

Rehabilitation Services in Saudi Arabia: An Overview of its Current Structure and Future Challenges

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Abstract

Saudi Arabia is the largest state in Middle East and is a major force in the Arab world due to its oil wealth. The prevalence of disability is growing rapidly in the kingdom of Saudi Arabia. The government has taken number of reforms to improve health care system. As a consequence health care services improved significantly in recent decades. There is still greater requirement for rehabilitation services due to reasons such as growing population, change in life style leading to greater incidence of diabetes mellitus, cardiovascular diseases, increased road traffic accidents leading to head injury, stroke, spinal cord injury etc. This paper focuses on the current structure and future challenges of tertiary care in the capital city of Saudi Arabia, Riyadh.

Keywords: Saudi Arabia; Health care; Rehabilitation services

Introduction

An estimated 10% of the world's population experience some form of disability. Chronic conditions such as cardiovascular and respiratory diseases, cancer and diabetes, injuries, such as those due to road traffic accidents, mental illness, malnutrition, and infectious diseases are the most common conditions leading to disability. The number of people with disabilities is growing as a result of population growth, ageing and medical advances that preserve and prolong life. These factors are creating considerable demands for health and rehabilitation services. Furthermore, the lives of people with disabilities are affected by the way society interprets and reacts to disability which requires environmental and attitudinal changes (WHO, 2010) [1].

In Saudi Arabia, the prevalence of disability is growing with the rapid increase in the prevalence of the now called "diseases of civilization", such as obesity, cardiovascular disease, and diabetes. Furthermore, the escalating rate of road traffic accidents is accompanied by an eminent increase in people with disability. It is estimated that the Saudi population growth is 2.9% (central department of statistics 2012) with an average life expectancy of 72.2 and 76.2 years for males and females respectively, revealing a trend towards creating an ageing populations [2]. Collectively these conditions require tertiary interventions, commonly known as rehabilitation. The overall supervision of the healthcare facilities, both in the public and private sectors is by the Ministry of Health (MOH 2012) [3]. National survey in Saudi Arabia reported the prevalence of major disabilities among children to be (6.33%) [4]. According to central intelligence agency (CIA) urban population: 82% of total population (2010) rate of urbanization: 2.2% annual rate of change (2010-15 EST) Riyadh (capital) 4.725 million Jeddah 3.234 million; Mecca 1.484 million; Medina 1.104 million; Ad Dammam 902,000 (2009) [5].

Rehabilitation is considered a health strategy that is provided by Physical Rehabilitation Medicine and professionals in the health sector and across other sectors to enable people with health conditions experiencing or likely to experience disability, to achieve and maintain optimal functioning in interaction with the environment [6]. Rehabilitation encompasses a wide range of activities including rehabilitative medical care, physical, psychological, speech, and occupational therapy and support services. People with disabilities should have access to both general medical care and appropriate rehabilitation services. Rehabilitation can be understood as one out of 4 health strategies also including prevention, cure and support [7]. There is growing significant evidence on the effectiveness of rehabilitation in number of conditions, such as stroke [8], rheumatoid arthritis [9], or elderly with hip fracture [10].

This paper presents the current structure of rehabilitation services in Riyadh and even focuses on its future challenges in rehabilitation health care system.

Rehabilitation care units in Riyadh

King Khalid University Hospital (KKUH) and King Abdul-Aziz University Hospital (KAUH) are the two major Rehabilitation service providers mainly outpatient services and partly inpatient services in Riyadh, the capital city of Saudi Arabia. There are also other hospitals, such as Sultan Bin Abdulaziz Humanitarian City, King Fahad Medical City among others.

Environmental analysis (current situation)

Internal Environment: The Dean of the College of Medicine is supervising the operation of university hospitals; King Khalid University Hospital (KKUH) and King Abdulaziz University Hospital (KAUH). Rehabilitation services provide mainly outpatient services and partly inpatient services. These services are delivered through rehabilitation departments in both hospitals. Both hospitals are

undergoing a major expansion as well as establishing new facilities (e.g. Cardiac Center).

The rehabilitation department at KKHU

The rehabilitation department consists of the rehabilitation medicine clinic, physical therapy, occupational therapy, communication disorders, orthotics and prosthetic, nutrition, psychology, and social services. The department operates on a referral system from physicians from different departments within the hospital. The rehabilitation clinicians are usually not involved in the screening process for patients who may need rehabilitation services. Clinic of rehabilitation for the acute patient is not available at the moment. In patients who may require of this rehabilitation services, their attending physician/surgeon, are requisitioned to the rehabilitation department and treated by the appropriate rehabilitation specialist, within inpatient or outpatient facilities according to the patients' needs.

Patients who are referred to the rehabilitation department go through a screening process by the clinical supervisor of the department to make sure that the patient is seen by the appropriate specialist. According to the severity of the condition of the patient, the clinical supervisor also makes decisions. Number of patients treated by rehabilitation practitioners in the last three years (Table 1).

	Year		
	2009	2010	2011
Number of in-patients treated	2477	4066	4336
Number of in-patients visits	10042	7884	4895
Number of out-patients treated	6330	4972	5523
Number of out-patients visits	38115	40428	53022
Total number of patients treated	8807	8981	9859
Total number of patients visits	48157	48312	57917

*King Khalid University Hospital (KKUH) Annual statistics report

Table 1: Patients treated in rehabilitation services at KKHU in the last 3 years*

These statistics do not show the types of cases and treatment by rehabilitation specialists. Then, one cannot judge, which cases are usually most common in demand for rehabilitation. In addition, it is not clear from the available reports (Ministry of Health), as how patients are referred for rehabilitation department and what are the selection criteria. The data is also limited regarding what factors may influence the number of patients treated, and the number of their visits. It is also not possible to identify the ratio: therapist/patient, that which is an important key of the service performance indicator. As for their qualifications, most clinicians in the department are holding Bachelor degree in their specialty. The Table 2, showed degree in their

specialty except for one physical therapist with Graduate Diploma and one physical therapist with Masters degree. There are no plans in place for staff training and development.

Specialty	Available number	Qualification
Specialist rehabilitation medicine physician	1	MD, Physiatrist
Physical therapist	30	B.Sc., M.Sc. (n=1), Graduate Diploma (n=1)
Physical therapy technician	8	Diploma
Occupational therapist	1	B.Sc.
Occupational therapy technician	2	Diploma
Orthotics and prosthetics technicians	2	Diploma
Speech and audiology specialist	1	B.Sc.
Receptionist	1	Ability to read and write in both Arabic and English
Medical records technician	1	TMR (technician in medical records)

*King Khalid University Hospital (KKUH)

Table 2: Number of rehabilitation specialists working in the Rehabilitation Department at KKHU and their qualification.

In terms of facilities, the department is comprised of male and female treatment areas, gymnasium for physical therapy, pediatric physical therapy, one hydrotherapy pool, one clinic for each rehabilitation medicine physician, speech pathologist, psychologist, and occupational therapist, and orthotics and prosthetics workshop. The department has limited space for the number of patients seen on a daily basis. The average number of patients visiting the out-patient clinics is approximately 210. There are also safety issues in these facilities.

Current situation

Expansion of KSU Medical City: The expansion of the university hospitals is in place. This includes increasing number of beds, establishing new departments, and establishing specialized centers (e.g. Cardiac center). Table 3 shows the current number of beds in each department and the expected increase. KKHU alone will have 73% increases in total number of beds. The current plan does not include In-patient Rehabilitation Facility (IRF), which is considered a requirement for such a general hospital. According to the Ministry of Health (MOH) strategic plan for rehabilitation services, 10% of general hospitals capacity should be allotted for IRF.

Department	Total Existing Number of Beds	Total Beds after the Expansion	% of increase
Oncology	12	60	400
Dialysis	10	42	320

Adolescent	0	15	New
Internal Medicine	99	141	42
Pediatric + NICU	86	128	49
Surgery	161	201	25
Orthopedic	48	78	63
OBG	136	174	28%
Trauma	12	40	233%
Maxillo- Facial	6	12	100%
ENT	0	12	New
Burn Unit	4	8	100%
Diabetic Foot	0	20	New
IVF	3	11	267%
Long Stay	0	58	New
ICU	18	46	35%
Total number of occupied beds	577	970	68%
Total vacant beds	48	171	103.6%
Total capacity	661	1141	73%

Table 3: Current number of beds and the expected expansion.

SWOT analysis: The following is based on the self-evaluation report of the rehabilitation department for the year 2010. Unfortunately, information from the SWOT analysis conducted by the College of Medicine Strategic Plan Committee was not utilized for the fact that rehabilitation staff and stakeholders were not included in the SWOT analysis sample.

Strengths:

Open (free) access to health services in university hospitals for all Saudi citizens.

Good academic environment.

Direct links with the College of Medicine and indirect links with other health colleges (Applied Medical Sciences, Pharmacy, Nursing, Dentistry).

Availability of good quality of care and highly qualified physicians.

Plans in place for development and improvement of services and staff.

Weaknesses:

Patient safety standards are not established.

Limited capacity.

Staff qualifications remain at minimum level.

Limited communication between the rehabilitation staff and other departments.

Limited and/or undefined research in the field of rehabilitation.

Limited financial incentives for staff.

Weak IT system.

Weak administrative and organizational environment.

Opportunities:

KSU support and focus on improving health sector.

Expansion of KSU Medical City.

Research Chairs and KSU Endowment.

Distinguished Faculty and Researchers Program.

The current urgency for establishing international recognition and accreditation.

KSU reform and strategic plan priorities.

Advancements in technology and assistive devices.

Government and community support for people with disabilities.

Threats:

High competition for talents leading to loose qualified staff.

Competitive local rehabilitation service providers.

Private rehabilitation services.

Limited number of local specialists in the field of rehabilitation.

Limited local academic rehabilitation programs.

Key competitive advantage of KSU Rehabilitation Institute: The proposed KSU Rehabilitation Institute has a number of competitive advantages that make its performance sustainable and provide a platform for growth:

- Direct links to academic facilities (health colleges).
- Free access to care.
- University support.
- Support for education and research.
- External environment

Target customers and their needs/expectations:

- Patients: need state of the art comprehensive rehabilitation services.
- Referring departments: need to refer patients to rehabilitation department as part of the total treatment and management plan.
- Staff: need to work in a supportive working and learning environment.
- Trainees and students: expect to have good learning opportunities and work experience.
- Academics and researchers: need to gain access to a specialized educational and research facility.

Community: need awareness and education related to rehabilitation.

Major competitors and their competitive advantage: According to the World Health Organization (WHO), the Saudi health care system is ranked 26th among 190 of the world’s health systems [11]. Despite these developments, it faces many challenges in implementation of the health services to the rapidly growing population with the current policies and work force. Over the last two decades, the Government of Saudi Arabia has established numerous rehabilitative services for persons with disabilities. At a glance, services provided by the government and charitable organizations seem to be plentiful and of high quality, but remain inadequate for meeting the demands of the growing population and advancement in medical services. To develop the current strategic plan, we made a careful analysis of the existing local rehabilitation facilities as illustrated in Table 4. Despite medical statistics compiled by the Ministry of Health for its annual reports, there are no regular and reliable reports on the distribution of people with disabilities in such facilities. In order to manage these issues, a well coordination of all related sectors is necessary. Efforts to improve and expand the rehabilitation health care services in the kingdom would meet the necessary demands and helps to reduce disability.

Major competitor	Advantage	Disadvantage
Military/Security/National Guard Hospital services	Adequate financial resources; Government support	Limited to a target population
Rehabilitation Hospital at King Fahad Medical City	Easy access for patients; Comprehensive rehabilitation services	Limited space and capacity
Not-for-profit institutions (Sultan Bin Abdulaziz Humanitarian City)	Long-term and Chronic care facility	Financial burden
Disabled Children Association	Geographical coverage	Limited inclusion criteria
Czech Rehabilitation Center (Private center)	Easy access for patients	Financial burden

Table 4: Major local rehabilitation facilities and their competitive advantages.

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