

THE ROLE OF INFORMATION AND COMMUNICATION TECHNOLOGY IN A HOSPITAL

**PRESENTED BY IT UNIT
NATIONAL ORTHOPAEDIC HOSPITAL DALA-
KANO**

**PRESENTERS: Fauziyya Abdullahi Ibrahim
MUHAMMAD MUBARAK SABITU**

OUTLINE

- **INTRODUCTION**
- **DEFINITION**
- **WHAT ARE THESE ICT EQUIPMENTS**
- **USE OF ICT IN HOSPITAL**
- **ICT IN HOSPITAL**
- **ROLE OF ICT IN A HOSPITAL**
- **SOME DEPARTMENTS IN THE HOSPITAL THAT MAKE USE OF ICT EQUIPMENT'S**
- **PRESENT ROLE/FUNCTION OF IT/ICT UNIT IN THE HOSPITAL**
- **FACTORS INFLUENCING THE ADOPTION OF ICT**
- **BENEFIT OF ICT**
- **FACTORS AFFECTING THE IMPLEMENTATION OF ICT**

OUTLINE

- Monitoring and supervision of PACS (picture archiving and communication system)
- ACHIEVEMENTS
- CHALLENGES FACING THE IT UNIT OF THE HOSPITAL
- SOLUTION
- CONCLUSION

INTRODUCTION

The advent of technology has paved ways for new approaches and how Health care, businesses, Government and society at large interact with each other. Hospitals are extremely technical places with complex ICT equipment.

Today ICT not only means the call you make to relatives on the other side of the world, or the quick email you send through your mobile phone. ICT is now something much more deeply woven into the fabric of our lives; it allows students to remotely connect to their university classes, or expats to send money back home through a simple SMS. ICT is the thread that has the potential to connect everyone and everything important around the world, including in the area of health.

DEFINITION

ICT- An umbrella term that include any communication device or application encompassing radio, television, cellular phones, computer and network hardware and software, satellite system and so on.

WHAT ARE THESE ICT EQUIPMENTS

- MOBILE PHONES
- IPADS
- COMPUTERS
- TABLETS
- PRINTERS
- SCANNERS
- ETC

USE OF ICT IN HOSPITAL

- ICT in hospital is for electronic storage of medical data. This helps to retrieve the information easily.
- The patient can have medical records in hand which can be used anywhere, anytime. ICT offers various ways to improvise the healthcare system
- Improve the quality of healthcare delivery, increases patients safety, decreases medical errors, and strengthens the interaction between patients and healthcare providers
- One of the main uses is ease of access of important information for professionals situated even in remote locations. Electronic health records provide safer and more reliable prescriptions

ICT IN HOSPITAL

Make use of computers in fields like;

- Clinical Implementation
- Administration

CLINICAL IMPLEMENTATION

In Clinical Implementation we can see the use of computers for:

- Assessment
- Patient Monitoring
- Documentation
- Electronic Medical Records



NATIONAL ORTHOPAEDIC HOSPITAL

DALA - KANO

Medical Health Record

Select Parameter

Book Appointmet

Manage Activities
File Number

10014

Insert New

Save

Retrieve

Print

Reset

Close

Parameters Setup

Patient Bio

Full Name	Age:	Sex:	Hospital No.:
KABIR ABUBAKAR	40	Female	10014

Booking Schedule

Folder No:	<input type="text" value="10014"/>	Date Of Book:	4/16/2017
Team:	<input type="text"/>		
Book Type:	<input type="text"/>		
Execution Date:	<input type="text" value="00/00/0000"/>		
Execution Time:	<input type="text" value="00:00:00"/>		

HOSPITAL ADMINISTRATION

Use of Computers by administrators is to:

- Reduce the cost of services rendered
- Facilitate medical/employee record process
- Justify roles of each hospital employee
- Auditing and account computing

ROLE OF ICT IN A HOSPITAL

1. Patient Records System

2. Patient Monitoring

▶ *Blood pressure monitor*

3. Patient Diagnostics

4. Patient Treatment

The IV drip

5. Robot Surgery

6. Patient Appointments System

7. Communication

8. Computerized Prescriptions

9. Pharmacy and Stock Control

[HOME](#)[VIEW APPOINTMENTS](#)[VIEW ALL RECORDS](#)[GENERATE REPORT](#)[PRINT](#)[LOGOUT](#)

UPDATE SECTION

Patient Information

Hospital No

Surname

Middle Name

First Name

Gender

Marital status

Date of Birth

Activate Windows
Go to PC settings to activate Windows.

[HOME](#)[VIEW APPOINTMENTS](#)[VIEW ALL RECORDS](#)[GENERATE REPORT](#)[PRINT](#)[LOGOUT](#)

UPDATE SECTION

[New appointment?](#)[Diagnosis](#)[X-ray](#)[Operation](#)[Physio](#)[O and T](#)[Pros/Orth](#)[Admission](#)[Disposal](#)[Referrals](#)

Sn	Date	Hospital no	Surname	Middle name	First name	Xray no
----	------	-------------	---------	-------------	------------	---------

Activate Windows

Go to PC settings to activate Windows.



NATIONAL ORTHOPAEDIC HOSPITAL DALU KANO

MEDICAL RECORD SYSTEM

[HOME](#)[VIEW APPOINTMENTS](#)[VIEW ALL RECORDS](#)[GENERATE REPORT](#)[PRINT](#)[LOGOUT](#)

UPDATE SECTION

From: to:

- Diagnosis
- X-ray
- Operation
- Physio
- O and T
- Pros/Orth
- Admission
- Disposal
- Referrals

SN	Date	Hospital no	Surname	Middle name	First name	Gender
----	------	-------------	---------	-------------	------------	--------

Activate Windows
Go to PC settings to activate Windows.

UPDATE SECTION

- Diagnosis
- X-ray
- Operation
- Physio
- O and T
- Pros/Orth
- Admission
- Disposal
- Referrals

DIAGNOSIS

Diagnosis date:

Hospital no:

Diagnosis:

Code no:

External causes:

Code no:

Save

Activate Windows
Go to PC settings to activate Windows.

UPDATE SECTION

- Diagnosis
- X-ray
- Operation
- Physio
- O and T
- Pros/Orth
- Admission
- Disposal
- Referrals

X-RAY

X-ray date:

Hospital no:

X-ray no:

Save

Activate Windows
Go to PC settings to activate Windows.

UPDATE SECTION

OPERATION

[Diagnosis](#)[X-ray](#)[Operation](#)[Physio](#)[O and T](#)[Pros/Orth](#)[Admission](#)[Disposal](#)[Referrals](#)

Operation date:

Hospital no:

Operation procedures:

Code no:

Surgeon:

Surgeon assistant:

Anaesthetic:

Type of anaesthesia:

Save

Activate Windows

Go to PC settings to activate Windows.

SOME DEPARTMENTS IN A HOSPITAL THAT MAKE USE OF ICT EQUIPMENT'S

ICT HELPS IN;

- **BLOOD GROUP TESTING**
- **SURGERY**
- **NICU**
- **ICU**
- **PEDIATRICS**
- **RADIOLOGY**
- **ULTRASOUND**
- **PHARMACY**

CONT..

- Medical Laboratory
 - Analyze blood and urine sample
 - Test for disease and genetic disorder.
- Runs Specimens



CONT

- **Surgery:** This department performs procedures to fix problems inside the body.
- **Neonatal intensive care unit (NICU):** When babies are born too early and or have serious problems they are placed in this special care unit.
- **Intensive care unit (ICU):** is for patients who are very sick or injured. They are very fragile patients.

CONT

- **Pediatrics:** This department deals with the care of children.
- **Radiology:** Uses imaging of the human body to help Find result.
- **Ultrasound:** Ultrasound is used for medical imaging on humans (and animals).
- **Pharmacy:** The pharmacy is where patients go to fill a prescription. This is where you get your medicine.

PRESENT ROLE/FUNCTION OF IT UNIT IN THE HOSPITAL

- Monitoring and supervision of PACS (picture archiving and communication system)
- Maintenance
- Training of staff on computer literacy and IT related issues
- Database management
- Maintaining and Updating the hospital Website
- Install and configure computer software and application.
- Designing and Maintaining the software in the hospital.
- Assisting the staff on IT related issue
- Production of staff ID cards
- Managing and creating the hospital e- mail

CONT..

- Troubleshoot system and network problems.
- Maintenance of all the hardware and computer peripherals in the hospital and providing immediate solution to hardware and software problems
- Ensuring the availability of internet connection in the hospital.

SOME FACTORS INFLUENCING THE ADOPTION OF ICT

- Level of Competition
- Changing trends in technology
- Client/Customer's demand

BENEFIT OF ICT

- Making professional job easier
- Facilitates decision making
- Saves operation costs
- Improves public image of users
- Saves time
- Improves document presentation

FACTORS AFFECTING THE IMPLEMENTATION OF ICT

- Insufficient / erratic power supply
- High cost of hardware and software
- Fear of virus attack
- High rate of obsolescence of hardware and software
- High cost of engaging computer staff
- Security
- Fear of ICT making professionals redundant

PACs

ACHIEVEMENTS

- Installation and Implementation of Picture Archiving and Communication System (PACs)
- Extension of PACs to SOPD Annex, main theatre, physiotherapy and Wards (ongoing)
- Provision of Internet Wireless cloud by Nigerian Communication Commission (NCC)
- Designing and developing of Health record software by the Unit
- Conversion of Nominal Roll to standalone software

CHALLENGES FACING THE IT UNIT OF THE HOSPITAL

- Unstable power supply
- Inadequate working tools and educational materials
- Inadequate computers in unit lab
- Training and Workshop

SOLUTION

- There should be provision for stable power supply
- The Unit needs to have proper tools in order to execute its job effectively and efficiently
- The unit need at least need 20 set of computers in the unit lab to be use for Departmental computer training.
- Training and workshop regularly

CONCLUSION

- ICT is acknowledged as a potent tool for accelerating health care delivery system and narrowing the gap between developing and developed countries. This requires a developing country like Nigeria to adopt appropriate ICT innovations for its health care system, which is one of the most sensitive purposes in the hospital. As ICT gains popularity in the international health care sectors in the early 80s, the Nigeria health sectors has also began to use this technology. This presentation is to elaborated on the impact of ICT on Doctors, Nurses, and other medical staff in the Hospital who are the main producers of healthcare delivery to clients.

THANK YOU ALL FOR LISTENING