The evolution of community health training at the PBMOTP

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Introduction

The community health experience at the Pacific Basin Medical Officers Training Program (PBMOTP) has been one of an evolving concept, which has had as its driving force the search for how best to train physicians to meet the health care needs of the Pacific. Health care in the US-Associated Pacific had been a hospital-based health system. Inpatient wards for the treatment of the acutely ill were set together with large outpatient departments treating minor and serious ailments each day. Within the same complex was found the public health department, with clinics for expectant mothers, newborns and infants, job applicants in need of examinations, and for patients with chronic diseases, infectious (TB, Hansen's disease) and non-communicable (hypertension, diabetes). Peripheral clinics were few in number and were usually found only in the remote outer islands. These received minimal support from the central hospital - weeks or months could go by without so much as radio contact between an outer island dispensary and the hospital, let alone a visit by the field trip ship. Moves to decentralize health care on the main islands of the jurisdictions in the early 1980s soon came to a halt through lack of support and a conceptual framework for decentralized health care. It was only in the mid-1980s that health care in the US began to move away from the hospital model, while medical educators in the US a decade later still struggle with the issues of how best to train their students and residents in this new era of decentralization[1].

It was in this milieu in the late 1980s that the PBMOTP found itself with the task of training doctors for Micronesia and American Samoa. This article is a recounting of how community health training evolved over the years, how the PBMOTP dealt, from its earliest days, with the marked centralization of health care services in Micronesia, and assisted in the move toward decentralization of health services.

The early years

From its inception the PBMOTP adopted a curriculum in which 50% of student learning time was devoted to academic classroom activities, such as didactic lectures, laboratory sessions, and eventually problem based learning groups[2,3]. The other 50% of time was devoted to supervised clinical care of patients. Early exposure to patients would reinforce what students were learning in the classroom, and would enable students to become familiar with diagnosing and treating basic illnesses by the end of their first year of study. From this, a career ladder curriculum process evolved, providing the opportunity for clinical certification of students in a step-wise fashion: as health assistants after one year of study, as Assistant Medical Officers (AMO) at the end of their third year, and as Medical Officer physicians after five years of study[3]. The AMO were eligible to be licensed by the Federated States of Micronesia Medical Licensure Board as Medexes, the mid-level practitioner position recognized throughout the region. By 1989 the PBMOTP had established its initial Community Health Curriculum[4], which, over time, progressed from mainly classroom-based didactic sessions [3,4,5,6], to "hands on" activities in the field[7,8]. Eventually, the faculty were also persuaded that a sincere attempt should be made to devote 50% of the both academic and clinical learning activities at the PBMOTP to the discipline of commu-

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nity health. It would take several years of developmental process, however, before such a policy in practice approximated its enthusiastic intent.

The simple logistics of providing clinical experience for students in the early years of the program presented challenges which required solutions. The Outpatient Department (OPD) of Pohnpei State Hospital, while providing an adequate volume of patients, was limited by the number of examination rooms that could be set aside for the clinical training of students. In general, the time constraints of clinically tutoring junior students interfered with the OPD patient flow and service needs. In addition, students assigned to doctors other than PBMOTP staff might suffer the disadvantage of being relegated to the role of observers, deprived thus of opportunities to deal with patients directly. Clinics Without Walls (CWW), *ad hoc* clinics set up by the PBMOTP in several communities in Pohnpei during the early years of the program, were established in an attempt to train students through direct hands-on experience in out-patient medicine under the supervision of PBMOTP faculty.

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'Clinic Without Walls' and medical education

These CWW provided some degree of primary care experience as well: students cared for patients coming to the CWW for antenatal care, well baby care or immunizations, or for follow-up of their hypertension or diabetes. The emphasis in the early years of the program was placed to not establish these clinics as sites of primary health care. It was on having them provide acute patient care in a non-hospital setting and for student training. What primary health care experience there was, was usually provided through student assignments to the well baby clinics (WBC) or antenatal clinics (ANC) being conducted at the Public Health department at the hospital. Similarly, little in the way of community health activities were conducted out of these CWW in the early years. The main community health activities during these years were environmental surveys conducted by the students, a long-term otitis media follow-up clinic in the evenings in one of the CWW, or a self-directed research project which each student was required to carry out. In subsequent years, students often used the CWW for health education sessions for the community, presenting topics through the use of posters, skits, or formal question and answer sessions; the community was often asked what topics they would like to hear about, and the following week a presentation was prepared and given. The CWW thus gave students experience in outpatient care for the most part, and eventually in later years experience in addressing the overall health status of communities via health education sessions.

The self-directed research project, when first introduced as an aspect of the community health curriculum, began as an assignment that each student was required to complete prior to graduation, and eventually became an annual project required for promotion to the next year. The goal was to train students in research methodology and statistical methods for the evaluation of data, important in enabling students to evaluate articles in the literature. At the same time, students learned how to evaluate a health care problem, gain an understanding of the problem, and suggest a solution. In effect, the research projects were large exercises in quality assurance. While valuable, the projects usually went as far as offering a set of recommendations, without taking the next step, i.e. the implementation of those recommendations. Indeed, in the early years, opportunities to implement such recommendations were not available. Such opportunities were still to come.

The students of the PBMOTP's first intake group, entering their fourth year of study in 1990, were assigned for their entire fourth year to the hospital-based rotations of Pediatrics, Internal Medicine, Surgery, and Obstetrics/Gynecology at Chuuk State Hospital. These rotations provided little in the way of community clinics. There were hospital outpatient experiences, apart from emergency room call in the evenings. Clinics normally associated with the various services were used as training grounds for fourth year students. While Well Baby Clinics and Antenatal Clinics at Pohnpei were staffed by junior students, their seniors were to be found mostly in the hospital wards in Chuuk. In order to address the lack of community health in the senior years of study, the faculty reaffirmed program policy that the community health portion of the curriculum should make up 50% of the PBMOTP curriculum and redoubled its efforts to make it so. The development of a tabella with clinical and in-hospital community health component was part of this effort. Part of the time was to be devoted to completing a self-directed research project, though there was a need to provide experience in community health activities in the field as well.

The latter years

As an initial step in this direction, the first intake group of students during their fifth year of study in 1991 were assigned

for several weeks to Yap State's Division of Primary Health Care. In Yap, the students undertook the re-training of a cadre of dispensary-based health assistants who were originally trained in the mid-1980s, and who were now staffing dispensaries and health posts throughout the state. The students gained valuable experience in training health care workers, devising curriculum and figuring out ways how best to teach and evaluate them. However, the students' curriculum emphasized of necessity what they themselves knew best, i.e., the care of outpatients with acute and chronic medical problems. The retraining was mainly classroom based, with an occasional foray into a dispensary or into a public health clinic.

In 1992, as the next step in this ongoing evolution of community health curriculum, fourth- and fifth-year PBMOTP students, all licensed Medexes, were assigned to a remote outer island dispensary of Yap state, where they engaged in on-site retraining of health assistants in the field. In this setting, however, the students actually learned more than they taught, as they had experienced little fixed-walled dispensary experience during their years of study in Pohnpei. In the outer islands of Yap, they were responsible for the acute and chronic care of a remote island community, without the support on which they had come to rely as closely supervised students in Pohnpei. At the same time fourth- and fifth-year students were engaged in Pohnpei, as part of their community health rotations, in training a cadre of health assistants for Pohnpei state in a program that lasted for most of 1992. Senior medical students were involved in planning the curriculum (a large component of which involved health education of communities), implementing the teaching sessions, supervising the health assistants, and evaluating them at intervals throughout the training program. Late in 1992 thirteen Community Health Assistants graduated in a ceremony at the PBMOTP and some then were assigned to dispensaries in the outer islands of Pohnpei. At the same time, community health activities for junior level students were expanded to include assignment to the local U.S. federally funded Community Health Center (CHC). A faculty member of the PBMOTP became medical director of the CHC, and the school was able to take advantage of the site for teaching students managerial skills in primary health care[7].

Fixed clinics and medical education

The next step of this ongoing community health curriculum development transferred the Yap experience to Pohnpei in 1993. What faculty and students from the PBMOTP had seen in Yap would be translated into a concrete program in the home state of the medical school. Year four and five students, again, all licensed Medexes, were assigned for weeks at a time to the outer islands of Pohnpei, where they engaged in on-site retraining of health assistants, as well as the revitalization of dispensaries and mobilization of the communities they served. At the same time, the Director of Health Services committed himself to the decentralization of health services on the main island of Pohnpei as well, with both the construction of more permanent dispensaries on or near the former sites of the PBMOTP's CWW, and the assignment of personnel to staff these new dispensaries.

The PBMOTP saw these dispensaries as excellent training sites for students, and revamped its curriculum for 1994 such that fourth and fifth year students were assigned for half of their academic year to the dispensaries. During that same year, the remaining classroom-based third-year class spent two days a week in the dispensaries, while a segment of the class moved to a dispensary on the southern part of the island, on a rotation basis, for five weeks at a time, where they rented a house, held classes, and managed the dispensary for the duration of the rotation. What the faculty had set as a goal in 1991, regarding a 50% allocation of time to community health, was closer to realization.

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The drive to decentralize medical care in Pohnpei, and to decentralize medical teaching and training, tended to obscure the fact that mere location did not necessarily determine the type of medical care provided, that dispensary medicine did not necessarily mean community medicine, and that a program which trained its students for 50% of its curriculum in the dispensaries did not thereby meet the goals of training good community physicians. Hospital-based rotations afforded little or no experience with the long-term primary health care problems and community problems one encounters in each of the disciplines. True, student case presentations usually included segments about how one might help to prevent the illness under discussion, but this was essentially lip service without follow-through. Indeed, students rarely saw patients in follow-up after discharge from a hospital ward. Similarly, dispensary care of patients failed to address long-term community health problems, as long as the dispensary was identified, by staff and the community alike, as a place only for members of the community to come with a problem (an illness) requiring a solution (a medication of some sort). The underlying problems remained unaddressed: How does one make sure a mother starts and continues to

breast feed her baby? How does one make sure that a child receives immunizations consistently on schedule? How does one ensure that a pregnant woman will start ANC visits in her first trimester, and keep regular appointments? How does one deal with the expectant mother who smokes? How does one address the problem of strokes, myocardial infarctions, angina, and hypertension, in a community?

Building on some of the activities carried on at the centrally-located CHC, and adapting and augmenting these activities for the smaller communities in the catchment areas of the new dispensaries, dispensary assignments became a way to train students, not only in good outpatient medicine and in good individual patient tracking and follow-up on a long-term basis, but also in addressing issues which concern communities as a whole - nutrition issues, diet and exercise, being responsible for one's health among others. The school health program, for instance, which had always done little more than the screening (i.e., the physical examination) of elementary school students, became a way to teach students about health and health maintenance, about taking responsibility for health issues in their families and in the communities. Home visitations, which in the past had been not much more than visits to acutely ill patients as a prelude to referral for admission to hospital, became a way to monitor regularly the health of chronically ill homebound and elderly patients. Centering the community's ANC and WBC visits in the dispensaries provided members of the community most in need of regularly scheduled health maintenance visits a convenient place to receive them, while affording students an experience in the routine long-term follow-up care of patients and their families. Planting and tending a garden became a way to demonstrate to patients a model diet of locally available food. Forming a dispensary board and encouraging regular meetings became a way to foster community responsibility for the health care facility and, ultimately, the overall health of the community.

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Hospital and community based training

In order further to break down the barriers between hospital-based and community-based practice, faculty who were supervising hospital-based rotations were required to expand training opportunities for students to include more than ward-care of patients. Each service was required to assign students for one or two half-days a week to the primary care clinics connected with that discipline. Patients being discharged from the ward were given appointments to return to see the student who cared for them on the ward in a follow-up clinic. Discharged patients from catchment areas with established dispensaries were sent back for follow-up there, and the ward-based student was required to contact the dispensary-based student regarding details of patient to be followed up. Similarly, dispensary-based students referring patients to the hospital for admission were required to contact ward-based students to apprise them of the patient before arrival.

In these ways did the PBMOTP attempt to broaden the training experiences of its students, not just to include both hospital-based and community-based experiences, but also to demonstrate to students that the two should not be thought of separately, but instead should be part of a seamless continuum. Students learn only by doing: no amount of telling students what good medical care consists of will convince them as easily as will having them actually do what is being talked about. Whereas students trained only in hospital-based rotations tended to view the malnourished child or the complicated delivery or the diabetic ulcer or the myocardial infarction as a challenge to their diagnostic and treatment skills, what students should come to appreciate is that each of these clinical challenges represents ultimately a failure of Pediatrics to prevent the malnutrition, of Obstetrics to prevent the preterm delivery, of Internal Medicine or Surgery to prevent the complications of diabetes and hypertension. When students are responsible, not only for the acutely ill patient, but for the follow-up of the patient on discharge from the hospital, for visiting the patient at home to meet the family and see the homestead, for familiarizing themselves with the other family members who may include an expectant mother not yet attending ANC or an inadequately immunized child, they gradually come to see the value in establishing long-term relationships between health care providers and community members. They gradually come to feel themselves at least as equally responsible, with the community itself, for the health of the community.

The PBMOTP, had it continued in its mission, would certainly have seen even further evolution of the Community Health curriculum. Information sharing between the hospital and the dispensaries was a perennial and as yet not fully resolved problem. Tracking of patients was often cumbersome and incomplete. The connection between the self-directed research project and true quality assurance on a

regular basis remained to be firmly established. Few if any dispensary boards included women among their members, though women (and their children) make up the largest proportion of dispensary encounters. And once those problems had been addressed, and resolved, others would certainly have arisen.

Conclusion

How does one gauge the success of a community health curriculum, the success of having instilled in medical students the concepts of community health? There are probably several parameters to measure success concretely: Have the immunization rates of the children increased? Has attendance at ANC improved? Are the rates of diabetes and hypertension, and of their complications, decreasing? The data for some of these can be obtained, and should form one of the bases for measuring the success of a program. Measures of success lie in other directions as well. The Pohnpei Department of Public Health has recently been reorganized into the Division of Primary Health Care, under the direction of a graduate of the PBMOTP, who is joined in the Division by three of her colleagues from the PBMOTP, each in charge of one or two of the peripheral dispensaries. The challenges they face in making the dispensaries sites of genuine community health care provision are certainly formidable, though the students and staff of the PBMOTP have shown that it can be done. The ultimate measure of success, however, probably lies in the community itself: does the community feel that its needs are being met, and is it willing to work to assure the continuing presence of the dispensary in its midst? A recent initiative to renovate a community building being used as a dispensary, on a former CWW site, and using funds from an outside source, met with an overwhelming response from the community: the new building was finished in less than two weeks, with all of the labor done by members of the community [8]. Certainly this response is not characteristic of all of the communities in which the PBMOTP has worked, but represents an encouraging trend.

The PBMOTP over the years developed a curriculum which sought to meet the needs of the communities to which its graduates would eventually be assigned. While the PBMOTP itself has closed, the need for ongoing training of community health physicians for the region continues. It is hoped that the momentum begun in Pohnpei, toward decentralization of health services and provision of community-based health services, will continue and spread to the neighboring jurisdictions.

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References

1. Osborn LM. Implementing community-based education: essential elements and recommendations. *Pediatrics.* 1996; 98:1264-1267
2. Finau S A. Pacific health: an analysis to train new leaders. Asia *Pacific Journal of Health*; 1992/1993; 6(2): 46 - 53.
3. Finau S A. Health care in the Pacific: who would bell the cat? *Pacific Health Dialog*, 1994; 1(1): 44 - 56.
4. Finau S. *PBMOTP Discussion Document: Overview of Community Health Program, 1989.*
5. Hunton R. *PBMOTP Document: The Curriculum, 1993.*
6. *Report on the First Conference: Community Health in Medical Education, Pohnpei, 19-22 November 1991.* A South Pacific Commission Document by S.A. Finau.
7. Pointer A. Hands-on training in the management of primary care facilities: a PBMOTP initiative. *Pacific Health Dialog.* 1995, 2 (1): 161-168
8. Robertson A, Upson D, Dever G, Tipene-Leach D. Community-based research and medical education: the PBMOTP experience with dengue, leptospirosis, TB and intestinal parasites. *Pacific Health Dialog*, 1996; 3(2):179-189.

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" My students are dismayed when I say to them, 'Half of what you are taught as medical students will in ten years have been shown to be wrong, and the trouble is, none of your teachers knows which half!' "

C. S. Burwell (1893 - 1967)

British Medical Journal, 1956; 2:113