Assessing the Information Needs of Health Professionals in The Pacific Basin

Final Report

July 31, 1992

I. Introduction

A major goal of the Pacific Southwest Regional Medical Library (PSRML) is to assess the information needs of the health professionals in the Region. Through such assessment, PSRML plans to develop programs to help bring biomedical information resources to rural health professionals, to underserved and unaffiliated health professionals, and to those serving minority populations. As part of this goal, an extensive information needs assessment was conducted in September/October 1991 in the Pacific Basin. A large number of underserved health professionals practice in the U.S. Territories in the Pacific Basin and have received little attention from the RML in the past. The territories are made up of nine zip code island groups with a population of over 327,000 and health professional groups, including doctors and medical officers, dentists and dental officers, nurses, nurse practitioners, and nurse midwives, and pharmacists. The Hawaii Medical Library, the resource library serving the Pacific, has provided some services to these health professionals, but in general, health sciences library services are either non-existent or extremely poor and out-of-date throughout the area. The health professional member of the PSRML Regional Advisory Committee (RAC) from Hawaii, Dr. D. William Wood, an associate professor at the University of Hawaii School of Public Health, has been deeply involved in developing health information systems and services in the Pacific Basin and has provided invaluable advice and guidance in planning and conducting the needs assessment. By attending a meeting of health professionals in Agana, Guam and then travelling to Saipan. Commonwealth of the Northern Marianas, Pohnpei, Federated States of Micronesia, and Majuro, capital of the Republic of the Marshall Islands, PSRML Network Coordinator, Irene Lovas, talked with health professionals about their information needs and visited libraries and health departments in these areas.

II. Preliminary contacts

A. In October 1990, PSRML network coordinator, Irene Lovas, and online services coordinator, Judy Consales, along with John Breinich, executive director, Hawaii Medical Library, attended the meeting of PIHOA (Pacific Islands Health Officers Association) to establish contacts with health professionals in these U.S. Territories.

- B. In March 1991, an invitation to speak at the September 23, 1991 annual meeting of the National Health Services Corps in Agana, Guam was issued to PSRML from Naomi Judd, NHSC project director, at the University of Hawaii John Burns School of Medicine as a result of the initial contacts and the efforts of John Breinich. This meeting gathers all the United States Public Health Services (USPHS) personnel in the Pacific to discuss various healthcare issues and concerns.
- C. Based on contractual obligations and restraints, an itinerary was developed to visits certain of the jurisdictions.
- D. Ms. Judd also provided lists of the NHSC health professionals and PIHOA members. (The annual meeting of PIHOA usually takes place before or after the NHSC meeting; in 1991, it immediately followed the NHSC meeting.) In order to make the health professionals from all the territories aware of the visit and presentation, letters went sent to those on the mailing lists about the coming visit and presentation on NN/LM and NLM products and services, inviting discussions with health professionals interested in information services, especially those from territories not on the itinerary for this trip. The health professionals were invited to meet with the network coordinator while in Guam, or, for those in areas to be visited, while Ms. Lovas was travelling to the specific islands. (See appendices A, B, and C for examples of the letters sent. Appendix D is the mailing list.)
- E. In early 1991, the network coordinator spoke to Jim Thompson from the Region IX Office of the USPHS in San Francisco regarding the information needs of the USPHS health professionals located in the Pacific Territories. Mr. Thompson had funding from the Department of Interior and wanted to purchase a core list of textbooks for these areas. Since textbooks quickly become out-of-date, he was encouraged to use the funds to provide computers or CD-ROM drives.
- F. Of major concern to PSRML was telecommunication access for the various jurisdictions in the Pacific. In 1990, many health professionals from these areas talked about the costly fees to access any online system from the islands of Palau, Pohnpei, and Majuro. Discussions with NLM staff revealed that there was no capability for 800 numbers there, and no local network access numbers other than on Guam and Saipan. NLM provided information about the Pacific Communication, Inc., the telecommunications vendor in the area. The network coordinator planned to contact the organization to discuss telecommunications possibilities.

III. Institutions/Sites Visited

In preparation for the needs assessment, two surveys were developed by PSRML staff to gather data about information-seeking behavior and the availability of resource and information services in the Pacific. One survey was designed to explore the impressions of the health professionals about the availability and need for information access (appendix E). The other was to assess any libraries visited (appendix F).

A. National Health Services Corps meeting, Agana, Guam - September 23, 1991

The needs assessment visit began in Agana, Guam where about seventy health professionals representing NHSC in the Pacific attended the annual meeting on September 23-25, 1991. As part of the program, the network coordinator from PSRML discussed the biomedical library network and demonstrated GRATEFUL MED and Loansome Doc, emphasizing the network concept of sharing resources, especially at the local level. A copy of the Information Resources factsheet distributed at the meeting is appendix G. NLM Factsheets describing GRATEFUL MED, Loansome Doc, and the network also were made available to the participants.

B. Guam Memorial Hospital - September 24, 1991

The network coordinator visited the library at Guam Memorial Hospital (GMH) having already met the librarian, Julie Torres, in 1990. The library does not search the MEDLARS databases online and had just received Silverplatter MEDLINE. There were difficulties, however, with the computer which seemed to be incompatible with the CD-ROM drives. Ms. Torres recently purchased a library software package to automate operations. The package contained a serials check-in, cataloging, circulation, book ordering and overdue components. The hospital library ordered NCME tapes, but the agreement prohibits them from loaning to the other islands, although the librarian would have been willing to distribute the videotapes to the other islands.

C. University of Guam, Mangilao (UOG) - September 25, 1991

The Robert F. Kennedy Memorial Library at UOG expressed an interest in joining DOCLINE to expedite document delivery of biomedical information in the Pacific, and therefore, could play a key role in obtaining information resources for health professionals. A handout from the ILL/DOCLINE/Loansome Doc workshop conducted in Hawaii was left with the library staff so they could become familiar with the system. Having recent access to OCLC, the library is preparing to utilize electronic technologies for the rapid delivery of information.

D. Pacific Islands Association of Libraries and Archives (PIALA) - September 25, 1991

During the last year, one of the most exciting developments in the area has been the organization of the Pacific Islands Association of Libraries and Archives (PIALA). This multi-type network was created largely through the efforts of Arlene Cohen, Joanne Tarpley, and Michael Hamerly at UOG. PIALA held its first annual meeting on October 1-3, 1991 in Koror, Palau to discuss resource sharing, electronic communications, development of a regional union list of serials, and document delivery. At the meeting, Arlene Cohen, UOG systems librarian, demonstrated "Black Boxes" which could serve as a means of electronic communication among the islands and could be accessed by health professionals to obtain information from UOG; the boxes, which cost about \$600.00, are most likely be located initially at the public libraries. PeaceSat (Pan-Pacific Educational And Communication Experiments by SATellite) just became functional, so Ms. Lovas observed Michael Hamerly and Arlene Cohen conducting a point-to-point conference with PIALA officers on Palau and Pohnpei. PeaceSat plans to bridge the gap between developed and developing country telecommunications in the remote areas of the Pacific by the use of appropriate technology. Direct access to sophisticated telecommunication applications over the satellite allows any country or territory's users to share information and resources with other areas. When the satellite is completely operational in all jurisdictions, every hospital on every island should have at least a radio-band. The actual apparatus is located at Department of Education stations. The mainland could be linked to PeaceSat through a call to Hawaii, so there are definite possibilities in networking with UOG.

E. Department of Public Health Services, Guam - September 26, 1991

The Department of Public Health Services has some individual journal subscriptions and outdated texts. Although the department is located only a short distance from UOG, using it or other libraries on the island has proved to be difficult because, in order to request online searches or document delivery, interagency agreements would need to be written and approved. The staff felt a definite need for on-site resources for daily, guick access. The one and only FAX machine is in the Directors' office, and it is difficult to send FAXs. With a telecommunications node on Guam, they could use GRATEFUL MED to search MEDLARS but the facility has computers without modems. They wanted information on CD-ROM and modems as an inexpensive means of telecommunications access to MEDLARS databases, the Centers for Disease Control, document delivery, electronic mail and educational bulletin Since they are seeing more AIDS cases, as well as cases of sexually boards. transmitted diseases, the staff need current information, especially on treatment. The staff epidemiologist needs online access to the Centers for Disease Control to transmit data. The Chief Public Health Officer promised to formally request this information

from PSRML. After the discussions, the staff also planned to further investigate working with GMH to borrow NCME tapes. One comment from a health professional there pointed out the frustrations of being in the Pacific without information resources. This health professional planned to return to the mainland in order to keep current and to obtain board certification, since that was not possible on Guam.

F. Commonwealth Health Center, Saipan, Commonwealth of the Northern Marianas - September 27, 1991

The next stop on the needs assessment trip was Commonwealth of the Northern Mariana Islands, Saipan, Commonwealth Health Center (CHC), the government hospital for the Commonwealth. A basic library collection of textbooks and journals has been established; the library, for physicians, is in the lounge and will soon exceed its space. There are less than 25 journal subscriptions which arrive in a timely fashion. In the past year, the library committee initially had \$7000 to purchase textbooks, but the amount was then cut to \$3000. Some titles were eliminated, but the purchase order seemed to have disappeared. Since Saipan has a telephone network access number, online access to NLM's MEDLARS databases is available. Presently, they search MEDLINE through DIALOG Medical Connection, but no one was quite sure why they used that method, how it actually worked, or what the method of payment was. Using one of the two direct lines out of the hospital, a demonstration of GRATEFUL MED and its document ordering capability, Loansome Doc was given for several members of the library committee. One of the five health professionals at the demonstration was an information systems analyst assigned through the Indian Health Service in Tucson, AZ to implement a hospital information system. The analyst was familiar with GRATEFUL MED and had been trying to convince the medical staff to switch, which now seemed more reasonable. The USPHS personnel could use GRATEFUL MED and become Loansome Doc users through Tripler Army Medical Center in Hawaii. (Tripler AMC had agreed to serve USPHS personnel in the Pacific since they are federal employees.) Hospital staff were very enthusiastic about expanding library services and, perhaps, joining DOCLINE in the future, as a non-SERHOLD library. What CHC needs is a medical staff secretary or someone to manage library services -- checking in journals, arranging books, doing simple searches on GM, and processing ILLs. There is a lack of continuity, due to frequent staff turnover. For the past three years, every library committee chairperson at CHC has contacted the RML about network and NLM services. Before any of the suggestions or ideas could be implemented, these chairpersons complete their tour-of-duty and return to the mainland. They do, however, have an interested library committee. The hospital staff entertained hopes that the new public library staff would serve their information needs. Their needs, however, are too urgent and unique for this to be a realistic option. Currently, Saipan has a community college library and a school library of sorts. The first public library in the Commonwealth, a new 16,000 square feet building, was being built with all the books and materials purchased with private funding

and donations. The doctors at CHC donated \$2000 for books on consumer health. After the library is functional, the operation will be turned over to the government and be funded through the legislature. The library was scheduled to open in December 1991. They were recruiting for three staff positions, an administrative librarian and then 2 staff librarians, for children and adolescent services and for adult services. A law library is planned for the near future. The public library intent is to serve the general public, while the community college serves as the archival library for the island.

Ms. Lovas then met with the director of the nursing program at Northern Marianas College. The director explained the slow turn-around time for filling ILLs; the college library goes directly to Hawaii with the requests and bypasses Guam. Since the college has programs in nursing and allied health areas, the students go to CHC for clinical practice. The nursing director also felt that the public library could not politically or physically support the information needs of CHC staff.

G. Pacific Basin Medical Officers Training Program, Kolonia, Pohnpei, FSM - September 30, 1991

Kolonia, Pohnpei is the site of the University of Hawaii, John A. Burns School of Medicine, Pacific Basin Medical Officers Training Program (PBMOTP). With a ten-year federal grant in its fifth year, the school plans to prepare at least 100 students from all cultures of Micronesia to be medical officers (MOs), the equivalent of Medical Doctors (MDs). The first class of 17 medical officers graduates in 1992. These MOs then will return to their native islands and provide quality health care and educate their communities in preventive medicine. Some of the students lack basic math and sciences skills. This innovative program concentrates on problem-based and selfdirected learning with self-assessment and peer assessment, as well as tutor assessment. Each year, the students must master eight modules or blocks. Those who do not master a block the first time are given additional chances to do so; they do not fail. The individuals and the tutor decide how the students upgrade their skills, and then the students are re-assessed until they master the module. The only release from the program is for disciplinary reasons, alcohol abuse or errant behavior in the hospital clinic. The students maintain the facilities at the school, living in the adjacent dormitories. The program pays their airfares and gives them stipends and some textbooks. The most important difference from other medical school programs is that more than 50% of the curriculum is devoted to preventive and community medicine, and to hygiene techniques, emphasizing the role of the medical officer as a life-learner, a self-directed learner and a responsible physician who will facilitate change in the attitudes of their communities about health care.

The PBMOTP will publish the first issue of a new journal, **Pacific Health Digest**, to deal exclusively with healthcare issues related to the Pacific Basin.

The staff at the training program, Gregory Dever, M.D., director, Rex Hunton, M.D., associate director, and Joel Weaver, learning resources coordinator, have established library services. They educate the students in ways to obtain information in order to do clinical assessments of their patients. The library has MEDLINE on CD-ROM; a staff member is always present when the computers are in use. In the first year, Joel Weaver teaches the students basic math, science, writing and presentation skills. In the third year, Mr. Weaver teaches a research methods course, and the students use the MEDLINE CD-ROM for the course. They rely on those CD-ROM abstracts for their studies and research and have a definite need for access to the full articles to improve their clinical assessment and analysis skills. There is a library of current textbooks and some journals. The PSRML Network Coordinator provided them with Brandon Lists and information about book vendors since they order both books and journals from individual publishers. Dr. Hunton devised his own classification scheme but they are interested in organizing the library more effectively. It was suggested that they contact the University of Hawaii Graduate School of Library and Information Science about the possibility of an internship in this remote area, or the University of Guam for assistance. They are interested in networking both to find a source to get the documents they need and to share with the other islands their own resources. Getting articles from Hawaii is expensive and can cost up to \$50.00 if FAXed RUSH from HML. They also were interested in information on NCME tapes and prices. Since there are no telephone network access numbers available for online searching, PBMOTP wants to obtain more CD-ROM products.

H. Pohnpei State Hospital - September 30, 1991

A short visit was made to the Pohnpei State Hospital library. In about 1976-78, there was some federal funding for the purchase of books. All these terribly out-of-date books were cataloged using NLM classification with a typed card and pocket in each book. The card catalog was presently located under one of the book shelves. And, surprisingly, there was a copy of the 1976 edition of the **PSRMLS Manual for Small Hospital Libraries**. The journals were old and the hospital staff had donated anything remotely current. Brandon lists for both medical and nursing libraries and a copy of **PSRMLS Suggested Minimum Guidelines** were given to the administrator who indicated that there are no plans to update the library because of the lack of funding, staff and time. The hospital was waiting for the books from USPHS which may be of use to the hospital staff.

I. Majuro Hospital, Republic of the Marshall Islands - October 3, 1991

The last stop on the journey was Majuro, capital of the Republic of the Marshall Islands. The health problems of the Marshall Islands include malnutrition and diabetes. The great majority of the population is under the age of fourteen; each woman has an average of seven children. Majuro Hospital just established a library

and has a part-time librarian, Elizabeth Barron, who started to order books and journals for the collection. Currently, the hospital receives about 15 journals subscriptions and plans to add more as Ms. Barron further organizes the collection. They also have about 50-100 textbooks with the librarian weeding the very out-of-date ones. The library has a carrel and a table with several chairs. The staff was eager to access the current literature on CD-ROM to keep current and for information on patient care question. The telephone system on the island is unique. To connect to anywhere on Majuro or Ebeye, the only other neighboring atoll with a population mass, one dials 9 and then a four-digit extension. Brandon lists and the **PSRMLS Suggested Minimum Guidelines** were given to the hospital nurse-midwife since the librarian was attending the PIALA meeting on Palau.

J. College of the Marshall Islands - October 3, 1991

The College of the Marshall Islands in Majuro has a very active nursing program. The library has a collection of nursing books and journals with about 70 subscriptions in the health sciences. The college plans to expand its health science programs adding courses in midwifery and perhaps other areas of allied health, such as nutrition and dietetics. The new librarian at the college arrived shortly before this visit. Already, the librarians at the college and hospital have started planning cooperative acquisitions for the purchase of medical, nursing, and allied health materials. The hospital plans to purchase medical texts and journals, while the college buys nursing materials. The college currently has absolutely no technology. The medical and nursing Brandon lists were given to the college librarian.

IV. Discussions with health professionals from areas not visited

Republic of Palau: During the three-day NHSC meeting, Ms. Lovas met with health professionals from the Republic of Palau to discuss their limited information resources and ways to keep current in this geographically remote area. Since there are no network access telephone numbers for online searching in Palau, using GRATEFUL MED to search the biomedical literature was not an option. Health professionals, therefore, were interested in using CD-ROM products to gain access to the current literature. One of the health professionals from MacDonald Memorial Hospital in the Republic of Palau mentioned that initially it did not matter that there were no information resources. But now, having been there for almost four years, it mattered deeply. Since there are no means to keep current and to continue to be licensed, it is important to have access to some resources. Sometimes, if the PHS officers on Palau need information, they contact the NHSC Project Director at University of Hawaii at Manoa, but it takes long and is not considered an effective way. They would like CD-ROM,

preferably with full text articles. Telecommunications is non-existent. The health professionals would write grant proposals but did not know what was available. There appeared to be very little funding from local resources for any healthcare needs.

V. Findings

A. Telecommunications access

One of PSRML's major concerns was the availability of network access for the health professionals in the various jurisdictions of the Pacific. While on Guam, the network coordinator contacted PCI, the company responsible for coordinating dial-in access to the telecommunications nodes in the Pacific. Discussions with PCI revealed that there is no dial-in access for the Federated States of Micronesia (FSM) or the Republics of Palau and the Marshall Islands other than calling long distance to the node in Guam. The reason appears not to be the technology. The governments of FSM and the Republics will not give PCI the permission to install the lines for access. PCI was investigating, however, linking the islands through the lines of the Bank of Guam which needs online access to their branches on these islands. The satellite, PeaceSat, designed for educational purposes seemed to be a possibility worth investigating.

B. USPHS Funding

On Guam, the network coordinator had the opportunity to speak to Jim Thompson, the USPHS pharmacist who contacted the RML about six months previously to discuss information needs in the Pacific Basin. At that time, he was more interested in textbooks than technology. He surveyed the jurisdictions about what current (1987-1990) texts they had. From the results, he compiled a list of textbooks which were ordered and sent to the jurisdictions. Since Majuro had never responded, Ms. Lovas had agreed to find out what textbooks were available at the hospital during the visit there. Unfortunately, there was no mention of using funds for technology, such as CD-ROM hardware and software, to enhance information access in the Pacific.

C. Continuity

USPHS employees serve usually two or three-year terms in the Pacific Territories, then return to the mainland. This turn-over can impede library development in these area. At CHC on Saipan, for example, where a health professional serves as the chairperson of the library committee, the physician just begins to understand library and information services when the tour-of-duty is over. In addition to getting acquainted to the aspects of library and information services, USPHS

personnel also need to become familiar with the unique bureaucracies of the jurisdictions. The necessary procedures can make it difficult to purchase books, journals, equipment, and CD-ROM products.

D. Local Funding

There is very little local funding provided for information services. In cases such as the Department of Public Health Services on Guam and Pohnpei State Hospital, there had been outside sources of funding, and books and journals were purchased. But the resources were never updated once the funding stopped.

E. Lack of awareness of information resources and technology

The health professionals had little awareness of how to access the information resources available to them. Those on Guam and Saipan were not aware that network access numbers existed there. The possibility was investigated five years ago when there was no access, and they never checked again. Even the notion of available local numbers was hard for them to comprehend. Most of the health professionals knew about CD-ROM technology, but not about what was specifically available in the health sciences.

The idea of using libraries in Hawaii and the mainland seemed remote. What was surprising was that none of the health professionals thought of utilizing the resources at the University of Guam.

F. Distance/Time

The distances between territories and between the territories and Hawaii are vast. (See Appendix H for map of the Pacific Islands.) FAX to these islands is very expensive. The assistant director at the PBMOTP spoke of a FAX from Hawaii costing \$50.00 for a RUSH. Journal abstracts are used almost exclusively for patient care.

The distance factor also plays an important part in the lack of technology. It is very difficult, even for UOG, to communicate effectively regarding user support with the vendors and software producers who are not only in a different time zone, but it is a different day. The slogan on Guam license plates reads "Guam - Where

America's Day Begins" because the International Dateline separates the Pacific Islands from Hawaii and the continental United States.

VI. Follow-up

- A. Jim Thompson, USPHS, was sent Brandon lists of selected books and journals for the small medical library, for nursing and for allied health, and information on CD-ROM products along with information about the hospital library in Majuro, Republic of the Marshall Islands.
- B. Commonwealth Health Center, Saipan, was sent information about grants, and a letter summarizing the visit to support the assignment of a staff person to manage the library keeping track of the cost of books and journals, answering emergency reference questions, searching GRATEFUL MED, requesting ILLS, and satisfying accreditation requirements. They also were sent applications for online codes having already received information about GRATEFUL MED.
- C. The nursing director, College of the Northern Marianas was sent Brandon lists and a grant application packet to explore improving access to information at the CHC and college.
- D. The PBMOTP was sent a copy of the PSRMLS cataloging manual since they are interested in organizing the collection more efficiently.
- E. The names of the staff at PBMOTP were given to the executive secretary of PIALA so that they could receive information about the association.
- F. Arlene Cohen and Joanne Tarpley at UOG had a "point-to-point" via PeaceSat with Rex Hunton and other staff from PBMOTP to discuss resource sharing and what UOG could provide for the students and staff on Pohnpei.
- G. A list of the serials holdings for UOG was received by PSRML and entered into PSRML's SERHOLD file in preparation for inclusion in the 1992 SERHOLD update. An application for DOCLINE was sent to the Robert F. Kennedy Memorial Library at UOG.

VII. Results/Next steps

Since part of the mission of the NN/LM is to improve, develop and support the sharing of biomedical information resources throughout the nation, this needs assessment in the Pacific Basin served as an important step in accomplishing that

mission. The RML plans to work closely with PIALA, the University of Guam, and the health sciences libraries in Hawaii to develop the information resources and to improve access to these resources for health professionals throughout the U.S. Territories in the Pacific.

A. PIALA

As an active participant in the NN/LM network, this multi-type network can bring information resources to health professionals in this part of Region 7. PSRML has joined the network as an institutional member. The network coordinator has made preliminary arrangements to conduct a workshop on health sciences resources for non-health sciences librarians at the second annual PIALA meeting to be held on Pohnpei November 3-5, 1992.

B. Guam

- 1. Both UOG and the Naval Hospital, Guam now have access to the Internet, and the network coordinator communicates regularly with them about network activities and resource sharing possibilities.
- 2. After the PIALA meeting in November 1992, Ms. Lovas plans to travel to Guam to meet with the health sciences librarians to encourage further DOCLINE participation.
- 3. Robert F. Kennedy Memorial Library at the University of Guam became an active DOCLINE participant in January 1992; their holdings will be part of the 1992 SERHOLD update to be submitted to NLM in July 1992. Their holdings will be part of the 1993 *MLGH Union List of Serials*.
- 4. The Library has submitted a \$25,000 GRATEFUL MED outreach purchase order to train health professionals on Guam and Saipan, Commonwealth of the Northern Marianas, to use GRATEFUL MED and to take advantage of Loansome Doc to order documents from the actual searches. These two U.S. territories in the Pacific are the only two to have telephone network access numbers.

C. CD-ROM

Talking with local health professionals and library managers also has provided a much clearer picture of what is needed. To follow-up on the data gathered from the needs assessment, PSRML is gathering extensive information on CD-ROM products in the health sciences to distribute to these health professionals.

D. American Samoa

Although not visited as part of the needs assessment, the LBJ Tropical Medical Center in Pago, American Samoa also has submitted a \$25,000 GM outreach proposal for training health professionals to use GRATEFUL MED since there is a telephone network access number on American Samoa. The library plans to become an active DOCLINE participant by contributing their serials holdings to SERHOLD.

VIII. Conclusions

PSRML has taken the initial step in achieving one of the major goals of the contract: to assess the information needs of the health professionals in the Region by conducting this extensive assessment of the information needs of the health professionals in the U.S. Territories of the Pacific Basin. Our objective now is to develop programs to help bring biomedical information resources to these rural health professionals, to those underserved and unaffiliated health professionals, and to those serving minority populations. By working with PIALA, a multitype library network, the University of Guam, the largest library in the Pacific, the health sciences, community colleges and public libraries in the Pacific, and the health sciences libraries in Hawaii, PSRML hopes to further improve access to information resources for health professionals throughout the U.S. Territories in the Pacific.