Nursing and nursing education in Iraq: challenges and opportunities

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Background: There has been extensive damage to nursing education and training in Iraq over the last two decades through three international wars, counterinsurgency struggles in the north and south, 13 years of economic sanctions, dictatorship and foreign occupation. Fortunately, there is wide agreement that nursing is a key area for further attention. Many nursing leaders have emigrated and the numbers of nurses working in professional roles in Iraq declined sharply after 1990.

Issues: The number of nurses per population has always been low in Iraq, and fell off precipitously after foreign workers left. There is less than one nursing staff of any kind for physician today. Few of the nursing staff are qualified to what would be minimal standards of professional practice in many countries. There is a strong educational base for nursing education in three Iraqi universities, but it relates little to other schools or hospitals. Military nurses, now being integrated into the public system of hospital care, are considered to have far more technical skill levels than non-military nurses.

Actions: Iraq needs a new generation of well trained nurses to develop primary care and health education activities. Programmes in nursing administration and community health nursing need to be developed. The World Health Organization has supported the development of training centres and short courses for nursing leaders. The former six levels of entry to nursing practice have been streamlined to three. Nursing salaries since the 2003 invasion have been greatly increased. These are good beginnings, and much more remains to be done to restore nursing in Iraq.

Keywords: Conflict, Development, Education, Iraq, Nursing

Introduction

Organized nursing in Iraq has been extensively damaged over the last two decades. Nursing leaders have emigrated and the numbers of nurses working in professional roles has declined. In the eyes of the public and even some nurses themselves, nursing has become a menial task. Iraq has had the additional burden of exodus of foreign nurses who made up the majority of the nursing workforce in the 1980s.

In 1990, amidst the crisis engendered by emigration, Saddam Hussein proclaimed the field of nursing unnecessary and said Iraq would do without nurses. He later reversed this approach by mandating agricultural school graduates to provide 6 months of nursing service to get their titles. In some areas army deserters or petty criminals were pressed into public service as 'nurses'. In many ways nursing came to look like pre-Nightingale nursing in the UK two centuries earlier.

Until recently nurses had little voice in the Ministry of Health (MoH). A renewed appreciation of the importance of nursing now exists. National leaders, non-governmental organizations and UN organizations now support upgrades in both the education and training of nurses and their professional status. It is seen that the major improvements needed in hospital care cannot occur without improvements in the recruitment, training and administration of nurses. Even more importantly, a new genera-

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tion of well trained nurses is needed to develop primary care, health administration and health education activities in their communities. But there is little clarity on how to achieve this goal.

A strong educational base for nursing education still exists in three Iraqi universities. Military nurses, now integrated into the public system of hospital care, have far more technical skill levels than non-military nurses. There is no structure to take advantage of their higher skill levels and the resources they represent maybe lost to the health system.

Such developments will not only be cost-effective in improving health but will create opportunities for women's employment and social participation. Raising the social status of nurses and making improvements in their education and training will also assist in developing local decentralized administrative capacity. All are essential changes if Iraq is to grow as a democracy. Nursing in Iraq thus has an important role to play in establishing a democratic, post-conflict and developing society in Iraq. Strategic priorities for Iraqi nursing are explored below. While many of these respond to the particular history and culture of Iraq, many relate to themes which are common among countries emerging from protracted conflicts.

Historical background

The first formal nursing programme was established in 1933 in Baghdad. From their inception, nursing programmes had difficulty recruiting well qualified men and women. Nursing was limited by cultural norms that restrict employment options for women and their ability to deal with the physical needs of unrelated people (Garfield & Martone 2003). The 1975 Free Educational Law promoted access to education and facilitated nurses to study abroad. Since 1982 men have been recruited into the field along with women. Ironically, most present-day Iraqi nursing leaders have Masters or Doctorates from developed countries. These were acquired in the years before Iraq descended into conflict and instability.

In 1962 a college of nursing was established under World Health Organization (WHO) administration at the University of Baghdad. The college prepared nurses as hospital administrators or faculty for other schools. Many of the faculty were recruited from abroad and had little knowledge of Iraqi society. In 1986 a Masters programme was established and clinical specialties are now offered in medical-surgical and psychiatric nursing, obstetric and paediatric nursing (Boyle 1989). Instruction is considered to be of high quality and about half of the students come from other countries. Few, however, provide service to the Iraqi public upon graduation.

Only after the Gulf War of 2003 were salaries raised and educational differentials introduced. Salaries currently range from $60–$300 per month. Professional standards are non-existent and no system of licensure or credentialling exists. Their development will be important to gain respect, stability and identity for the field of nursing. Yet because of ongoing conflict and a lack of unity among leading nurses, these projects have hardly begun.

Graduates of nursing programmes are now assigned to a wide range of institutions to cover the nursing shortage without regard to interests or experience. Iraq recruited many foreign nurses in the 1980s (Akunjee & Ali 2002). In 1989 there were a total of 12 687 nurses, including 5932 baccalaureate graduates (Ministry of Health, Baghdad, Iraq, unpublished data).

Entry to practice

More than 60 high school programmes train the largest number of skilled nurses in 3 year programmes. Nineteen post-high school institutes train technical nurses in hospital schools for 2 years. Four nursing colleges train high school graduates in 4 year professional nursing programmes. Yet in a hospital, all levels of graduates from nurse's aides to professional nurses may do the same job. To date there is no licensing procedure and virtually no system of discipline for poor professional behaviour. Training materials are obsolete and traditional in their approach, with virtually all instruction in the classroom. WHO has plans to establish five training centres, three of which are now operational. There is virtually no clinical practice or supervision of students. In midwifery education, only the secondary school level exists.

Personnel

In 1999, the total health worker to population ratio was 11 per 10 000. This included 10 832 physicians registered in 1999 in Centre/South Iraq. The doctor to population ratio was 1 per 1926 people, or 53 per 100 000 people. This provides Iraq with a very low doctor-to-population ratio, more characteristic of poor than middle-income developing countries. Iraq has far fewer health workers than neighbouring countries or the average of Middle Eastern countries (Diaz & Garfield 2003). See Table 1. Neighbouring Jordan had a physician-to-population ratio four times greater. In Iraq there was one professional nurse for 24 physicians,

Table 1 Health personnel per 100 000 population in Iraq and neighbouring countries

	Iraq	*Syria*	*Iran*	*Jordan*
Physicians	53	140	105	205
Dentists	11	72	19	55
Pharmacists	8	52	13	52
Nurses and Nursing Assistants	46	194	246	275

Source: World Health Organization human resources database.

two professional nurses per 100 000 persons, and 50 auxiliary nurses per 100 000 persons in Iraq. Jordan had 70 times more nurses and twice as many auxiliary nurses.

The number of nurses per population has always been low, and fell off precipitously after foreign workers left in 1990. There are 5.2 nursing staff per 10 000 people, meaning that there is about one nurse of any kind per physician. See Table 2. In most countries there are 3–6 nursing personnel per physician. More than a third of the physicians are specialists, while less than a third of the nurses were trained in post-high school programmes.

The 16 700 nursing staff in the civilian sector were supplemented by a similar number of nursing staff from the military when the latter group was disbanded following the 2003 invasion. Many of the 9000 male nurses in the civilian sector had been trained in the army. These schools are affiliated to the MoH; only the three university schools at University of Baghdad, Mosul and Suleimaniyah are directed by the Ministry of Higher Education. Two other nursing colleges, at Mustansariya in Baghdad and Basra, were under development in 2003. They were cancelled after the war, their resources given over to other schools.

Many Iraqi nurses have left the hospitals and their profession, choosing more remunerative employment or emigration in the 1990s (Garfield et al. 2003). Hyperinflation during the early 1990s so reduced the value of salaries that the cost of public transportation sometimes exceeded income for nurses. Physicians were provided benefits like on-call meals and uniforms to defer such costs but nurses were not. Some physicians maintained satisfactory income levels through the 1990s due to income derived from private practice, but nurses lacked this option. Private hospitals employ about 500 nurses. Lack of security since the 2003 invasion has further eroded the ranks of the nursing profession as many have emigrated or stay home.

Problems with education

There are few qualified teachers and scientists in Iraqi medical colleges, in part because senior clinicians can earn far more in private practice. The problem is especially acute in medical colleges established in the last 5 years.

Curriculum and teaching methods have been strictly controlled by the Ministry of Higher Education. Opportunities for self-directed or participatory learning are very limited, but are now being expanded with the assistance of WHO. The curriculum is crowded with theory and information technologies and audio-visual material access has been very limited.

Laboratory facilities and classrooms are usually poorly equipped and outmoded. Most college buildings are not purpose-

Table 2 Nurses and doctors per 100 000 population, 2000

	Specialists	*General practitioners*	*Total doctors*	*Nurses*	*Nursing auxiliaries*	*Total nursing staff*
Baghdad	16.4	44.8	61.2	14.3	15.9	30.2
Ninevah	9.0	28.4	37.4	6.8	19.7	26.5
Basrah	11.5	36.0	47.5	9.8	32.6	42.4
Thi-Qar	7.1	15.8	22.9	10.4	24.2	34.6
Babylon	13.9	36.7	50.6	13.5	24.6	38.1
Diala	11.5	23.6	35.1	16.8	18.3	35.1
Anbar	13.5	32.3	45.8	9.1	22.1	31.2
Salah Al-Din	15.0	27.9	42.9	1.6	15.6	17.2
Najaf	14.8	33.0	47.8	8.3	23.4	31.7
Wasit	14.3	21.9	36.2	2.0	5.1	7.1
Qadisiya	10.8	30.4	41.2	4.8	29.3	34.1
Tameem	17.8	31.4	49.2	6.7	20.2	26.9
Maysan	8.3	15.2	23.5	9.0	27.2	36.2
Kerbala	14.6	35.4	50.0	10.9	48.2	59.1
Muthana	11.8	23.4	35.2	0.2	12.1	12.3
Suleimaniyah	27.7	44.2	71.9	62.2	141.8	204.0
Erbil	7.3	37.5	44.8	32.6	110.5	143.1
Dohuk	5.8	48.6	54.4	7.6	88.2	95.7
Total Iraq	13.5	32.2	47.7	14.0	38.1	52.1

Source: Ministry of Health, Baghdad, Iraq, unpublished data.

built. Even the library in the flagship University of Baghdad school is now usually without electric service.

During sanctions, the intellectual isolation of the country was extensive. Few books or journals from the last 10 years are in Iraq and the government limited telecommunication facilities. Severe limitations on permission to participate in regional and international scientific activities compounded this problem.

Recommendations

The Global Advisory Group on Nursing and Midwifery and the Eastern Mediterranean Region (EMR) of WHO made recommendations for nursing development (WHO 2001). They are highly pertinent to Iraq:

- The role of nurses and midwifes within the health care system should be redefined to allow them to occupy decision making positions throughout the health system, not just the nursing office in MOH.
- The national plan of action for human resources should be formulated with focus on nursing and midwifery.
- Two levels of nurses only, the technical nurse and the institute or university professional nurse, should be recognized.
- Profound revisions in curriculum should be made, taking into consideration the EMR guidelines and prototype curricula, to be followed by preparing current learning material in Arabic and developing computer and Internet-based learning.
- Nursing teachers should be trained in educational technology and clinical supervision. They should develop clinical expertise through continuous participation in staff development activities and ensuring clinical roles in hospitals. Competency-based learning and continuing education in hospitals are needed.
- Nurses should be involved in the planning, implementing and monitoring of activities in primary healthcare (PHC) and in health development with other members of the health team.

Destruction of facilities, emigration of staff and intellectual isolation of Iraq over two decades gives the country further priority needs (See Table 3). Prime among these is the stagnation of curriculum and a lack of community health and primary health focus in the health system. The expected future roles for nurses should be reflected in the curriculum. Preparation should include skills in communication, technology assessment, informatics, community assessment, statistics and disease surveillance, as well as clinical care. Specialty training for intensive care units and neonatal nurses is needed. Most importantly, the development of programmes in community health and rehabilitative nursing are needed.

There is an urgent need to rehabilitate nursing colleges and schools and student dormitories along with the provision of teaching materials, supplies and equipment. The present four nursing colleges are inadequate; the two other universities with partly developed buildings and faculties for nursing should be helped to open their schools.

More importantly, these schools should be changed to better prepare graduates for roles in the Iraqi health system. University graduate nurses should staff renovated institute and high school nursing programmes. They should be trained in clinical rotations in hospitals and in community settings so that they will be ready to work in these environments upon graduation.

There is a need to organize workshops to develop teaching skills. In-service education, the use of supervised fieldwork, the development of clinical preceptors, learning laboratories, and the

Table 3 Health and social indicators

Indicator	*Level at 1990/1991*	*Poorest level after 1991 (Year)*	*Year when previously at this poorest level*	*Most recent information (Year)*
Under five mortality	42/1000	132/1000 (1995–1999)	1970	Below 100*
Chronic (Wt for age) malnutrition	11%	23% (1996)	–	9% (2002)
Maternal mortality per 100 000 births	121	294 (1989–98)	–	NA
Diarrhea episodes per child per year	3.8	14.4 (1996)		NA
Per capita income	$3500	$500 (1994)	1960	$1000 est.
Electric production	9000 KW	3500 KW (1993)	?	8000 KW (2003)
Calories available per capita	3200	1090 on ration + 500 estimated purchase (1995)	1961	2300 + 1000 (2003)

*Consensus estimate among experts since 2000.
Source: Diaz & Garfield 2003.

use of return demonstrations should be developed. Computer-assisted learning should be instituted. The participation of nursing educators from other countries experienced in these technologies will be essential.

A community education campaign to improve the image of the nursing profession should be initiated. There should be educational programmes for medical and MoH leaders to develop expanded roles for nurses in the health system. The Ministries of Education, Higher Education, and Health should be consulted on the development of programmes for accreditation of nursing schools and teaching hospitals, certification of clinical specialists, and licensure of nursing professionals. Nursing leaders and their professional organizations should be encouraged to learn about nursing systems in other countries through an organized study programme, field visits and participation in international nursing meetings.

Health science schools and district offices of the MoH should be engaged in discussion and experiments with new nursing roles. In this way cultural factors that are particular to local areas will be drawn upon to find effective approaches. This includes engagement of local religious or social leaders for health promotion, identification of Iraqi organizations that can best spread health messages to their constituents, and experimentation with the use of rapidly evolving media of all types.

The lack of strategic planning or use of media for health promotion in the past creates a ripe environment to begin implementing some of these suggestions now. Well chosen activities are likely to be quite successful in the new open, participatory, decentralized social environment developing in Iraq. Strengthening of primary care services and the development of more effective targeted programmes in the MOH will create new opportunities to develop clinical roles, research opportunities and new educational approaches.

To achieve these aims, Iraq will need an extended period of international assistance. Iraqis must emerge from isolation to take part in regional and international organizations, establish their own legal basis for nursing practice, and interact with schools and colleagues in other countries.

Summary and conclusions

The status and identity of the nursing profession in Iraq is quite low. As in pre-Nightingale nursing in the UK, those with skill and intelligence were often considered inappropriate candidates for the field of nursing. Further, there is a great social split between the college graduates, who represent higher standards, and less trained or untrained nurses, who provide nearly all hospital-based nursing care. This split goes all the way up to the MoH and the Iraqi Nursing Association, where a capable group of leaders (Anonymous 2003) has little contact with hospital-based nurses.

Patients not accompanied by family members to provide basic nursing functions often go without care and essential nursing functions are often performed by interns as existing nursing staff is considered unreliable. Nursing in the public sector has become a menial profession. Nurses in the military hospitals, providing surgical care, or in private hospitals are generally more highly skilled and respected but are still seriously underutilized.

Wars and economic sanctions have confounded and worsened the problems faced by professional nurses in Iraq (Garfield et al. 2003a; Garfield et al. 2003b). Low social and professional status, a demeaning public image, poor pay and working conditions, lack of autonomy and cultural constraints for women worsened with the years of sanctions and war.

Key opportunities for collaboration and development exist in Iraq:

- Nurses from other countries should be invited to serve as visiting professors to upgrade teaching objectives, materials and methods. An international presence is key in raising the image of nursing in Iraq at this time of reintegration after 13 years of isolation.
- The two partially developed nursing colleges at Mustansariya and Basrah should be completed and opened.
- Basic science courses should be integrated with nursing and other health science students together.
- Community health rotations should be developed on an interdisciplinary basis. Nursing is thouht of basically as a hospital-based field in Iraq, yet its contribution to community health and primary care can become greater than that in hospitals.
- Only those who elect to go to nursing schools should be accepted and scores on a uniform national exam should not be the only criteria used to track students to or away from nursing.
- A health research policy is needed. Health system research should be prioritized. The formation of a health research council as an independent body could be a step in that direction. This is another key area for international collaboration.
- The current dichotomy between the institutions responsible for production of different categories of health manpower (mainly the Ministry of Higher Education) and the beneficiaries of such manpower (mainly the MoH) needs to be bridged. This could be achieved by the establishment of a body to monitor training programmes and to make sure that training objectives are relevant to community health needs. Such a body should establish standards of practice.
- A Curriculum Review Committee was established at the first national nursing conference in June of 2003. This nurse-led activity should be continued and individual schools encouraged to innovate in the contents and methods used.
- Twinning programmes with health science schools abroad are needed. A consortium of interested parties can coordinate this in

Europe or the USA. WHO and the MoH, in addition, can facilitate these school-to-school arrangements, and stimulate the offering of scholarships and fellowships.

• The revolution in information technologies must now reach Iraq in electronic and paper formats. Internet access and use for problem-solving must be fostered.

• A national accreditation and licensure system should be developed, incorporate quality assurance mechanisms for institutions and continuing medical education (CME) requirements for clinicians.

A unique opportunity exists to improve nursing and health care in Iraq (Garfield 2005). The MoH and the WHO agree that if health is to improve rapidly in Iraq, then nursing education, administration, research, and labour conditions must change radically. This will further contribute to the participation of women and local communities in a way that has not been possible in the past. How to achieve these goals is still not clear. A strong group of nurse administrators and educators needs the support and collaboration of nursing organizations and schools in other countries if it is to fulfil its potential in the years ahead.

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