

Nursing, midwifery and allied health education programmes in Afghanistan

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Background: In 2001, Afghanistan was the centre of the world's attention. By 2002, following 23 years of internal conflict – including Soviet invasion, civil war and Taliban rule, plus 3 years of drought, the country was just beginning the process of re-establishing its internal structures and processes. In the health sector, this included the revival of the Ministry of Health (MOH). The MOH was assisted in its efforts by multiple partners, including the UN, donor and aid agencies, and a variety of non-governmental organizations. The author served as a consultant to the Aga Khan University School of Nursing, in partnership with the World Health Organization and the MOH, as it took on the work of strengthening nursing, midwifery and allied health education programmes for Afghanistan.

Aim: This paper will focus on the initial assessment of that sector. It will describe the situation as it existed in 2002, by examining the Kabul Institute of Health Sciences (IHS) and then turn briefly to the current state of affairs.

Conclusions: Despite the uncertainties of daily life in Afghanistan, the country has successfully initiated the reconstruction process. In the health sector, this can be seen in the work done at the Kabul IHS. Progress has been made in a number of areas, most notably in development and implementation of nursing and midwifery curricula. However, no one would deny that much more work is needed.

Keywords: Afghanistan, Health sector, Nursing/ midwifery education, Reconstruction

Introduction

The world's attention has been riveted recently to the turmoil and strife created globally by civil conflict, war, and terrorism in places such as Bosnia, Chechnya, Iraq and Afghanistan. The spotlight shines brightest while the conflict is active, such as it is now in Iraq. But what happens, once the spotlight has moved on, to countries faced with the monumental task of 'reconstruction' (Barakat 2002; Goodson 2003; *The Economist* 2003; USAID 2002b) in the face of ongoing uncertainties and shattered realities? Understanding this phenomenon is part of the challenge nurses face in developing a broader, more global perspective on nursing and health issues.

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In 2001, Afghanistan was the centre of the world's attention. Following 23 years of internal conflict – including Soviet invasion, civil war and Taliban rule, and 3 years of drought, the country has begun the slow process of re-establishing its internal structures and processes. In the health sector, this included the rejuvenation of the Ministry of Health (MOH) and all its branches: service, education, administration and research/data collection (Afghanistan MOH 2002a; USAID 2002a; US Department of State 2002; WHO 2002a; WHO/EMRO 2002).

In this article, attention will be focused on the education sector, specifically nursing, midwifery and allied health programmes. Covering the period from 2001 to 2004, the focal point will be the situation as it existed at the start of the reconstruction process (2001–02) and then will turn briefly to the current state of affairs.

Overview

By all standards, Afghanistan is one of the least developed countries in the world today.¹ Life expectancy is 42 years for males and 43 years for females. The per capita income from GNP is approximately US\$180 and the adult literacy rate is 16% overall, 5% for women. In a country with a population of approximately 28 million, only 3% of the national budget is spent on health. An agrarian economy has been hampered by years of war and drought (Asia Development Bank 2003; CIA 2004; Popal 2004; UNDP 2004; UNICEF 2003; WHO 2002b, 2003; WHO/EMRO 2003).

Afghan women have borne an especially hard burden. The birth rate is estimated at 47.27/1000 live births (WHO/EMRO 2002) and the population growth rate at 4.82% (CIA 2004). The total fertility rate is 6.8 births/woman (UNDP 2004). Less than 15% of women have had access to any antenatal care in any pregnancy. Over 70% of deliveries are done at home, but trained birth attendants are present only 5% of the time (CDC et al. 2002; Physicians for Human Rights 2002; UNICEF 2002). The majority of maternal deaths occur within the first 24 h after delivery (UNICEF 2002) and the maternal mortality rate (MMR) is figured to be between 1600 and 1700/100 000 live births – the highest in the world (Asia Development Bank 2003; UNDP 2004). Children are also at high risk. The infant mortality rate (IMR) is 165/1000 live births and the under 5 mortality rate (u5MR) is 257/1000 live births (UNDP 2004; UNICEF 2003). Approximately 70% of the population lives with chronic malnutrition (Asia Development Bank 2003).

The public health system in the country is in disarray. The Soviet system in place for the last 25 years was not generally responsive to community health needs. The present workforce is in desperate need of refresher training. Health care services are weak at best. There is no equipment or supplies beyond what donors are providing, inadequate documentation of care, no real infrastructure, lack of safe water, adequate drainage or reliable electricity (Afghanistan MOH 2002d; Al-Darazi et al. 2002; AREU 2002; Asia Development Bank 2003). The number of hospital beds/10 000 population is 3.9 (WHO/EMRO 2003). The MOH (Dr N. Malang, Human Resource Development Unit MOH, personal communication 2002) has 23 000 health positions in the country but only 15 000–16 000 are filled. Of the total health workforce, only 21% are women. Greater than 50% of all health facilities in the country have no labour and delivery services. Basic health centres (BHC) are scattered throughout the country but are in various states of operation. There is one BHC

for every 40 000 population in the central/eastern regions (near Kabul); one BHC per 200 000 population in the south/west; and 19 districts which have none (WHO 2002b).

Health care providers in Afghanistan

Available statistics on health care providers indicate there are 11–18 physicians; 18–19 nurses; 4 midwives; and, 2 pharmacists per 100 000 population in Afghanistan. By comparison, Pakistan has 57 doctors, 34 nurses, and 34 pharmacists per 100 000 population. Tajikistan has 65 midwives per 100 000 population and countries like Egypt and Iran have between 233 and 259 nurses per 100 000 population. In the USA, there are 972 nurses/100 000 population and in the UK, 43 midwives/100 000 population (WHO 2003; WHO/EMRO 2003). Outside Afghanistan, the majority of nurses in these countries are women.

The Afghan government acknowledges the severe shortage of nurses, especially women providers, midwives, and allied health personnel available (Afghanistan MOH 2002c). The 1 : 1 ratio of doctors to nurses is well below the minimum standard seen in other countries (ranging from 1 : 2 to 1 : 6); and, the ratio of doctors to allied health personnel (X-ray, pharmacy, laboratory and dental technicians) is also low (1 : <2) (Al-Darazi et al. 2002). Afghanistan has always had a nursing shortage and, in fact, the nurse/population ratio has been 18/100 000 since the 1970s. However, in the 1970s and up to the advent of the Taliban, the majority of nurses in the country were women. They worked primarily in hospitals or polyclinics in urban areas while auxiliary nurse midwives (ANMs), all women, worked in the MCH clinics at village and town levels. Of the five schools of nursing in the 1970s, there was one for ANMs, three for women and one for men. Nursing leadership at the MOH level was predominantly held by women, some of whom had been educated abroad (Heber 1975; Herberg 2003).

The collapse of the educational sector, professional exodus to the West, Taliban restrictions on girls' education, and exclusion of women from educational and work opportunities in the health sector created a vacuum for women's access to health care seen today in Afghanistan (AREU 2002). Although male nurses have proliferated since the 1970s, their interactions with female patients are severely restricted. In a 2002 UNICEF survey on maternal mortality, local communities across the country identified the top three priorities for health as first, the presence of skilled female birth attendants available at the village level; second, adequate transportation; and third, accessible clinics with women doctors.

The MOH has 8000 nursing positions budgeted but only 4500 nurses trained and registered (salaried); 1500 physicians are working in nursing posts; 2000 nursing positions are filled by allied health personnel or untrained nurses (personal communi-

¹There is a pressing need for improvements in the availability of relevant, reliable and timely human development statistics for countries like Afghanistan, according to the UNDP (2004; p. 250). Afghanistan is one of 16 countries excluded from its Human Development Index due to lack of reliable data. The statistics used in this section of the paper are taken from a variety of sources and represent the best data available to the author.

cation with Dr N. Malang; Human Resources Department in the MOH 2002). Of the 2000 current nursing and allied health students, less than 10% are women. An estimated 9100 additional nurses and midwives are needed to implement the MOH's basic health services strategy for the country.

Approximately 2400 physicians are on the MOH payroll and it is estimated there are about 4000 physicians in the country. Seven medical schools are operational, including one in nearby Peshawar, Pakistan; the combined enrolment figure is estimated at over 5500 students. Women account for 16% of medical college enrolments (Smith 2002). There is a severe maldistribution of physicians favouring the large cities. The MOH is predicting an oversupply of physicians in the near future.

Background

Prior to the December, 1979 invasion of Afghanistan by the Soviet Union, educational programmes for ANMs, nurses and nurse midwives were well established (Furnia 1978; Heber 1975; Russel & Richter 1981). A Post Basic School of Nursing opened its doors in 1978 as the first 'teacher training institute' for the preparation of nursing faculty in the country (Herberg 2003). By the beginning of 1979, however, political unrest made it difficult to continue daily operations at most nursing schools in Kabul. Fighting broke out in the city; the sounds of rifles and helicopter gunships became common; tanks appeared on the streets. By 1981, all existing schools were closed, after the graduation of the first and only group of nurse educators prepared at the Post Basic School of Nursing.

Soviet systems of education were initiated throughout the country. Responsibility for basic nursing and midwifery education was transferred to the Intermediate Medical Education Institutes (IMEIs)² located throughout the country. IMEIs had been established in the mid-1960s to train mid level public health workers, primarily technical personnel for rural health clinics. This Soviet system dominated until the Taliban seized control in 1996. The Taliban prepared new curricula for nursing and allied health students, and the programmes continued, contrary to popular belief. Although women were barred from attending educational programmes, male students continued to study.³ Throughout the 1990s, non-governmental organizations (NGOs), established in rural areas, proliferated a myriad of different cadres of 'nurses' with little to no standardization of training

²The name has changed to Institute of Health Sciences (IHS) and that name will be used in this article.

³The Taliban also prepared a midwifery curriculum which was implemented with female students in Kandahar. It is believed that the Taliban desired continuing maternal care for their wives and female relatives; the programme operated with low visibility. This information was given to the author by a member of UNICEF in Kabul.

or outcomes (Buse & Walt 1997; Goodhand 2002; Thier & Chopra 2001).

Beginning the reconstruction efforts 2001–04

With the downfall of the Taliban, the Interim Afghan Authority was formed in December 2001, and began the work of reconstructing the Afghan civil sector (Asia Development Bank 2003; Rubin & Armstrong 2003; US Department of State 2002). Needs assessments conducted by the World Bank, the United Nations Development Program (UNDP) and the Asia Development Bank targeted health, education, energy, roads, landmines, agriculture and employment as critical priorities. The international donor community, at conferences in Bonn and Tokyo (Ministry of Health of Japan 2002), and more recently in Oslo (*The Economist* 2003), pledged more than \$5bn over a 5-year period for Afghanistan's reconstruction efforts. A UN trust fund was established to help pay civil service salaries (Afghanistan MOH 2002d). The civil service salary scale was set at \$5.00/month plus food allowance.

A new Minister of Health, Dr Suhaila Seddiq was appointed in 2001 and given the charge of revitalizing the MOH and its seven regional centres. The MOH, in collaboration with the World Health Organization (WHO) and other international agencies, began the task of setting the agenda for change. A final draft of a National Health Policy (Afghanistan MOH 2002b) was approved and a Health Services Package (Afghanistan MOH 2002a) plan prepared. A new organizational structure was approved (WHO 2002b), but the former Nursing Unit was not revived. Eighty per cent of the MOH resources came from aid agencies, the UN and NGOs. Richards & Little (2002) claimed 70% of the country's health care delivery was being provided by 20 NGOs with long-standing ties to Afghanistan. According to Dr Malang, head of the Human Resources Department (HRD) in the MOH (P. Herberg, personal communication, 2002), 66 international and local NGOs supported the health sector in Afghanistan in 2002. The monthly salary payments for MOH personnel ranged from \$35.00 to \$50.00 USD. Many employees, especially physicians, worked in the private sector to supplement income.

Like most of the reconstruction efforts in Afghanistan, work in the MOH involved a combination of local government, donor/aid agencies and NGO personnel. The HRD of the MOH coordinated these efforts and established an HRD Task Force to facilitate planning and communications. A WHO Educationist/Training Coordinator worked with the head of the HRD. In the summer of 2001, a team from the Aga Khan University School of Nursing (AKUSON) and WHO visited Kabul to begin dialogue with the MOH about the situation at the Institute of Health Sciences (IHS) (former IMEI) and its role in nursing education. A challenging aspect of this visit and the work to follow, related to language. Many of the senior administrators and the majority of the faculty

Table 1 Strengths and weaknesses of Kabul Institute of Health Sciences fall 2002

<i>Strengths</i>	<i>Weaknesses</i>
All programmes are operational	Poor physical status
Classroom and clinical practice sessions are being held according to schedule	Absence of dormitories
Examinations are given on time	Lack of prepared educational administrators and operating policies/procedures
Faculty report for duty and carry out teaching assignments	Lack of prepared faculty
Students are orderly and attend classes	Out of date curricula not in line with international standards of education or professional standards of competency based outcomes
Mix of mature faculty (with experiences pre dating the 20-years period of civil unrest) with new younger faculty	Lack of teaching/learning resources: books, reference materials in national language
The infrastructure is standing and in good condition	Lack of community based learning facilities
The library is operational with some useful books	Lack of learning laboratories: skills, science, computer
There is land/room for constructing dormitories	Inadequate supplies and equipment
A significant number of the professors are very eager to learn	Too many students without rationale for admissions
	Lack of female students

at IHS were non-English speakers. All written documents were in Dari (a form of Persian).

In July 2002, the challenge of strengthening nursing, midwifery and allied health education was taken on by the Aga Khan Development Network (specifically through the AKUSON) in partnership with WHO and the MOH. One faculty member from AKUSON was moved to Kabul on a year's contract to establish a base of operations at IHS. From August to November 2002, the author served as consultant to the project, including the development of a five-year strategic plan for the IHS. A detailed baseline assessment was undertaken to serve as the foundation for planning. The strengths and weaknesses of the Kabul IHS, at that time, were identified and are presented in Table 1.

The Institute of Health Sciences: 2001–03

There were eight institutes in Afghanistan in 2001: Herat, Helmand, Kandahar, Kabul, Mazar I Sharif, Faizabad, Kunduz and Jalalabad. Their role was to prepare nurses, midwives and allied health personnel for the health sector. Not all were functioning adequately because of physical damage sustained during the war years (one was operating from tents as the main building had been destroyed; some IHSs existed only on paper). The Kabul IHS was operational. It had an administration, staff, faculty, students and defined programmes of study. It was expected to play a central coordinating role for the provincial schools in terms of standardizing curricula, setting educational policies and procedures, and monitoring outcomes, but from 2001 through 2002, little communication actually took place.

Organizational structure

The Kabul IHS came under the jurisdiction of the MOH in terms of academic and operational standards. However, the Ministry of

Planning (MOP) set the numbers of students to be admitted to each programme annually and established guidelines for the number of personnel, including faculty, required at each IHS. Unfortunately, these policies were not always enforced, especially with regards to student admissions (e.g. the IHS administration admitted triple the designated number of students during 2000–01 because of various political and other pressures).

The senior administration of the Kabul IHS consisted of the President of the Institution, two Vice-Presidents, for Training and for Sciences, and two Directors: of Academic Affairs and of Administration. Frequent turnover of top leadership occurred during the transition of governments. In November 2002, there were 40 administrative personnel including the Librarian; the Directors of Transportation, Hostels, Records (Publishing and Statistics), Archives, Finance, Accounting, Maintenance, and Storage; the Administrative Heads for each academic programme; and 66 staff and support workers. In addition, there were 96 faculty and 9 Kindergarten (day care) teachers – for a grand total of 216 personnel.

Institute of Health Sciences senior administration

The IHS administrators had not been exposed to modern methods of educational administration. Their understanding of academic processes was fair to poor. They also lacked the ability to provide accurate and useful data for planning and development. Although they have developed rudimentary systems of record keeping, including statistical analysis, and had some written policies and procedures, they lacked skills in many areas (see Box 1).

Programmes

The IHSs were responsible for academic programmes for all health cadres except Medicine, Dentistry and Pharmacy – which

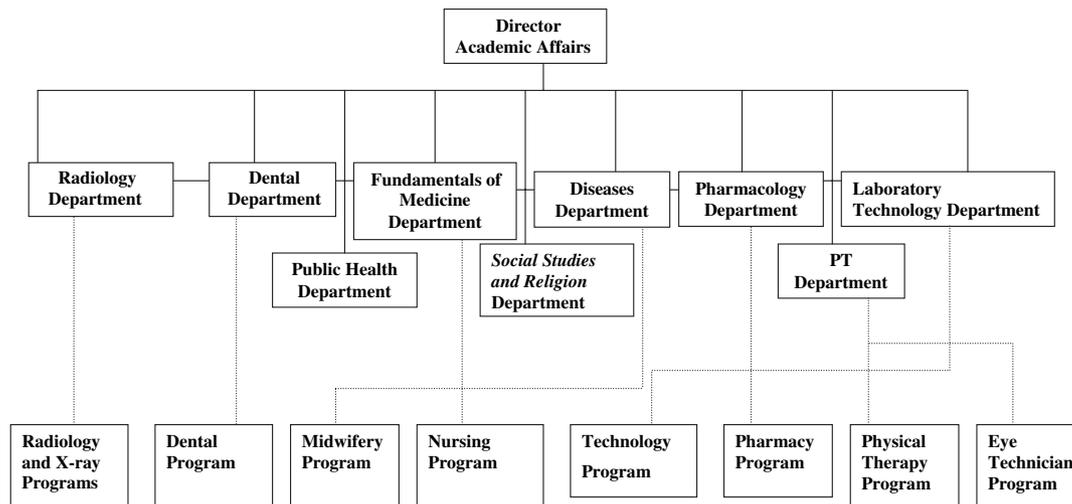


Fig. 1 Institute of Health Sciences Academic Structure fall 2002.

Box 1 Areas in which IHS Administrators Lacked Exposure/Experience

1. Management information systems, data collection, analysis and report generation
2. Policies and procedures for admissions, progressions and graduation
3. Operational management including budgeting
4. Faculty evaluation
5. Programme monitoring and evaluation

were taught at the University. Programmes were divided into two sections. Those programmes which required 12th grade education at entrance were considered 'institute' programmes. They included (i) dental technology; (ii) pharmacy technicians; (iii) laboratory technicians; (iv) physical therapy; and (v) radiology. Those programmes which required 9th grade education at entrance were considered 'school' programmes and included (i) nursing; (ii) nurse midwifery (NMW); (iii) X-ray technicians; and (iv) eye technicians.⁴

The IHS academic structure presented in Fig. 1 was based on Departments, which housed components of several programmes of study. The nine departments included Radiology, Dental, Pub-

⁴Although the physical therapy and eye technician programmes were officially part of the IHS curriculum, they were housed in a separate building on the grounds of the Wazir Akber Khan Hospital and were run by the International Afghan Mission (IAM) as a separate operation. IAM employed its own staff as well as paying salaries to the four IHS Physical Therapy faculty.

lic Health, Fundamentals of Medicine, Diseases, Pharmacology, Physical Therapy and Laboratory Technology. One faculty member was assigned as Head of each department. In addition, each programme was assigned an 'Incharge' faculty manager who was located in one of the Departments. The Incharge/Nursing programme was a member of the Fundamentals Department; the Incharge/Midwifery programme was in the Diseases Department. The way in which courses were assigned to each department is illustrated in Table 2. Assignment was based on specialty areas (for example, anatomy and physiology was the responsibility of the Fundamentals Department). Laboratory and practical/clinical training was included in the curriculum but poorly executed. Laboratories lacked basic necessities and the opportunities for quality clinical experiences in local health care facilities were extremely poor.

An initial task was to translate each programme's curriculum into English. This formed the database for future revisions. The programme curricula were modelled on outdated systems of Soviet medicine based on curative care and Taliban proscribed content. Core content had not been updated for over 20 years. There was little inclusion of concepts such as primary health care or community based approaches. It was noted that curriculum revision would need to be taken at a slow, methodical pace to ensure faculty understanding and buy in of the process and ability to produce a satisfactory outcome: revised, current, relevant curriculum packages for each programme.

Some required courses were common to all programmes: (i) Islamiyat; (ii) Languages: English, Pashto, Dari; (iii) Medical Terminology; (iv) Computers; (v) Primary Health Care; (vi) Pharmacology; and (vii) First Aid. Five of the six programmes

Table 2 Academic subjects taught by departments

<i>Diseases</i>	<i>Fundamentals</i>	<i>Pharmacy</i>	<i>Medical technology</i>	<i>PHC</i>	<i>Social studies</i>	<i>Radiology</i>	<i>Dental</i>
Dermatology*	Fundamentals of nursing*	Pharmacology*	Biochemistry	Control of* Communicable diseases	Islamiat*	X-ray dental	Instrumentology
Surgery*	Fundamentals of midwifery*	Plant pharmacology	Microbiology*	Health education*	English*	Radiology technician	Dental surgery
First aid*	OR techniques*	Chemical pharmacology	Serology	Nutrition*	Dari*	Radiotherapy	Protozoa
GYN*	Practical work*	Practical work	Parasitology	PHC*	Pashto*	Photography	Practical work
MW practice*	Anatomy & Physiology*		Haematology	MCH*	Medical* Terminology	X-ray physics	Anatomy
ENT*	Pathology		Blood bank	Hygiene*	Science*	Structure X-ray	Dental medicine
Internal medicine*	Psychology*		*Laboratory techniques	Statistics*		Diagnostic radiology	Orthopaedics
Neurology/ Psychology*			Virology				Paediatric dental
Paediatrics*			Mycology				
Eye*							

Computer course is not yet assigned to a specific department.

*Subjects taken by nursing and nurse/midwifery students. GYN, gynecology; MW, midwifery; ENT, ear, nose & throat; OR, operating room; MCH, maternal child health; PHC, Primary Health Care.

included (i) Anatomy and Physiology; and (ii) Microbiology; and, three of the six programmes included (i) Internal Medicine; (ii) Surgery; (iii) Paediatrics; (iv) Ear, nose and throat (ENT); (v) Ophthalmology; (vi) Pathophysiology; (vii) Biochemistry; and (viii) Laboratory Techniques.

Infrastructure and operations

The Kabul IHS, like other educational facilities, faced acute infrastructure and operational constraints. There was no guaranteed steady source of electricity. The water and sanitation situation was unsatisfactory. Classrooms were stark and labs in poor condition. Equipment and supplies were non-existent (except for NGO provided necessities). There was no transportation for students going to clinical facilities. No dormitories existed and housing for current male students was in a crisis state.⁵

⁵Until mid October 2002, 350 male students were housed in tents on the barren land near the school. They contended with heat, dust, snakes, scorpions, and totally inadequate sanitation on a daily basis. Unfortunately, one of the students was killed while trying to rig an electric line to his tent – which precipitated a flurry of activities: the tents were dismantled; the students moved temporarily (sleeping in classrooms, the cafeteria, etc.); and a building on the Kabul University campus was identified as a temporary new ‘home’ for the students. Long-term housing (dormitories) was a priority identified by the MOH for the IHS.

Infrastructure

The IHS building was originally constructed in the late 1960s by USAID to house the Auxiliary Nurse Midwife programme, which admitted its first class in 1971 (Russel & Richter 1981). When constructed, the third floor was a dormitory for students (all women) and the first and second floors contained classrooms, labs and offices. Western style toilets were installed throughout the building. In 2002, all three floors contained classrooms. The building itself was well constructed. Classrooms were large and contained adequate ventilation. There was a large cafeteria, a library and conference rooms. Storage space was available. IHS had a city permit allocating ‘continuous electricity’ during working hours. However, although there was sporadic power, it was not steady or predictable. There was no running water in the bathrooms or laboratories.

There were 39 classrooms in the building, allocated to specific programmes (7 for nursing; 14 for radiology/X-ray and dental; 4 for NMW; and 14 for pharmacy and laboratory). One NGO had purchased tables, chairs, office furniture, and student desks (~500). More student desks were urgently needed. Each classroom had a blackboard, and 11 of them were in need of immediate replacement; others need to be repainted. None of the classrooms had curtains. There were no clocks, bells or other aca-

demic 'frills'. The end of each class period was announced by the banging of a large stone against the railing of the building!

Seven rooms served as laboratories. The *nursing skills lab* on the ground floor was spacious enough to hold three or four beds plus a small conference table but contained only chairs. There were built-in sinks but no running water. Although there were cabinets, they were in disrepair, not secure, and need to be replaced. The *science lab* on the ground floor required a total refurbishing – cabinetry, benches and counters, plumbing, storage space, etc. There were *two NMW skills labs* on the third floor but one was locked (the key was 'lost') and no one had been inside for some time. The second room was small but contained one bed. There was no sink in this room. The other labs – *radiology, dental, and X-ray* – were not assessed.

The IHS administrative offices were adequate. Faculty offices were available and varied in size. One room had been allocated as the AKUSON/IHS office. It was large enough for four desks and a small conference table. A storage room for AKUSON/IHS equipment and supplies was provided; but the space was barely adequate. There was a large library with book cabinets and a central conference table. The library holdings were not well organized and were not catalogued. A lending system did not exist.

Operations

The Institute of Health Sciences operated on a semester system. Each semester was 8 weeks long followed by 2.5–3 weeks of exams. The academic year began in March. The school day officially ran from 8:00 am to 4:00 pm, however, all classes and most activities were finished by 1:00 pm.

Institute of Health Sciences received supplies from the MOH, but WHO, the AKDN and other NGOs were in reality providing this support. The IHS administration put together a list of their capital and other equipment/supply needs and purchases were made including stationary, digital telephones, office furnishings, dormitory beds and linens, appliances, audiovisual equipment (televisions, video cassette recorders), computers, and laboratory supplies/equipment.

Faculty

The IHS faculty functioned, to a large extent, in an educational vacuum for 20 years. Individual faculty members were not exposed to current trends in health care delivery or to international standards of health professional education, including current curriculum standards, teaching methodologies, technologies, or educational resources. They also had not had the opportunity to consume or digest the rapid and ever changing knowledge base that forms each of their specific disciplines. They have had little to no continuing education.

The educational backgrounds of faculty members varied. A few had completed master's degrees, some had a bachelor's degree, and most had completed technical programmes equivalent to 12 or 15 years of education. Both physicians and nurses were part of the faculty. Teaching experiences also varied. Some faculty members had been educators for over 20 years and remembered pre-Taliban and pre-Soviet times; others did not. Some remained in clinical practice, but many had no clinical skills. Almost half of the faculty were women.

The process of assessing the strengths and competencies of the faculty was a major challenge. Faculty members were tested for English language skills prior to beginning English training courses. The majority had little to no ability to read or comprehend English. Most had no computer literacy, which they identified as a priority learning need – even insisting that a computer laboratory for faculty and student use was required.

Institute of Health Sciences faculty used traditional teaching methodologies: lecture, dictation, and recitation of lessons. Some faculty members were aware of other teaching methods, but found them impractical with large classes or were resistant to introducing new methods in their classrooms. Concepts of student assessment and evaluation were weak.

On average, each faculty member carried a teaching load of 10–12 h per week. However, the load ranged from 4 to 26 h, with little rationale for the variation. All members were considered to be working 'full time'. Some were given both classroom and clinical responsibilities, but many had either 'practical work' or didactic assignments. The Department Head made the teaching assignments.

Students

In the 2002 academic year, there were a total of 1101 students – 868 men and 235 women (27%). An overview of the student population of IHS is presented in Table 3. These figures for women were skewed as a result of the fact that the NMW programme admitted only women and accounted for 150 of the 235 women. In the programmes outside of NMW, the percentage of women students ranged from 7.6% to 13.6%. In nursing, 26 out of 330 students (7.8%) were women. Projections for the 2003 academic year indicated a total student body of 1400 students, with 370 new men and 120 new women (20%). These were admittedly 'guesstimates' but clearly indicated that the recruitment of women remained problematic. The MOH had set a target of 70% for new women students in the 2003 admissions cycle, but this was clearly overly optimistic.

Admission of students was based on set criteria. For programmes which required 12th grade entry, Kabul University administered an entrance exam. Those students with high scores were given placements in university programmes: medicine, den-

Table 3 Student population in Institute of Health Sciences programmes fall 2002

Programme	Year One		Year Two		Year Three		Totals		Total
	Male	Female	Male	Female	Male	Female	Male	Female	
Nursing	150	26	84	–	70	–	304	26	330
Midwifery	–	102	–	24	–	24	–	150	150
Pharmacy	65	8	49	4	–	–	114	12	126
Laboratory technician	125	6	36	5	36	4	197	15	212
Radiology	72	2	25	5	10	3	107	10	117
Dental technician	57	10	50	5	39	5	146	20	166
Totals	469	154	244	43	155	36	868	235	1101
	623		287		191		1101		

tistry, pharmacology, etc. Students who did not achieve high enough rankings for university placements were referred to IHS. Students finishing the 9th grade were given an entrance exam set by IHS.

Nursing programme

Nursing was the largest programme within the IHS. During 2002, the 3-year nursing curriculum was reviewed and modified slightly from the Taliban-proscribed version. The number of hours of religious training was decreased significantly. However, the curriculum itself continued to be woefully outdated and a major curriculum revision was identified as a priority for 2003.

In the 2002 curriculum, first year students studied Islamiat, Languages (English, Dari, and Pashto), Anatomy & Physiology, Principles of Nursing including skills lab, Microbiology, Science (Math, Chemistry, and Physics), Primary Health Care (PHC), and First Aid. In the second year they covered Islamiat, Languages, Principles of Nursing, PHC, English/Medical Terminology, Pharmacology, Psychology, Paediatric Nursing, Surgical Nursing and Internal (Medical) Nursing. Third year students studied PHC, Laboratory Techniques, Pharmacology, Paediatric Nursing, Surgical Nursing, Internal (Medical) Nursing, Statistics, Neurology, Ophthalmology, ENT, Operating room (OR) Techniques, Dermatology, Infectious Disease, and Computers (although listed in the curriculum, no course was yet developed or taught). Second and third year students spent 3 days in class and 3 days in clinical practice at local hospitals.

Due to the large class size, students were divided into smaller cohorts. Subjects were taught to each cohort – meaning that the same class topic was repeated several times during a week. Likewise, students were divided into smaller laboratory and clinical groups of about 15 each. The faculty members who taught the Principles of Nursing (Fundamentals) course were responsible for

skills lab supervision. In reality, students received mostly verbal explanations of skills without demonstrations or lab practice. As a result, students were ill prepared for clinical experiences. In the clinical area, students were accompanied by an instructor whose own clinical expertise was questionable. The primary activity of students in the clinical setting appeared to be observation.

Nurse midwifery programme

Until 2001, when 100 students were admitted to the NMW programme, 35 women per year was the goal. In 2002, there were 150 students in the programme, with the majority in year one. A consultant from the Johns Hopkins Program of International Education in Gynecology and Obstetrics (JHPIEGO), in conjunction with UNICEF and USAID, had recently revised the third year curriculum and planned to work with faculty on clinical supervision of students during a proposed 6-month residency programme. For the first 2 years of the curriculum, students studied general nursing and support courses. The midwifery courses were taught in year three. The 2002 group of third year NMW students, 24 in number, was in a unique situation. They began their studies in pre-Taliban times and returned to complete the programme in 2001. As a result, they required refresher courses in general nursing along with their new subjects in midwifery. They completed their studies in a 6-month block of theory/practice (3 days a week class; 3 days a week clinical), which ended in December 2002. They were to begin their residency work in January 2003.

UNICEF/JHPIEGO concurrently supported the Malalai Maternity Hospital in Kabul as a 'centre of excellence' for maternal care. As part of this endeavour, Malalai was used as the clinical training site for the third year midwifery students. Technical consultants from JHPIEGO worked with a group of physician 'trainers' and the IHS midwifery faculty on clinical teaching methodologies. The UNICEF/USAID contract to support

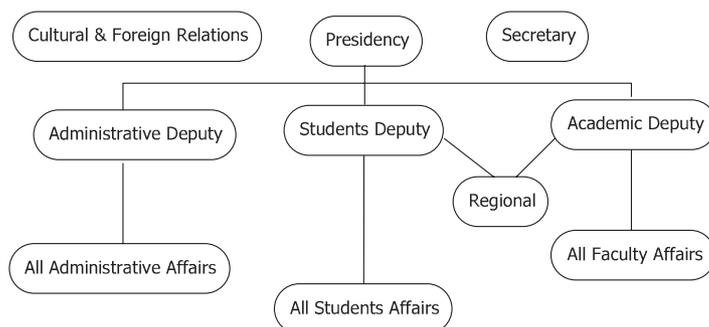


Fig. 2 Institute of Health Sciences 2004.

JHPEIGO activities expired March 2003. It is unknown to the author if those activities continued in 2003. UNICEF did continue its support to Malalai Hospital in 2003.

During 2002, the International Medical Corps (IMC), an NGO working in the health sector assisted with the preparation and implementation of the curriculum. IMC purchased equipment and supplies for the programme and rented a van to provide transport for students to and from clinical practice at Malalai Hospital. A local obstetrician at Malalai was hired as the coordinator of training. Three additional trainers, all physicians, were hired. Five IHS midwifery faculty were mentored by the physician trainers and targeted to eventually take over the clinical training roles. A translator/typist was paid to translate journal articles into Dari and type them for student use in the programme. UNICEF designated one classroom at Malalai Hospital for use by IHS midwifery students. This classroom was furnished, had a computer and printer and some specific teaching/learning equipment. By the end of 2002, the IMC input was taken on by AKUSON. In March 2003, a second cohort of third year students began midwifery training using the revised curriculum.

The current situation: 2004⁶

Several changes have taken place since the author left Kabul in 2002. The Institute has a new Director, Dr Shah Mahmood Popal, MD and there are now eight regional centres in addition to Kabul: Kandahar, Nangarhar, Badakhshan, Herat, Balkh, Farah, Helmand, and Kunduz. The regional student population stands at 1378 (418 female; 960 males) and there are an average of 20 teachers at each institute – 30% of whom are female and 70% male.

The organizational structure of the Kabul IHS has been clarified (see organogram in Fig. 2). There are now three Schools:

⁶The author wishes to acknowledge Dr Yasmin Amarsi, Dean AKUSON & Dr Popal (2004), Director IHS, for providing the updated information in this section. AKUSON continues to provide technical assistance to the IHS in Afghanistan.

Nursing, Midwifery and Eye Technician; five Departments: Technology, Physiotherapy, X-ray, Assistant Pharmacists, and Dental Assistants; and one Class: Anaesthesia. There are 1123 students, 287 women (26%) and 836 men. The faculty has grown to 105 (50% male; 50% female).

Progress has been made in several areas, especially with the introduction of English and computer training for administrators, faculty and students. Twenty-six faculty members graduated from the first computer course in December 2003. Fully equipped Computer, Skills, and Science labs have been established. The library has been upgraded with books in English and in Dari. Nursing and midwifery teaching and resource materials have been translated into Dari. Aspects of the physical plant have been renovated.

In terms of academic progress, new, integrated nursing and midwifery curricula were developed based on the Afghan context. Curricula are available in English and Dari. Three new faculty have been hired by AKUSON and are placed at IHS (two are Canadian and one Afghan – all of them are AKUSON graduates). Two groups of nursing students, starting with the 2003 intake, are using the new curriculum. Subjects include Islamiyat, English, Computer Science, Sociology, Psychology, Pharmacology, Infectious Diseases, Fundamentals of Nursing, Medical/Surgical Nursing, Community Health Nursing and Maternal Child Health. Twenty-one midwives graduated from the transitional, competency-based programme begun with UNICEF/JHPEIGO assistance. Seventeen are working in Kabul hospitals, two are teaching at the IHS and two are working in district clinics. An additional 24 midwives graduated from the second class in March 2004. The new fully revised midwifery curriculum has been introduced to the incoming class of 2004.

Faculty development is ongoing through a variety of strategies including study visits outside Afghanistan, scholarships for further education, workshops and seminars. Training has focused on clinical nursing skills, math competency and teaching/learning methods.

Summary and conclusions

Despite the uncertainty of daily life in Afghanistan, the country has been able to begin successfully the reconstruction process. In the health sector, this can be seen in the work begun at the Kabul IHS. The process necessarily began with a complete assessment of the 2001–02 situation in order to identify needs and set priorities.

The *Essential Package of Health Services* (Afghanistan MOH 2002a) identified (a) rural and vulnerable populations (women and children especially); and (b) development of a referral system for emergency and obstetric care among its top priorities. The *National Health Policy* (Afghanistan MOH 2002b) outlined the positive role the government hoped to play in strengthening women's rights by encouraging recruitment, training, and involvement of women in the health sector. Along these lines the MOH has re-defined the categories of health care workers needed in the country to include community health workers and trained birth attendants, community midwives, nurses and nurse midwives.

The MOH has committed resources to strengthening the health professions' curricula, introducing competency based outcomes; focusing on community health strategies, updating content and teacher preparation as well as developing sound inservice training programmes for all health care cadres (Afghanistan MOH 2002c,d). They are well aware of the role that the IHS plays in producing future health care workers and plan to vastly increase the number of mid level health workers, including nurses, midwives and ANMs enrolled in these programmes. Their goal is that 70% of the students at the IHS will be women (Afghanistan MOH 2002d). In this article, a detailed picture of the state of the IHS in 2002, as a baseline for future comparisons, has been established. It is clear that some progress has been made, but no one would deny that much more is needed.

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