

Fiji School of Medicine Diploma in Pharmacy Graduates, Ten Year Analysis – where are they now?

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Abstract

The Fiji School of Medicine (FSM) has been delivering pharmacy education since 1944. The philosophy of education provision changed from pharmacy technician training to pharmacist education in 1991 and since that time, pharmacy graduates from FSM have influenced the practice of pharmacy in Fiji and in other countries of the Pacific Region. FSM Diploma in Pharmacy graduates now comprise forty six percent of pharmacists active in the private sector of Fiji. Ten of sixty eight Fiji pharmacy graduates (fifteen percent) since 1993 have emigrated from Fiji.

This paper describes the progress to date in pharmacy education philosophy and tracks the current employment and emigration of all pharmacy graduates since the introduction of pharmacist education (replacing the then pharmacy technician training) in 1991. (PHD 2006 Vol 13 No 2 Pages 151 - 154)

Introduction

The Fiji School of Medicine was established as the Suva Medical School in 1885, originally having existed to train "Native Practitioners" over a three-year period. This approach arose from the success of Fijian males having been trained as public vaccinators to address epidemics of measles and smallpox which had resulted in the deaths of 40,000 Fijians (approximately one third of the population at that time) following an official visit by Ratu Cakobau to Sydney in the Colony of New South Wales during 1875.¹

Development at FSM has continued and today it is an active tertiary health education institution for the Pacific Region, offering a range of programs at both undergraduate and postgraduate levels through on-site and flexible (distance) learning opportunities.

Since 1998 FSM has been an autonomous regional tertiary health education institution offering a six-year problem-based-learning medical program. There are Master Degree programs in Anaesthetics, Medicine, Obstetrics & Gynaecology, Paediatrics, Public Health, Surgery, with undergraduate degree and diploma programs in Dietetics, Environmental Health, Laboratory Technology, Pharmacy, Physiotherapy, Public Health, Radiography.

Unfortunately the FSM records do not record the exact date of commencement for pharmacy education, although anecdotally the date is given as 1944.²

The Practice of Pharmacy

The profession of pharmacy has a long history and can be traced back in many cultures to the beginning of recorded civilisation. Early references to pharmaceutical treatment can be found in Arabic, Chinese, Greek and other European texts. In many countries, the "healer" who was frequently a herbalist and had gained his/her knowledge from another family member, was highly respected within the local community.

In the English-speaking world, pharmacists were originally known as apothecaries and as well as mixing potions undertook minor surgery. In the late 18th Century, William Withering discovered that the digitalis plant was beneficial in the treatment of heart failure.

This was the commencement of modern allopathic therapeutic practice as we know it today. The discovery of penicillin, and subsequently of other antibiotics, has since the 1940s ensured the development of potent medicines to both cure and prevent many illnesses which affect humankind. The time-scale for developments in pharmacy education reflects that of developments in therapeutic practice.

The pharmacy profession today is based on ethical concepts of service to the community. Many people, when they think of pharmacy, automatically focus on their local pharmacist or chemist shop near their home. This is the practice of "retail pharmacy" and is perhaps the most visible branch of the profession. Such pharmacists

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have to balance the demands of professionalism and successful business management.

The next most visible branch of the profession is that of hospital pharmacy practice. People attracted to hospital pharmacy as a career enjoy the continuous learning environment coming from frequent interaction with their medical and nursing colleagues. They may also be less inclined towards business management, however increasingly, they must be good financial managers so that they can manage a budget and provide input into health economic decisions concerning new and existing drug therapy.

Pharmacists are also to be found in research and development within the pharmaceutical industry and as academics in health or general tertiary education institutions. They are actively involved in rational drug use programs and the pharmacist as prescribing advisor is now the dominant model in the United Kingdom. The main avenues for pharmacist employment in developing countries continue to be in retail pharmacy (the private sector) and in hospital pharmacy (the public sector). Although FSM became an autonomous institution in 1998, employment as a pharmacy academic in that institution is for the purpose of this paper, defined to be public sector employment.

History of Pharmacy Education at FSM

Commencing in year 1944 FSM established a two-year course for pharmacy technicians with a qualification of Certificate in Pharmaceutical Technology.² These graduates were employed in the public sector as assistant pharmacists under the supervision of a registered pharmacist. In some remote areas of Fiji, pharmacy technicians were employed in hospitals and health centres without supervision, to provide a basic drug supply service from a restricted range of drugs on the Fiji Essential Drug List.

In 1991, the Certificate in Pharmaceutical Technology course was discontinued and a three-year Diploma in Pharmacy program based on the diploma offered at the Central Institute of Technology in New Zealand was introduced. FSM pharmacy education philosophy had changed from training technicians to educating pharmacists. There were eight initial graduates with Diploma in Pharmacy at the end of 1993 but as the Fiji Pharmacy and Poisons Act had not been adjusted, these graduates were not able to apply for registration as Pharmacists in Fiji. The Act at that time restricted

pharmacist registration to those pharmacists who had qualified in one of the countries of the "old" British Commonwealth.³

In 1997, the existing Pharmacy and Poisons Act was amended to provide a mechanism for the registration as pharmacists of graduates with Diploma in Pharmacy from the Fiji School of Medicine.⁴ Following a one-year competency-based internship in hospital or retail pharmacy, graduates can now apply to the Pharmacy and Poisons Board for registration as a pharmacist in Fiji. The two-day assessment examination is rigorous and includes two papers from the Australian Pharmacy Examining Council (APEC), an extemporaneous practical examination, a non-extemporaneous dispensing practical examination, a pharmaceutical calculation examination paper, and a series of role-play pharmacist/prescriber/patient scenarios. In addition, the candidate must present

and defend a major research project which has been undertaken during the internship year.

Development in the Diploma in Pharmacy program at FSM has continued with the addition of new courses, in preparation for introduction of a four-year Bachelor of Pharmacy degree with first student intake programmed for 2005.

Method

For this cross-sectional review, both quantitative and qualitative approaches were undertaken. Information was first sought from the FSM Academic Office on Diploma in Pharmacy graduates. Figures and names were then checked with the Fiji Ministry of Health pharmacist registration authority and finally confirmed through verbal discussion with personally known graduates from each year since the pharmacy diploma commencement year of 1991.

Results

Since the commencement of the Diploma in Pharmacy program in 1991 there have been seventy seven graduates.

Of the sixty eight graduates who are Fiji citizens, twenty five (thirty seven percent) are now registered pharmacists in Fiji.

Of the seventy seven graduates since 1993, nine (twelve percent) have come from Pacific Island Countries other than Fiji.

The main avenues for pharmacist employment in developing countries continue to be in retail pharmacy (the private sector) and in hospital pharmacy (the public sector)

Table One: Diploma in Pharmacy Graduates by Year

	1993	1994	1995	1996	1997	1998	1999	2000	2001	Total
Graduates	8	12	8	7	19	7	8	5	3	77
Registered	1	1	5	3	10	3	2	0*	0*	25

* At the time of writing, results from registration assessment for these candidates are not yet finalised.

Table Two: Diploma in Pharmacy Graduates Registered (Fiji Citizens)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	Total
Graduates	7	10	7	6	19	4	8	4	3	68
Registered	1	1	5	3	10	3	2	0*	0*	25

* At the time of writing, results from registration assessment for these candidates are not yet finalised.

Table Three: Diploma in Pharmacy Graduates by Country

	1993	1994	1995	1996	1997	1998	1999	2000	2001	Total
Fiji	7	10	7	6	19	4	8	4	3	76
Regional	1	2	1	0	0	3	0	1	0	9
Cook Islands	-	-	1	-	-	-	-	-	-	1
Micronesia	-	1	-	-	-	-	-	-	-	1
Niue	-	-	-	1	-	-	-	-	-	1
Samoa	-	-	-	-	-	1	-	-	-	1
Solomon Islands	-	1	-	-	-	-	-	1	-	2
Tonga	-	-	-	-	-	1	-	-	-	1
Tuvalu	-	-	-	-	-	1	-	-	-	1
Vanuatu	1	-	-	-	-	-	-	-	-	1

Table Four: Employment of Registered Pharmacist Graduates by Sector in Fiji

	1993	1994	1995	1996	1997	1998	1999	2000	2001	Total
Now Registered	1	1	5	3	10	3	2	0*	0*	25
Public	1	-	1	1	1	1	1	-	-	6
Private	-	-	3	2	7	2	1	-	-	15
Further Study	-	-	1	-	-	-	-	-	-	1
Emigrated	-	1	1*	1*	2	-	-	-	-	5

* not registered in Fiji but have attained registration in Australia.

Table Five: FSM Graduates who have Emigrated from Fiji

	1993	1994	1995	1996	1997	1998	1999	2000	2001	Total
Fiji Graduates	7	10	7	6	19	4	8	4	3	68
Emigrated	1	3	1	1	4	0	0	0	0	10

Of twenty five Fiji registered pharmacist graduates, fifteen (sixty percent) are now employed in the private sector.

Of the total sixty eight Fiji Diploma in Pharmacy graduates, ten (fifteen percent) have emigrated from Fiji.

Discussion and Conclusion

The seemingly low proportion of thirty seven percent registered pharmacists to total graduates (Table Two) is due to several factors. Eight graduates are still completing their internship requirements and some of these will presumably acquire registration at the next meeting of the Pharmacy & Poisons Board.⁴

The Public Service Commission (PSC) has not yet formally recognised the educational and skills difference between pharmacists and pharmacy technicians. As a result, promotion and salary progression within the public health sector for pharmacists and technicians are based on years of service rather than on merit. Some graduates decide not to subject themselves to the rigor of the registration assessment as over time, they can float up the salary scale to a certain point without registration as a pharmacist. It is considered that this approach by the PSC is deleterious to professional pharmacy development.

Other graduates perceive that their qualifications are not recognised by the Ministry of Health and PSC and

therefore leave public sector employment for the private sector where their qualifications are recognised. It is considered that the public sector will continue to lose its most skilled young graduates to the private sector until such time as the Ministry of Health and the PSC put into place career progression grades which satisfactorily distinguish between pharmacists and pharmacy technicians and recognize the pharmacist through salary payments which compare more favourably against private sector salary payments. At the present time, one description of Pharmacy Officer (PH) covers the professional pharmacist, the pharmacy intern and the support technician. It is considered that this single grouping classification should be separated into Pharmacy Officer (PH), Pharmacy Technician (PT) and Pharmacy Intern (PI). Whilst the first two of these proposed new classifications would confer permanent employment status, the category of Pharmacy Intern (PI) would be temporary employment which would automatically terminate at the end of one year, thus making employment and experiential training space for new graduates and further encouraging completing candidates to apply for registration as a pharmacist in Fiji.

Pharmacy graduates from Regional Countries (Table Three) include people from the Cook Islands, Federated States of Micronesia, Niue, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu. Current students include people from the Marshall Islands, Samoa, Solomon Islands, Tonga, Vanuatu. As a regional health education institution, FSM is indeed increasing impact on pharmacy practice throughout the Region over time. These countries will need to develop or adjust their legislation so that they can establish a mechanism for registration as pharmacists, Diploma in Pharmacy graduates from Fiji.

The large number of graduates (nineteen) in 1997 (Table Two) is a combination of eight standard graduates plus eleven holders of the Certificate in Pharmaceutical Technology who completed a once only one-year bridging course to Diploma in Pharmacy.

From a total of twenty five Fiji registered pharmacists who graduated from FSM, three (twelve percent) have emigrated. From a total of sixty eight Fiji Diploma in Pharmacy graduates ten (fifteen percent) have emigrated.

From a total of twenty five Fiji registered pharmacists who graduated from FSM, fifteen (sixty percent) are now employed in the private sector. For FSM as a tertiary health education institution, this is a pleasing result as it indicates that graduates are acceptable to the private practice pharmacist owners. Six of the fifteen pharmacists in private practice now own their own pharmacy and provide a pharmaceutical service to their local community.

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There are seventy one pharmacists on the Fiji Register of Pharmacists⁵ however only fifty five are in active practice in the existing thirty five retail pharmacy premises in the country. This indicates that ten years after introduction of pharmacist education in Fiji, graduates from FSM comprise forty six percent of the total number of pharmacists who are active in the private sector.

In conclusion, FSM has become the major educator for pharmacy practice in the island countries of the Pacific Region. In the pharmacy profession, the concept of education for the Region, by the Region is firmly established at this regional health education institution.

References:

1. History of Fiji School of Medicine. FSM Archives.
2. Samisoni J. Personal Communication (July 2002).
3. Fiji Pharmacy and Poisons Act [1 January 1938].
4. Fiji Pharmacy and Poisons (Amendment) Act, 1997.
5. Ministry of Health, Pharmacist Register.

One machine can do the work of fifty ordinary man. No machine can do the work of extraordinary man.

(Elberd Greem Hubbard, 1856-1919)