

Old school, new programme: the Fiji School of Medicine 1994

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Introduction

Fiji became a British Colony on 10 October 1874. During the following year, an epidemic of measles killed about a third of the young colony's 120,000 population. The consequent labour and manpower shortages necessitated the shipment of Indian indentured immigrants to work the sugar cane farms. The first shipload of labourers reached Fiji in 1879, bringing with it smallpox and cholera. With the devastation from the measles epidemic still fresh in his mind, Dr William MacGregor, the Colony's Chief Medical Officer, placed the ship on quarantine for three months whilst he trained three young Fijian men and sent them out to vaccinate communities against smallpox.

With the help of his two other medical officers and his Fijian vaccinators, Dr MacGregor soon discovered that the health status of the young colony was not only appallingly dismal, but also rapidly deteriorating and therefore needed urgent corrective management to avoid a potentially calamitous situation. Having been frustrated repeatedly by the lack of positive reaction to his frequent requests for more doctors, he finally sought and obtained approval to train some of his vaccinators to become "native practitioners", the event which marked the beginning of Fiji School of Medicine (FSM) although at that time it was called the Suva Medical School.

The first three graduates from that institution came out in 1888. By 1928 when the institution became known as the Central Medical School, a total of 122 graduates have been produced, including two Tokelauans (known as Union Islanders then), one Samoan, one Fiji Indian and three Rotumans. There was another change in 1961 to its present name and the original three year course evolved through a series of "upgrading" and lengthening to change from three to four years in 1934 then again to five years in 1952, and finally to seven years at the beginning of 1982. The present programme which is the substance of this paper was introduced in 1991, but shortened the course to six years.

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The undergraduate medical education and training programme

The early graduates were primarily trained to deal with primary care, immunization and the promotion of a healthy physical environment, in other words, to be Primary Health Care (PHC) practitioners. The original programme constituted three years of practically oriented "on the job" apprenticeship type training. That original programme was subsequently "upgraded" and progressively extended from three to four years (Certificate), then five years (Diploma) and finally seven years for the Bachelor of Medicine and Bachelor of Surgery (MBBS) degrees granted by the University of the South Pacific.

Such "upgrading" however focussed almost entirely on the preclinical components of the course through the successive introduction and extension of various disciplines in the general, basic and paraclinical sciences. In other words, there was a refocussing of its training and educational approach from the problem based, interdisciplinary and practically oriented clinical model to the highly theoretical, intensive and extensive knowledge based multi-disciplinary, biomedical model. Community medicine or public health was only minimally dealt with and was taught at the end rather than at the beginning of training. Because the clinical component of the training programme was almost totally hospital-based, the skills and knowledge which students learned and acquired were virtually confined to the provision of secondary or tertiary health care. In effect therefore, graduates from that undergraduate programme were largely uninformed about community based health care because their clinical skills and knowledge base was very firmly focussed on hospital-based care. Their competencies and capabilities were determined by the biomedical model of disease based management and understanding of the pathophysiological basis of the health problems rather than a holistic approach to those health problems, in terms of the individual as a patient, a member of a family and a community.

Student failures and high attrition rates

With the expanding number of disciplines and a greater emphasis on a broadened theoretical knowledge base during the early preclinical years of the training programme, there was a progressive and disproportionate increase also in the number of students who failed and dropped out. During the seventies and the eighties for example, this problem was so rampant that up to seventy percent of

Fijians and regional students dropped out at the end of their first year by failing general science, with a further 40% of those remaining dropping out later because of their inability to pass basic sciences. In fact, the serious shortage of doctors currently affecting Fiji and neighbouring Pacific countries, can be directly attributed to this high attrition rate of medical students.

Inappropriate training

Other deficiencies in the undergraduate training programme included the predominant emphasis on hospital based care during clinical training and the virtual absence of community based training in PHC. Graduates were therefore not only incompetent and inadequately prepared for community based health care services, but were additionally unmotivated for such a role because their educational and training experiences had largely influenced their professional preferences in favour of hospital based healthcare and the biomedical model of disease and medical practice.

The Fiji government's core policy since independence has been to stimulate and encourage economic growth. Government therefore fully subscribes to the precept that a healthy and productive population is an essential prerequisite for an outward looking economy engaging competitively in world markets. In this context, Fiji fully supports the global goal of "Health For All By the Year 2000" and, in keeping with the World Health Organization's (WHO) recommended strategies for achieving this, has realigned its health care policies towards an expanded and enhanced PHC service. Unfortunately, however, the medical training programme at FSM was hospital based and treatment oriented rather than PHC focussed.

The promotion of PHC

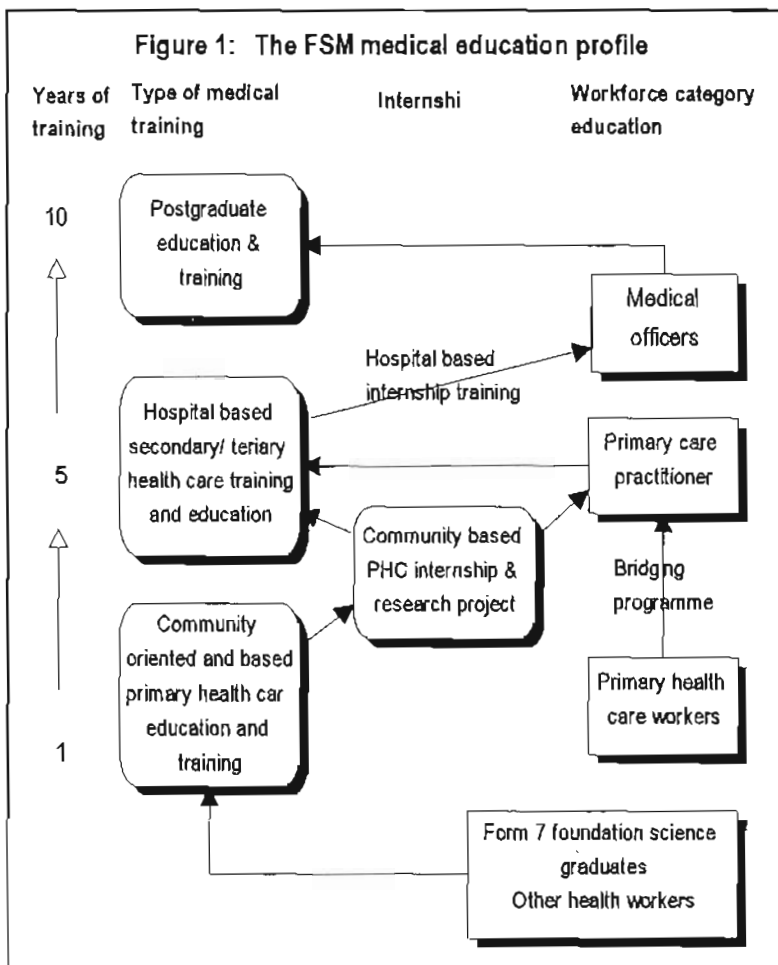
During the late seventies and early eighties, the Ministry of Health (MOH) was extensively promoting PHC in accordance with WHO strategies and recommendations. The Village Health Worker (VHW) or Primary Health Care Worker (PHCW) concept was accepted and put in practice through the training of the VHW and other communal health promotional activities. Many villages or rural communities had their own health committee, VHW and for many of them, a village dispensary. There was, therefore, a significant change in direction towards the decentralization of health care delivery because of greatest and more effective interaction and cooperation between the health sector and the rural community which was facilitated and sustained by the VHW's link role in this interactive relationship. Fiji's achievements in this area has been lauded and appropriately recognised by WHO on a number of occasions through the award of WHO - PHC prizes.

Undergraduate medical training response

The need to address these exposed weaknesses and the mismatch between the MBBS programme and the desire of the MOH to promote and focus on PHC training became critical following the sociopolitical watershed events of the 1987 coups which precipitated two additional major problems:

- the quantum loss of health manpower from government service because of out migration or entry into the private sector;
- the near closure of the FSM through the withdrawal of faculty staff who were financed by external assistance, together with the recall of students by some Pacific countries.

WHO was consequently approached for assistance to revitalize the FSM and prevent its eminent shut down. A Medical Educational Task Force was accordingly commissioned by WHO and in follow-up discussions with officials of the MOH and FSM, a plan of action for the revitalization of the FSM as a regional institution for the training of health care personnel for the Pacific was developed.



Essentially, that plan of action recommended extensive restructuring and substantial operational changes in three areas; academic and curricular reform; administrative and operational reform; plus the upgrading of training facilities through the construction of a new physical plant.

Curricular reform

The recommendation of that Task Force called for change of the medical educational model from the classical biomedical, multi-disciplinary, sequentially hurdled and extensive knowledge-based approach, to that of an integrated, interdisciplinary, problem and competency based approach as well as early exposure to clinical training. To formulate and develop this change, the University of Newcastle's problem based medical training programme and the Pacific Basin Officers Training Program's (PBMOTP) experiences were used as guidelines.^{1,2}

Mr Brooke Murphy, Fellow in Medical Education at Newcastle, together with the author, who was then the Associate Director of the PBMOTP, were appointed as WHO Short Term Consultants to work with faculty of the FSM in developing the new curriculum. The result of this is a six year training programme that is sequentially structured into two tiers (or three if postgraduate education and training is included) of appropriate, competency and problem based, student-centred integrated training and education which focusses heavily on active participation and practical hands-on learning by students. Figure 1 illustrates the broad profile of the course.

There are three strands or concentration areas on which student performance and success or failure are assessed throughout the course for progress and promotion. These are their professional and academic knowledge base; clinical skills; and community health. Table 1 gives an outline of these strands.

Primary care practitioner

In addition to on-going and continuous assessment, there are summative assessments at the end of year 1 and 2, and a qualifying final evaluation at the end of year 3. Those who pass at the end of year three are awarded a PHC Diploma which qualifies them to undertake a twelve month internship in PHC at a rural health care facility within their own communities, as Primary Care Practitioners (PCP). They are also required to undertake and scientifically write up an applied PHC research project during this practical placement.

Year	Academic professional knowledge base	Clinical skills	Community health
1	<ul style="list-style-type: none"> - Small group & self-directed student-oriented learning - Management 	<ul style="list-style-type: none"> - Interviewing/ examination - Communication skills 	<ul style="list-style-type: none"> - Biostatistic/ epidemiology - Social/ behavioural sciences - Health information and research
2	<p>Paper problems:</p> <ul style="list-style-type: none"> - Aetiology of ill-health - Organ system spirals 	<p>Attachments:</p> <ul style="list-style-type: none"> - Urban health care - Rural health care - Maternity - MCH/WBC - Special courses 	<ul style="list-style-type: none"> - Primary health care provision - Health education and promotion - Environmental science/ occupational health
3	<p>Primary health care (PHC)</p>		<ul style="list-style-type: none"> - Disease control - Health development - Management/ economics - MCH
4	<p>PHC internship in student's own community and rural health care facility</p> <ul style="list-style-type: none"> - Consolidate and expand knowledge base and clinical skills - Applied health reasearch project on primary care health 		
5	<ul style="list-style-type: none"> - Paper problems on organ system for secondary and tertiary health care problems - clinical specialities 	<p>Hospital-based rotation/ attachment</p> <ul style="list-style-type: none"> - medicine - surgery - obsetric & gynaecology - paediatrics - psychiatry - specialities 	<p>Health financing</p> <p>Health management</p>
6			<p>Group project on health care cost</p>

In order to ensure that the PCP are appropriately supervised during their PHC internship and applied research activities in fourth year, rural medical officers from different communities where students were recruited from, have been identified and brought together initially for a two week Workshop and Conference on PHC Supervision and Applied Health Research Methodology to prepare them as Clinical PCP Instructors and Honorary PHC Supervisors to the FSM. The original group which met in 1993 consisted of 12 from Fiji, 2 each from Samoa, Tonga, Solomons and Vanuatu, and one each from American Samoa, Cook Islands, Kiribati and Tuvalu. The second meeting has already taken place and it is intended that follow-up workshops will take place annually so that proper supervision of PCP will not be compromised in future.

When PCP are assessed to be satisfactory in terms of their PHC clinical performance and written research projects, they can then be registered as PCP who can either enter the work force or return to the FSM to complete the final two years of hospital based secondary and tertiary health care education and training which then qualifies them for the MBBS degree when they succeed. The final problems for their knowledge base will be the final spiral of the organ system and clinical skills training which will be the usual hospital ward attachments in medicine, surgery, obstetrics and gynaecology, paediatrics, psychiatry and other sub-

specialities. Community health will deal with health management, health financing and economics, with group research projects focussing on the cost of health care.

The profile of professional competencies that the PCP is expected to have is given in the Appendix at the end of this paper.

Future projections

For curriculum reform and redevelopment, the imminent need is to introduce the "third tier" of the programme and institutionalise postgraduate education and training as part of the FSM's role. Although not included in the original curriculum reform plan and developmental activities during the 1989-1990 period, the need to develop such a programme was clearly identified and very strongly recommended by a two day WHO Workshop in November 1990. The FSM and the MOH fully support that recommendation and have accordingly drawn up preliminary plans to develop a four year Master of Medicine course, in the disciplines of Obstetrics and Gynaecology, Paediatrics, Internal Medicine, Surgery, Community Health, etc.

Administrative reform and physical redevelopment still remain to be implemented because of a number of planning difficulties and procedural constraints. Political and bureaucratic assurances of support for such changes however appear to be consistently positive and this 108 year old institution still remains optimistic and hopeful that the 1989 WHO Plan of Action will be fully implemented soon.

Regional nature of FSM

To the end of 1993, nearly 1,000 medical officers have been graduated by the FSM, over one-third of whom are from other Pacific countries (See Figure 2). Similarly, over 1,200 health workers have graduated from dental studies and the other six paramedical training programmes (e.g. health inspectors, dietitians, pharmacists, physiotherapists

Table 2: Profile of student enrolments 1993/1994

Type of student	1993	1994
Regional Medical Students	62	70
Regional students in other programmes	56	65
Total Regional Students	118	135
Total FSM enrollment	454	463

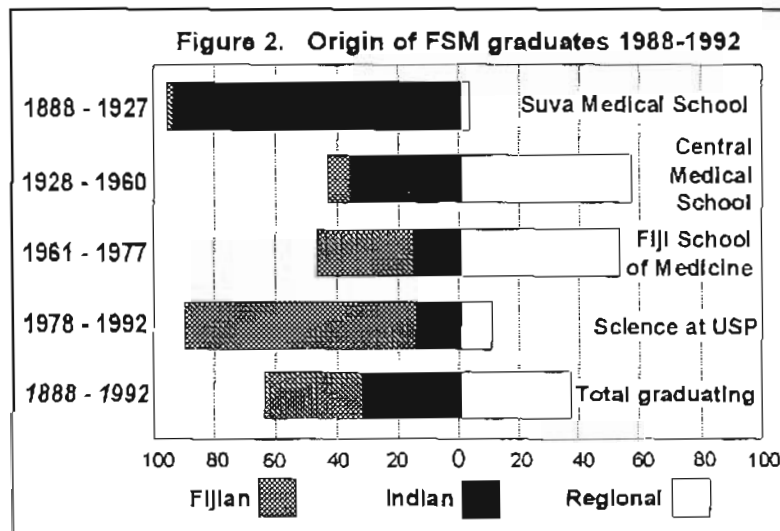
and lab/X-ray technicians) also belonging to other Pacific countries. It is therefore obvious that the FSM is neither a solely Fijian institution nor indeed just a Medical School.

Table 2 gives the profile of FSM student enrolments in 1993 and 1994. This further supports that FSM is not just a medical school or a Fijian national institution only, even though the government of Fiji pays for most of the cost of running the institution. Table 3 gives the numbers of students in FSM in 1994 by country of origin.

WHO's 1989 plan of action was for the revitalization of the FSM as a "Centre for Education of Health Personnel in the Pacific". Therefore, WHO clearly sees FSM as a "Regional Institution", a view-point which all donor countries and agencies should foster, because Fiji's socio-economic status disqualifies FSM from receiving aid on bilateral inter-governmental cooperation basis. As a regional institution however, it is eminently qualified to receive such aid.

Table 3: Number of students in all courses offered by FSM in 1994 by country

Country of origin	Number of students
Fiji	328
Samoa	28
Solomon Islands	26
Vanuatu	19
Tonga	12
American Samoa	12
Tuvalu	9
Cook Islands	8
Federated States of Micronesia	8
Kiribati	5
Tokelau	3
Marshall Islands	2
Niue	2
Burma	1
Total	463



Regionalization and autonomy in the same way that the University of the South Pacific functions would therefore make a lot of sense for the FSM. Perhaps the "Pacific Institute of Health Sciences" with additional breakdown of administration into "Schools" of Medicine, Dentistry, Environmental Health and Paramedical Studies should be the calibre of change to advocate for because it will also provide the appropriate platform for including Nursing and Post-graduate Studies as supplemental schools when such needs arise.

References

1. Dever G. An alternative physician training program in the Pacific. *Pacific Health Dialog*, 1(1): 71-73.
2. Finau SA. Pacific health: an analysis for training new leaders. *Asia Pacific Journal of Public Health*, 1992/1993; 6(2): 46-53. □

Appendix

A Profile of the Primary Care Practitioner

The following broad areas of competency apply to the Primary Care Practitioner (PCP) at the time of certification after three years training.

1. Recognition, understanding, management and prevention of disorders.

The PCP will be able to:

- recognise and understand the common emergency, acute, epidemic and chronic disorders of the region. The disorders will be identified through the Disease Profile¹ of patients as they present in the primary care setting.
- achieve this by using problem solving strategies, history taking and physical examination skills, and laboratory tests which are available in the health centres.
- manage a range of disorders from the Disease Profile using basic surgical techniques, selected drugs, and behavioural counselling techniques.
- carry out pre- and post-natal care, undertake family planning advice and procedures, perform normal deliveries, and run well-baby clinics.
- perform minor surgery including emergency dental treatment.
- deal with specified uncommon but life-threatening conditions.
- consult others and refer patients appropriately to secondary institutions, based on a recognition of personal clinical limitations.
- develop treatment plans which consider the whole patient in the context of the family and community.
- adopt strategies to prevent disease by patient counselling, assessing compliance, contact tracing and screening techniques.

2. Health promotion and intervention.

The PCP will be able to:

- identify the need for health promotion based on local epidemiological evidence.
- plan, implement and monitor health promotion and health education activities in cooperation with the community and other members of the health team.
- stress the importance of lifestyle and environmental factors in health promotion, using appropriate communication techniques, including public speaking.
- use the resources of government and non-governmental agencies in developing health promotion and health education activities.
- participate in the training of other members of the primary health care team.

3. Self directed learning.

The PCP will be able to:

- take responsibility for learning by seeking out available information, resources, and formal continuing education opportunities.
- critically analyse and apply new knowledge to daily practice.
- organise study time in order to minimise personal and family stress.

4. Health administration and management.

The PCP will be able to:

- administer a health centre by undertaking budgeting, inventory and stock control, personnel management, record keeping and equipment maintenance.
- remain familiar with the local structure of health care delivery.
- keep accurate and accessible patient records and administer the record system of the health care.

5. Interpersonal and interprofessional relationships

The PCP will be able to:

- recognize personal strengths and limitations.
- communicate effectively with patients, their families, community members, colleagues and other civil servants.
- use appropriate language, diplomacy, and an understanding of social and cultural traditions.
- recognize the ethical and legal boundaries applied to the practice or primary health care.
- understand the roles played by other members of the primary health care team, government and non-government agencies.

6. Understanding people, communities and populations

The PCP will be able to:

- demonstrate a knowledge of the patterns of disease in his or her community.
- use epidemiological methods of population research and analysis to contribute to the disease profile of the region.
- apply where appropriate traditional community approaches to health.

¹ The Disease Profile refers to a list of common symptoms, disorders and health problems of the region prepared by Dr Robertson.