# AVAILABILITY AND ACCESSIBILITY OF APPROPRIATE HEALTHCARE EQUIPMENT IN ANTENATAL CLINIC FOR WOMEN WITH PHYSICAL DISABILITY IN PORT HARCOURT, RIVERS STATE

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## Abstract

*Health systems throughout the world are struggling with the challenge of how to manage health-care delivery in conditions of resource constraint. The availability and utilisation of various health care equipment at all levels of the health care system, has been emphasised for effective and efficient service delivery and health. The objective of this study was to assess availability and accessibility of appropriate healthcare equipment in antenatal clinic for people with physical disability who were clients and identify reported reasons that affect availability and utilisation of medical devices among four referral hospitals in Port Harcourt, Rivers State. A qualitative method was used in four Government owned hospitals in Port Harcourt and data was collected by observation of availability of the devices and key informants interview in the study hospitals. Observation and interview using checklist showed that none of the hospitals had a height-adjustable examination table, chair and an accessible weighting scale. Reason given for non-availability was that the government did not provide. The result showed that the health care system for pregnant physically-challenged mothers was very poor. Hence a need to sensitise service providers on reproductive health needs of people with physical disability for better support and for the government to enforce the provision of physical disability-friendly services in all health facilities in all community to promote their wellness.*

**Key words:** *Medical devices, Availability, Accessibility, Women with physical disability, Port Harcourt*

## Introduction

Disability is seen as a complex phenomenon, reflecting an interaction between features of a person's body and features of the society in which he or she lives (World Health Organization, 2012). Increasing evidence suggests that people with disabilities in general have a much poorer level of health, than their non-disabled counterparts (World Health Organization, 2012). Based on the 2010 global population report, more than one billion people have been estimated to

have some form of disability or the other, a total of 15% of the world's population (World Health Organisation, 2012). A higher prevalence of disability is reported among women (World Health Survey, 2002) with a prevalence of 10% estimated among women of childbearing age (World Health Organisation, 2012), inspite of this, more disabled women are having children (Blackford, Richardson, & Grieve, 2000). A large scale UK population based study of women with a limiting longstanding illness, who had recently given birth found a prevalence of 9.4% of limiting long-lasting illness (Sumilo, Kurinczuk, Redshaw, & Gray, 2012). There are vital routine tests and procedures that should be carried out during pregnancy. Most antenatal regimes require the woman's blood pressure to be taken at each visit; urinalysis; weight, fundal height; abdominal palpation (World Health Organisation, 2003). In conducting these procedures there is the need for an adjustable examination table, chair and a weighing scale.

Public buildings like hospitals are thus expected to be built to accommodate the accessibility needs of all persons in the society. This will ensure that all persons have the opportunity to have access to healthcare services. Obtaining and maintaining health insurance coverage and quality healthcare is a critical issue for everyone in Nigeria, yet, people with physical disability especially the pregnant ones still face additional barriers to receiving adequate healthcare (Hamzat & Dada, 2005). These barriers can range from physically inaccessible healthcare provider locations, to examination and diagnostic equipment that cannot be adjusted for a range of patient function, to failures to modify office policies or practices to accommodate the communication and accommodation needs of patients with various disabilities (DREDF, 2016). These barriers have been reported for many women with physical disabilities (Coyle & Santiago, 2002). High rates of abortion, miscarriage, caesarean section, and low usage of contraception were found in a survey involving 410 physically challenged women carried out in South Korea (Lee & Heykyung, 2005).

Examination tables and chairs are used almost universally throughout the health care delivery system (Northwest ADA Center, 2014). The examination tables used in most doctors' offices are typically designed to be used at a fixed height of 32 inches making independent transfer very difficult or impossible for many people with mobility disabilities, especially those who use mobility aids such as a wheelchair (Northwest ADA Center, 2014). An accessible adjustable examination tables provide critical benefits to health care providers and clients/patients because they help make medical settings more accessible to pregnant women with disabilities; ensure that examinations can be done routinely and efficiently; decrease the risk of injury for medical providers and disabled health care clients; reduce the frequency and time required in using a lift team, lift equipment and/or providing transfer assistance from staff. In addition to

getting on the table, the low height of the table allows the disabled mothers to sit with their feet still on the floor, eliminating strain on their back and legs. Examination tables with greater height flexibility decrease the need for staff assistance and help the patients maintain their independence, confidence and dignity (Kailes, & Mac-Donald, 2010).

Tables and chairs that can be lowered to 17"-19"inches from the floor to top of the cushion make transferring easier for wheelchair users and others with activity limitations (Kailes, & Mac-Donald, 2010). When the height of an examination table or diagnostic chair is not adjustable, wheelchair users and ones with other activity limitations may need to be lifted or assisted onto this equipment. This type of lifting can cause back or other musculoskeletal injuries to staff. Once the patient is on the equipment an adjustable-height feature also enables health care providers to elevate the equipment to a comfortable height for conducting an examination or procedure, thus, decreasing the risk of back strain or other injuries to these health care professionals (Kailes, & Mac-Donald, 2010). Adjustable handrails and side panels attached to the table or chair provides added safety, balance, and stability assistance for getting onto and off the table, in addition to stability and maintaining positioning once on the table (Kailes, & Mac-Donald, 2010).

Accessible scales are useable by all people with and without disabilities including wheelchair users, people with activity limitations, and larger people who may exceed a standard weight scale limit. This includes people with conditions that interfere with mobility, walking, climbing, and using steps. When patients cannot be weighed, they receive a lesser quality of health care. Without an accurate and current weight measurement, chances of missed diagnosis or incorrectly prescribed medication increase (Jenkins, & Vaida, 2007). By providing accessible weight scales, the quality of care provided to pregnant mothers with disabilities and activity limitations are improved (Weight Control and Diet, 2001).

Weight measurement is important to overall health, and is generally included in a gynecological examination (Pendo, 2009). However, antenatal mothers with mobility disabilities are not being weighed due to the lack of wheelchair accessible scales in hospitals (Kroll, Jones, Kehn, & Neri, 2006). In a national survey of people with that are physically disabled, sixty percent of the respondents who used wheelchairs reported problems being weighed due to lack of an accessible scale (Kailes, & Mac-Donald, 2010). Similar evidence exists for women with disabilities (Nosek, Hughes, Howland, Young, Mullen, & Shelton, 2004). This inability to be properly weighed is especially problematic in the light of data that suggests that women with disabilities have higher rates of obesity

than women in the general population (Weil, Wachterman, McCarthy, Davis, O'Day, Iezzoni, & Wee, 2002). As one mother explained, 'could you believe that all through my pregnancy so far they don't know how much weight I've gained, because they don't have a wheelchair or sitting scale or nothing. They don't monitor my weight at all' (Pendo, 2009).

Availability and accessibility of healthcare facilities and equipment that gives preference to physically challenged mother during antenatal visits, is a serious problem as there is gross deficiency in the distribution of health facilities in Nigeria (Ibekwe, 2010). There is limited or no study on availability and accessibility of antenatal examination table, chair and weighing scale for physically challenged pregnant women in Port Harcourt, Rivers State. Therefore, this study examined the availability and accessibility of adjustable examination tables, chairs and weighing scales for pregnant women with physical disability in major hospitals in Port Harcourt, Rivers State.

## Research Questions

The following research questions were answered:

1. Are there available and accessible adjustable tables, chairs and weighing scale?
2. What is the functional status of adjustable tables, chairs and weighing scale?
3. What are the reasons for not having and not using adjustable tables, chairs and weighing scale?

## Methodology

A descriptive survey design was used by the researchers to collect data on availability and accessibility of appropriate healthcare equipment in antenatal clinic for women with physical disabilities in Port Harcourt, Rivers State. It involves a qualitative method of data collection including one-time observation of the hospital equipment with no attempt to manipulate any variable and an interview of appropriate authority. The study population consisted of administrators of hospitals, heads of units and matrons in all Federal and State Government owned Hospitals offering antenatal services in Port Harcourt. They are University of Port Harcourt Teaching Hospital (UPTH), Military Hospital, Braithwaite Memorial Specialist Hospital, and Kelsey Harrison Hospital, Port Harcourt. A checklist of available and accessible height adjustable examination tables, chairs and weighing scale was used. Key informant interview on Administrators of the hospital, heads of units and matrons was done.

Administrators were asked if the hospital had the following pieces of accessible equipment: a height adjustable examination table and chairs, a scale that could accommodate a wheelchair, a height adjustable. Hospitals that lacked these equipment were asked reason for non-availability. Permission to take the required measurements was obtained from the appropriate authority in charge of the buildings. Physical observation of the study site was carried out by the researchers and necessary measurements were taken and recorded by the researchers. A key informant interview (KII) was conducted with the appropriate head. The researchers developed a good level of *rapport* with the respondents and explained the need for them to respond to the items of the instruments. Descriptive statistics of frequency tables and percentages were used to present the data. Data were analysed thematically.

## Data Analysis and Discussion

**Research Questions 1:** Are there available and accessible adjustable tables, chairs and weighing scale?

**Table 1**: **Availability and accessibility of medical devices and equipment**

| Items | Number of Available and Accessible Medical Device | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | UPTH | | MH | | BMH | | KHH | |
| | Ava | Acc | Ava | Acc | Ava | Acc | Ava | Acc |
| Adjustable Examination Table | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjustable Examination Chair | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Accessible Weighing Scale | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

In table 1, none of these referral centers in Port Harcourt had any adjustable height examination tables, chairs and accessible weighing scale.

**Research Question 2:** What is the functional status of adjustable tables, chairs and weighing scale?

**Table 2: Functional status of medical devices and equipment**

| Items | Functional status of Available Medical Devices | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | UPTH | | MH | | BMH | | KHH | |
| | Func | Not Func | Func | Not Func | Func | Not Func | Func | Not Func |
| Adjustable Examination Table | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Adjustable Examination Chair | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Accessible Weighing Scale | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

In table 2, none has functional height adjustable tables, chairs and accessible weighing scale for disabled patients.

**Research Question 3:** What are the reasons for not having and not using adjustable tables, chairs and weighing scale?

**Table 3: Reasons for non-availability and non-utilisation of medical devices and equipment**

| Items | Reasons for non-availability and non-utilization of Medical Devices | | | |
|---|---|---|---|---|
| | UPTH | MH | BMH | KHH |
| Adjustable Examination Table | Government did not supply. | Government did not supply. | Government did not supply. | Government did not supply. |
| Adjustable Examination Chair | Improper management | | We have maids who help in lifting women with physical disabilities | |
| Accessible Weighing Scale | | | | |

The result showed that the major reason for not having this adjustable equipment was because the government did not provide them. Key informant on BMH also said that when they have such patients, they were lifted onto the fixed-height tables.

## Discussion

Accessibility is an important feature of the overall process of seeking and obtaining health care services and where accessibility is a problem, the result will

be limited use of these services, especially by persons with physical disability. The findings of this study showed that none of the Government owned hospital has an accessible medical height adjustable examination tables, chairs and accessible weighing scales. Where there is no height adjustable examination table, interviews from both patients and providers indicated that patients may be examined seated or lifted up onto the examination table (Iezzoni, & O'Day, 2006). Conditions may be missed if a patient is only examined seated in a wheelchair (Story, Schwier, Kailes, 2009). This is contrary to the study of Mudrick, *et al.*, (2012), where 8.4% of provider sites had a height adjustable examination table and only 3.6% of sites had an accessible weight scale. The prior studies had indicated that height adjustable examination tables were present in 17%-44% of offices (Sanchez, *et al.*, 2000; Graham & Mann, 2008).

Reason given for not having an adjustable examination table, chair and an accessible weighing scale was that government never provided. Since the hospitals are government owned, it is only the government that equips the hospital. The study also revealed that the hospitals had maids who helped in transferring patients onto the examination tables. This is similar with the Lagu, *et al.*, (2013) where 40% reported that their staff would manually transfer patients to fixed-height tables. Untrained or unassisted lifting of a patient onto an examination table can lead to injuring of patients and/or the individual who is doing the lifting (Sanchez, *et al.*, 2000; Iezzoni, & O'Day, 2006). Height adjustable examination tables are useful to a broad range of patients that includes people with obesity, arthritis, balance difficulties, vision impairments, and a wide range of mobility impairments.

## Conclusion

The researchers looked for the presence of three items of accessible medical examination equipment, a height adjustable examination table, a height adjustable examination chair with a minimum height of 17-20 inches and an accessible weight scale. An accessible weight scale was defined as a scale useable by pregnant patients with mobility or activity limitations or who may exceed the standard weight scale limit. In this study, none of these referral hospitals had a height adjustable examination table, chair and an accessible weight scale.

An inaccessible examination tables, chairs and weight scales will impede some pregnant women with physical disabilities from getting routine prenatal physical examinations and weight measurement. This represents substandard care. Adjustable height examination tables and chairs and wheelchair accessible weight scales could significantly improve care and comfort for pregnant women with physical disabilities. Healthcare providers should be proactive in planning to

accommodate these patients by considering accessibility whenever they acquire new equipment, renovate older structures, or build new facilities. They also should establish policies and procedures to ensure that equipment is available during appointments of patients with mobility issues and that staff are trained in safe transferring procedures. Ensuring accommodation and accessibility will benefit patients with impaired mobility and clinical staff.

Access to government-supported health care facilities constitutes a major and persisting health inequity between persons with and without disabilities in Nigeria. Ensuring equal access will require further strengthening of the country's health care system. The state government should liaise with health professionals (the occupational therapists, physiotherapists, engineers and architects) to make necessary devices and equipment available and accessible to ease provision of healthcare to women with physical disability.

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