Cardiovascular Nursing in Jordan: A Need for an Action

INTRODUCTION

Cardiovascular diseases (CVD), also known as one of the three “neglected global epidemics” according to the World Health Organization (WHO), constitute a huge burden on individual, local or global levels. CVDs are no longer “western diseases” (1). With the Epidemiologic transition, chronic illnesses are accounting for 80% of deaths in developing countries, CVD is the first cause of death (1). Although CVD is on the decline in developed countries, it is on a rise in developing countries (1). CVDs burden in these countries are huge because of onset of illnesses at younger ages, and an increase in incidence of preventable complications (2). The morbidity and mortality associated with CVD could be prevented to a large extent.

Jordan is a developing country that is substantially affected by CVD. Therefore, this editorial aims to examine the role of nurses in promoting CVD assessment, prevention and management in Jordan.

JORDAN: YOUNG COUNTRY EVOLVING

The Hashemite Kingdom of Jordan is a small Middle Eastern country located between the West Bank, Syria, Iraq, and Saudi Arabia. It is rich in history, and has been a major site for civilization since the Paleolithic Age. Jordan’s modern history dates from 1921, when it was established as the Emirate of Trans-Jordan, a self-governing territory under British mandate. The country became independent, as the Hashemite Kingdom of Jordan in 1946. From 1950-1999, the late King Hussein served as the political leader, and is remembered for his efforts at maintaining peace in the region. Since his death, his son, King Abdullah II has served as...
King. Jordan has experienced over the last century migrations that have added to its population. This has placed a huge burden on the infrastructure, schools, health services, employment and all aspects of living causing problems because Jordan is notably resource-poor, with limited agricultural land, no oil resources, and considerably scarce water.

The population of Jordan is 5,723,000. It is predominately Arab, with approximately 92% Muslim, 6% Christian, and 2% other. Jordan has one of the youngest populations among lower-middle income countries with 37 percent of the population under the age of 15. Based on the 2004 Population and Housing Census the country is going to be witnessing a “Window of Opportunity”. This is demonstrated by the decrease in mortality rate, fertility rate, and growth rate from one side and an increase in the life expectancy at birth to 71.5 years (70.6 for men, and 72.4 for women) (3). This indicator reflects the effective national strategies adopted by Jordan to achieve sustainable development.

THE JORDANIAN HEALTH CARE SYSTEM

The health care system in Jordan is facing a number of challenges, including a shortage in nursing staff and health care professionals, a decline in health services, lack of coordination among the different health service providers, operational inefficiency and cost ineffectiveness of medical services provision. Therefore, Jordan has witnessed over the past two decades several plans for reform but these plans have been challenged and impeded by poverty and unemployment.

The National Health Agenda (2006-2015) recognized these challenges and suggested more realistic and doable plans among them were: reform health sector policies, improve the institutional framework, develop a cost-effective medical insurance system to cover all Jordanians, enhance the operational efficiency of the public health care system, while improving the quality of service, improve emergency medical services, strengthen preventive medicine and further expand primary health care centers to ensure availability of qualified medical care (5).

Primary Care

One of the major health care problems in Jordan is inadequate quality and quantity of health care services directed toward primary care. Health promotion programs are insufficient and receive little attention from the Ministry of Health. The existing health promotion programs advocate for physical activity and smoking cessation only in youth. Working population and older adults are not viewed as target populations for health promotion programs. Furthermore, socioeconomic factors such as absence of suitable inexpensive options, few parks and high cost of sports club facilities may impede older adults willing to exercise.

Smoking is another risk factor that is not well addressed in Jordan. The overall smoking rate in Jordan in 1995 was 48% (4). More recent statistics demonstrate that smoking in men is higher (47.1%) compared to women (6.5%) (6). Interestingly, according to forms of smoking, men report smoking cigarettes as their first choice of tobacco products, whereas women report smoking waterpipe (7,8).

Ministry of Health and the Non-governmental Organizations work in empowering youth and educating them about the dangers of tobacco use has brought down the smoking rates in youth. However, current smokers need help especially that benefits of quitting are well established regardless of duration of smoking or the age at quit. Smoking cessation programs must be available for all who might benefit. Pharmacological interventions increase the success rate. Therefore, health insurance providers must include smoking cessation interventions in health insurance coverage.

Secondary Care

The first leading cause of death in Jordan is CVD (38.2%); ischemic heart disease and CVD are responsible for more than two thirds of CVD related mortality rate (4). The Ministry of Health in collaboration with World Health Organization and The Centers for Disease Control (CDC) established a surveillance program to determine population based health indicators. Risk factors for CVD are rising in an alarming way. The most dominant CVD risk factors in Jordan are being smoking, hypertension, DM, high blood cholesterol, obesity, and physical inactivity (table 1).

Screening programs for CVD risk factor assessment and management do not exist (9). The most dominant CVD risk factors in Jordan are being smoking and Diabetes Mellitus (DM). DM screening is only done as a diagnostic procedure to confirm the disease. Health insurance plans donot cover any services that are not associated with signs and symptoms.

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Many diabetic patients are diagnosed after years and sometimes when complications have occurred. Outpatient clinics role is exclusive to medication prescription. Patients are not assessed for foot care or are not educated about their diet or the importance of being physically active. Ineffective management of illnesses whether it was DM or hypertension is evident. Patients with these illnesses often suffer from knowledge deficits in regards to the properties of medications they are taking. Nonadherence to medications is a threat but no one tend to ask why patient do not take their medication as prescribed and how to make patients be part of the solution. Ineffective self management of prescribed medications contribute to increase in health care expenditure and in the complication of the underlying disease.

Tertiary Care

Cardiac rehabilitation services are unknown in Jordan, and discharge planning for patients are rudimentary or nonexistent, containing only education without the essential components necessary for risk factor reduction such as education, counselling and behavioral interventions. The development of preventive health care programs and provision of rehabilitation services is in urgently needed given the Jordanian demographics.

CVD, as a chronic health condition, poses physical, psychological, social, and economical threats to individuals, families, and the health care system. For example, the disability rate due to chronic illnesses is 7.2%. Functional disability is the most common form (10). Permanent complications and disabilities limit Activities of Daily Living (ADLs) and thus, have a devastating impact on the person and family members or other caregivers. Loss of productivity, lack of cardiac rehabilitation services together with the family members attitude about the need to remain inactive, result in as loss of independence and inability to interact with outside world which in terms may cause the older adult to suffer from loneliness (11). Additionally, being affected with these illnesses puts an additional burden on the person and her/his family. In Jordan, the overall number of suicidal cases in the older adults in the years 2000 and 2006 was 18 (denominator data not available), 6 of them were due to chronic physical and mental health problems, and this most likely constitutes underreporting due to the “shame” suicide brings on the family (12). Unfortunately, mental health services familiar with how to meet the needs of older adults are not available (13), although, mental and psychological health problems are prevalent (11).

More importantly, improving disease outcomes requires comprehensive health services to ensure effective management of CVD which centers on the provision of health care services through the use of

### Table 1. Prevalence of the most common health indicators in Jordan in 2004 and 2007

<table>
<thead>
<tr>
<th>Risk factors</th>
<th>2004</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension</td>
<td>21.5</td>
<td>25.6</td>
</tr>
<tr>
<td>Diabetes Mellitus</td>
<td>7.5</td>
<td>16.0</td>
</tr>
<tr>
<td>Hypercholesterolemia</td>
<td>16.2</td>
<td>36.0</td>
</tr>
<tr>
<td>Overweight BMI ≥ 30</td>
<td>20.0</td>
<td>36.0</td>
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<tr>
<td>Physical inactivity</td>
<td>50.0</td>
<td>32.0</td>
</tr>
<tr>
<td>Ever checked blood pressure</td>
<td>29.0</td>
<td>21.0</td>
</tr>
<tr>
<td>Ever checked cholesterol</td>
<td>58.0</td>
<td>61.0</td>
</tr>
</tbody>
</table>

coordinated, interdisciplinary clinical professional teams whose focus is the cost effective optimization of health outcomes. Jordan, compared to several countries in the regions, has the highest prevalence rates of irreversible complications in chronically ill including hypertensive and diabetic patients (14). The most afflicted population are the older adults. Complications such as cerebrovascular accident (CVA) also known as stroke are devastating especially because patients with a CVS requires specialized long term care to assist them with restrictions in ADL’s. Many families do not know how to provide care for the affected person themselves; have limited financial resources; health insurances do not cover any care beyond hospitalization due to the unrecognized role of long term care or home care services. Under these circumstances, caregivers may have conflicting attitudes toward the older adults and sometimes abuse may occur. Violation of older adult’s rights includes any intentional or unintentional abuse by a person they know or trust (15).

These care giving families need some form of support from the health care system to enable them to provide comprehensive care and at the same time maintain the person in their natural environment since the Ministry of Health and Ministry of Social Development constantly declare that they do not advocate placing older adults in institutions. Actually, this is one of the major barriers for the Ministry of Health for not establishing long-term care centers because they are perceived as settings that provide shelter for the older adults.

**Financial Burden of CVD**

CVD diagnosis are costly to manage, and they utilize a large portion of the national income. This rise in the cost of chronic health problems is also confirmed by the National Healthcare Costs Study, whereby the rate of annual expenditure of health was 9% of the gross domestic product; or about 454 Million Jordanian Dinars (JD), the majority of which is spent on services that treat preventable illnesses (about 263 Million JD’s annually) (16). In another study, conducted by the Social Security Corporation, the annual cost of health care for individuals aged ≥60 years was about 599 Million JD’s, or 74% of the total expenditure on curative services. Cardiovascular surgeries are performed in public, private, and in the military sectors. Ministry of Health hospitals reported performing 13,380 heart surgeries in its hospitals over 7 years. The rise in expenditure is expected to continue unless there is a deliberate planned shift in health policies and priorities toward prevention (13).

Despite the importance of healthcare services in preventing the occurrence of CVD and the resulting complications, only 26% of the total expenditure is directed toward preventative services (17). Additionally, the high rates of disability among the older population may be due in part to the high frequency of smoking, changes in dietary habits, and increase in physical inactivity. Adopting comprehensive health policies that focus on preventative services will cut the costs of health care and has the added benefit of reducing morbidity, disability, and suffering and premature death.

**POST GRADUATE EDUCATION**

Jordan has a number of master programs in nursing and has recently opened a doctoral program in 2006. The primary focus of the master programs is critical care, and intense subspecialty programs do not yet exist. Many students do their thesis or research on a CVD topic. However, once these students graduate they are employed by academic institutions as clinical instructors for undergraduate nursing students, and what was taught in the classrooms stays within the walls of the classrooms. Jordan at this time does not have a system of nursing registration or licensing exams, and therefore also does not have continuing education requirements. The master’s program directors need to evaluate the objectives of their programs and whether they are contributing to the development of cardiovascular nursing in Jordan. If they claim that the graduate programs were established to develop specialised nurses then there is a need to seriously consider having settings for the advanced practice of nurses. Until scope of practice and settings are clear and available for the students in the inpatient and outpatient and community health care system, nurses will remain with little or no contribution to in the advancement of practice in the area of cardiovascular nursing.
PROFESSIONAL ORGANIZATIONS IN JORDAN

In Jordan we have two competing organizations. The first established one is the Jordanian Nurses and Midwives Council (JNMC) (http://www.jnmc.jo), and the more recent is the Jordanian Nursing Council (JNC) (http://www.JNC.gov). These two professional nursing organizations regulate the nursing profession: The JNC role is to collaborating with other governmental agencies in setting the national health strategy and in establishing priorities, goals and directions for the profession and to provide the expertise for their implementation. Whereas, JNMC offers continuing education and training courses on specific topics such as critical care, or emergency care. These two organizations need to set the priorities in terms of widening the horizon for nursing practice through the influence of their organizational leadership power.

CHALLENGES FOR THE FUTURE

Nurses play a significant role in expanding the knowledge related to etiology, management, and prevention. Nurses also share the responsibility for translating the generated scientific knowledge into actions and measures to control this devastating group of illnesses. Therefore, nursing schools especially at the undergraduate and graduate levels must take action to develop training and certification programs that are customized to prepare nurses for subspecialties such as CVD nursing, to enable nurses to meet the needs of persons with CVD.

In addition, nurse leaders must be actively involved in lobbying for reform of health care services such as the establishment of long term care services due to the growing proportions of chronically ill, who have suffered irreversible complications. This is not only a medical service need but also a basic human right. Nurse leaders must act urgently to establish settings for the advanced nursing practice in graduate program curricula and for continuing education for nurses who are already in practice. In this way, graduates with adequate education and training can find settings to practice their skills and build on further developments. For example, doctoral student who study effective self-management of chronic illnesses can collaborate with either primary care settings or outpatient clinics and devote time to work with persons with CVD and empower them through providing proper health education and teaching survival skills such appropriate way of taking medications or adhering to diet. This type of practice can be monitored and outcomes can be measured to learn what works in the Jordanian setting and context and modify and advance patient care. This evidence-based practice will serve as a depository data bank that can form the bases for adopting CVD prevention and management guidelines that are customized for the Jordanian cultural context to enhance: risk reduction, early diagnosis, and control for progression of disease.

REFERENCES

11. Akroush L. The Problems of the Elderly in the Jordanian Society, unpublished PhD.


