the skins and clothing of all those living in a traditional setting.

Another social custom in this part of the world is the chewing of the betel nut (buae). The nut is a pulpy, bitter-tasting seed which is dipped in lime and chewed with mustard stalks giving it a more neutral pH. With this change the mixture takes on a bright blood-red appearance and lends a dark staining to the teeth. The expectorations of buai chewers can be found adorning the floors and walls of most public buildings. Favourite targets are the white guard rails and the sides of passing buses. One very common hazard of chewing buai is caustic burns to the eyes suffered while dipping lime in the back of open flatbed trucks which are the most common form of public transport in P.N.G. The chewing of betel nut has also been associated with causing oral cancer.

Alcoholism is well documented and is more commonly found in the larger villages and towns. This has prompted the closure of liquor outlets from Friday to Sunday throughout P.N.G. However this has led to a rise in the consumption of other various intoxicating beverages and resulted in an increasing number of methanol poisonings and blindness.

KAINANTU HOSPITAL

The health centre in Kainantu is a 125-bed facility comprised of a collection of single-floor structures spread over about five acres. There are several main hospital buildings, one housing the I.C.U. and acute care unit, another featuring pre, post, and perinatal care, while one is the general ward with some eighty beds for long-term care. There is some running water and electricity and the I.C.U. and maternity units have their own toilet while the rest of the hospital has the use of a communal toilet and shower room.

A morgue, without refrigeration, is situated on the grounds and post mortems are done posthaste.

Other facilities include a mother and child teaching unit; some of the buildings are in the traditional round house form so as to help mothers become accustomed to using their natural surroundings in the care of their infants. There is a large out-patient clinic which sees sometimes more than a hundred patients a day, some of whom have had to walk several miles to be treated for their complaints. A most modern dental clinic with three chairs is on the premises, a gift of a visiting American dentist. There is no dentist but it is operated most efficiently by National dental technicians and medical orderlies.

A dispensary is available for all medicinal requirements from adhesive tape and triangular bandages to antibiotics and analgesics. All these are provided free to the public as a government service. There is no contribution made by the general public to the operation of the health care service.

A food and supplies store is available to the long-term patient. Some food is supplied by family members of the patient although meals (known to be protein deficient) are provided by the hospital from its very limited budget. Short-term patients requiring only a few days stay can be seen arriving with a bundle of sugar cane and cooked kaukau under their arm. It is largely the responsibility of the patients' relatives or tribal members (wantoks) to care for and feed them during their stay at the health care facilities.

As many as six or eight family members and wantoks may accompany an individual to hospital, staying with him for the entire time of his confinement. Bodies can be found sitting or sleeping on, under, or between the wooden bunks which serve as hospital beds, sometimes making identification of the afflicted individual something of a chore. There is no separation of the patients in the acute or general wards by either age or sex and only the most acutely ill of them will receive constant medical attention. Patients may be lost to direct medical observation for days. This problem is compounded by the habit of patients to go "walkabout" for hours or even days at a time.

There is a laundry room and clothes lines dot the hospital landscape but the favoured method of drying is to scatter the clothes on the grassed areas of the hospital grounds. A laboratory is available for most basic blood work and urine analyses. Blood smears for malaria staining and white count differentials are possible, and blood may be typed and screened for blood transfusions. Any tests for thyroid, liver, or other organ functions must be sent to the provincial base hospital at the provincial capital at Goroka some fifty miles away.

There are X-ray facilities and a surgery and operating theatre with three tables. Bare feet are the order of the day as shoes can carry too many unknown entities. The hospital orderly, Manutopo, performs the limited number of surgical procedures possible under these conditions. Among those possible are D & C's, emergency

appendectomies, split skin grafting, any amount of debridement and suturing, the setting of compound fractures, and in a pinch a caesarian section. Their forte is tubal ligations and this hospital leads the country in the number done. Manutopo speaks little English and has no formal education but is a master at his trade, having trained under the many and varied physicians who have served in the Highlands over the past twenty years. Although the facilities exist for general anesthesia no one is trained in their operation. All operations are done under ketamine (producing a cataleptic state, laryngeal reflex depression, and amnesia), atropine (to dry up the salivary juices), and without intubation.

A remarkable degree of above-the-waist sterility is observed. The hospital has its own autoclave and although surgical drapes may vary from bedsheet to tablecloth materials they serve the purpose adequately. There are few post-op infections although this may be due in part to the fact that even the most trivial surgical procedure is well dosed with penicillin or chloramphenicol.

The rest of the hospital grounds is occupied by a dormitory for the trainee Health Extension Officers (H.E.O.'s), an administration building, teaching classrooms, and bungalows belonging to many of the permanent staff of the health centre. The whole complex is surrounded by a chain-link fence topped with barbed wire and lies about half a mile from the town centre.

The hospital is staffed by about thirty medical personnel and an equal number of support staff. At present the head staff doctor is a Canadian Expat, Dr. Karl Hudson, and is backed by one or two National doctors or residents. The remainder of the medical team is made up of National nurses and H.E.O.'s.

SUB-CENTRES AND AID POSTS

The Kainantu area itself is home to some 6,000 people and the hospital serves a rugged mountain area whose population is between 60,000 and 70,000 people. Throughout this area are scattered health sub-centres and aid posts. The entire Eastern Highlands Province covers an area of 11,000 square kilometers and has a total population of over 275,000. To service this area there are less than 50 physicians, most of whom occupy positions in Goroka. Less than a dozen doctors are to be found in other towns throughout the largely inaccessible but heavily populated province.

There is only one paved road running across the province and other travel is afforded (in the dry season) only by four wheel drive transport or by foot. In the wet season there is no travel.

Besides the two main hospitals there are about two dozen small health centres and sub-centres, some having their own ambulances. Most of these centres are run by religious organizations or are housed on their properties. They are manned by National nurses or H.E.O.'s and

act under the auspices of the Expat European or Australian missionaries. Medical supplies are provided by the P.N.G. government.

An average health centre will have a dozen acute care beds and another dozen long-term beds. One or two Expat nursing sisters and an equal number of H.E.O.'s will run the facility. Medical or surgical emergencies will be transported by road or in the more remote areas by plane to a major hospital. Likewise, the health sub-centres are smaller, having only a few beds, and are manned by only one H.E.O. or nurse. These centres are connected to the main hospitals by a radio telephone link and can receive medical advice readily.

About one hundred aid posts are found throughout the mountains and are manned by a single first-aid attendant or H.E.O. who will live in the nearby village. These are mainly in areas inaccessible by road and are the only form of medical care available to the majority of the population in the Eastern Highlands Province. To get to these posts people may have to walk miles over mountain trails for days to get medical care.

THE HEALTH EXTENSION OFFICER

Kainantu is one of two training centres for the Health Extension Officers, the other being in Madang, a major port city on the north coast. The candidates for the H.E.O. training programme are recruited from school graduates from all over P.N.G. and enrolled in a three year course which will, in the end, allow them to function much as would a general practitioner in North America. Only twenty or so H.E.O.'s graduate each year and must supply all parts of P.N.G.

The H.E.O. is expected to diagnose and treat all the common, and some of the not so common, illnesses to be found in P.N.G. Their duties include the immunization of local children and the keeping of records of all the infants in the area. They are entrusted to educate the local populace in public health and are capable of such minor surgical procedures as appendectomies, split skin grafts, and the removal of arrowheads from various parts of the anatomy (a common complaint amongst the highlands people). Treatment of pneumonia, septic arthritis, various eye and ear infections, broken limbs, peptic ulcer disease, and the ever popular circumcision are normal daily chores for these very capable young men and women. Birthing is still very much a village occurrence but many women are now seeking the facilities afforded at health centres.

The H.E.O. student spends his first year in Madang learning theory and being sent on coastal patrol. The second year is spent at Kainantu learning more theory and going on mountain patrol. The last year of their education is spent back in Madang. During this time the students are provided with food and housing plus a government grant of about thirty dollars a month (shortly to be discontinued).

During their training in Kainantu these students function much as would a resident in Canada. Their responsibilities include the

diagnosis and treatment of disease including the prescription of drugs, the carrying out of surgical procedures, and the daily care of the patients. Besides this they are expected to go on patrol into the mountain regions travelling for days between villages or aid posts delivering medical care and vaccinating the pediatric population. They boast of having a better than 80% immunization rate amongst the 1 - 5 year old age group. Some of these patrols will last for two to three weeks walking on footpaths through the rainforests and all medical supplies and equipment must be carried with them. A runner is sent ahead of the main group to arrange gathering sites of villagers. As much as twenty miles may be covered in a single day and three or four villages serviced. This will involve the hiring of porters for their equipment and guides and translators to accompany them on their journey. Several mountains, valleys, and rivers will be crossed in a single day's walk. Much of the food is supplied by villagers or is purchased along the way while accommodation is usually shared quarters with families or livestock.

The patrols are not without hazard and several "H.E.O.'s have suffered at the hands of suspicious villagers in the past. It is not unknown to have to hire whole new groups of porters and guides upon crossing territorial boundaries, the former porters not willing to enter rival areas for fear of personal injury. Likewise patients may refuse transport through enemy country because they anticipate reprisals and the very real possibility of the infliction of a condition much worse than the one they may be presently suffering.

Upon reaching a village or meeting area the patrol will set up three stations. The first is primarily for the registration and recording of pediatric patients. Each one's name, sex, age, approximate birth date, height, weight, and general physical state is recorded in a Scale Book which will then be kept by the family for reference by future patrols or in the event of their visiting a health centre. Records of all vaccinations received, illnesses suffered, and the child's growth pattern are kept in the book. These books are treated with great reverence and it is unusual now to find children under the age of six who do not have a comprehensive medical record from birth. There is an attempt at present to continue this record keeping into adulthood. It is the only method of providing a continuity of medical care for an individual in this country of a largely illiterate population.

The second station delivers vaccinations which consist of

- BCG - given soon after birth, at 6 and again at 12 years
- Triple Antigen (DPT) - given at 2, 4, and 6 months
- Oral Sabin - given at 2, 4, and 6 months
- Pigbel Vaccine - given at 2, 4, and 6 months and at 6 and 12 years (Pigbel is peculiar to New Guinea and is a disease attributed to clostridial infection acquired following the ingestion of pork flesh which has been left lying around after a pig roast.)
- Tetanus - given at 6 and 12 years and to women antenatally
- Measles - given at 9 months

As well any and all ailments which are encountered amongst the adult population receive a dose of two million units of penicillin for good measure.

The last station is for first aid where all ill are treated with topical antibiotics, gentian violet, hydrogen peroxide, or a mysterious anti-scabies solution. Most individuals at this stop are children suffering from superinfections of cuts or from the scratching of their scabies-covered bodies beneath their unwashed clothes. Other minor complaints may include septic joints suffered in falls or inflicted during battle.

In one day several hundred villagers may be treated and many new pediatric patients documented and immunized. These patrols take place between April and October in the dry season and an area may be revisited every three to six months. In the areas accessible by road visits are made to the missions every three to four weeks and a physician will accompany the patrols. At these times the ill of the area are rounded up for an inspection by the visiting medical team and there is a discussion of the treatment being given by the centre's H.E.O. and revisions made to the regimen if necessary. Any seriously ill patients will be transported to larger facilities at this time, if the patient is willing.

Very seldom is it necessary for a revision of treatment to be made at H.E.O.-operated health stations. Two books exist in P.N.G. which are utilised verbatim and are the H.E.O. "bibles". One is for Illnesses of Children while the other deals with adult complaints. They are used through the whole of P.N.G. with impunity and are amazingly effective. Once a diagnosis is made it is simply a matter of turning to the appropriate page in either of the two vest-pocket sized books and then implementing the therapeutic regimen instructed. Anything which cannot be diagnosed or does not respond to treatment is referred up the line to a large health centre.

COMMON ILLNESSES

Amongst the pediatric population the greatest cause of mortality by far is pneumonia which caused more than 65% of deaths in the under five age group of in-patients at the Kainantu Hospital in 1984. In the first ten months of 1985 pneumonia was implicated in 75% of the deaths in the under five age group. Second to pneumonia is meningitis followed by malnutrition (kwashiorkor and marasmus) and gastroenteritis (dehydration).

Pneumonia still ranks highest among the adult population but is closely followed by dysentery and malaria. Many of those dying of pneumonia have chronic underlying diseases which have predisposed them to this disease but because of a lack of diagnostic facilities remain undetected.

The greatest cause of morbidity and chronic care is most likely meningitis, followed by burns and fractures, which are responsible for

much disfigurement and disability in the population. In the adult sector malaria requires the greatest amount of medical investment in ongoing care even in the highlands. This is due to the new mobility of the people and the lack of precautionary measures taken when visiting the coastal areas where malaria is endemic. Fractures, burns and tropical ulcers contribute heavily to the cost of medical care in P.N.G.

Some of the most prevalent and preventable diseases in this country are the sexually transmitted ones. In 1984 there were 702 cases of gonorrhea and 138 cases of syphilis treated at the Kainantu Hospital. Sexual promiscuity is common and rape is used as a form of payback amongst tribes. Between four and five cases of rape a week are seen at Kainantu involving individuals under the age of ten. Very seldom are the perpetrators caught or even pursued due to a lack of effective policing.

Other less frequent but more exotic diseases seen are chronic anemias due to hookworm infestation, leprosy, hepatic failure secondary to Hep-B, and typhoid. Some of the most splendid livers and spleens may be palpated there. Tuberculoid lymphnodes fairly jump out at you.

Many diseases which are normally treated on an out-patient basis must by necessity be treated on an in-patient basis in P.N.G. Long term compliance in following medical therapy is non-existent and individual wards are allocated to the treatment of leprosy, T.B., and chronic anemia. Sanitary conditions in the villages preclude the return of individuals with burns or wounds until a good layer of granulation tissue has formed.

Although the H.E.O. system of the delivery of health care and community health education is accomplishing much in bringing new concepts to the tribal people of the Highlands, the traditional belief in the power of the witch doctor or shaman still holds most people strongly and prevents the possible cure of many relatively easily treated diseases. In many areas the occurrence of disease is blamed on spells cast by rival villages. One benefit derived from this belief is the custom of hiding the afflicted individual in the forest so that he is not open to further spells. This is in effect a form of quarantine and has probably prevented the spread of many infectious diseases.

COMMENT

On the whole the delivery of medical and community health care in P.N.G. is better than in most third world countries, and that in the Eastern Highlands Province is most likely the best in the country. The National H.E.O.'s and nurses deserve the praise of all for their hard work and perseverance in accomplishing so much with the facilities and supplies available to them. Until, however, the government places a greater emphasis on, and a greater financial investment in, the training of Nationals to the positions of administration and puts less reliance on the charitable efforts of Expat physicians they will not

have a medical profession capable of dealing effectively with the social biases and customs of its population.