Diagnostic Radiology in Nigeria





Objectives:

- •Participate in daily readouts
- Attend conferences
- Inquire about quality issues
- Patient population
- •Is Imaging considered part of patient management?
- •Medical insurance and payment
- Common cases that get imaging
- •Imaging equipment: X-ray, ultrasound, CT scan, MRI, mammography
- Availability and accessibility; functionality and maintenance
- •Issues like Picture Archiving Communication system (PACS) and voice recognition (VR)
- •Radiology residency program

My Findings

Patient Population:

Majorly from with the area Varies from acute emergencies to preventive imaging

HIV+ patients and routine screening For Tuberculosis

Is Imaging Part of Patient Management?

	No of Days/week	No of hours/day	Avg. no patients/week	Avg. no of patients/day
OPD	5	8	250	50
*Central radiography	7	24	100	15
Ultrasound	7	24	300	40
MRI	5	8	15-20	3-4
CT (central)	7	8	35	7
CT (A&E)	7	24	20	3
*HSG	2	8	12	6
*IVU	3	8	8	3
*RUG	2	8	10	5
*MCUG	2	8	10	5
Mammo*	2	8	14	7

Insurance:

NHIS (National Health Insurance Scheme)

Less than 20% of patient population

Most of hospital staff

Otherwise, self-paid system

Does not cover MRI, CT scan

Covers X-ray, ultrasound

Medications (generic drugs)

No insurance? Patient bears 100% of cost

Cost of Imaging:

X-rays: 1 view is #1,200 (chest x ray) Ultrasound is about #4000 (abdominopelvic)

CT scan ranges from #20,000 to over #100,000 (\$135 to over \$650) depending on the number of and body segments being imaged MRI is #55,000 (\$370)

*Children pay half of the adult cost

PACS and VR:

- •No PACS and VR
- •Patients' plain film images are kept in a film-jacket
- •CT and MRI images can be copied on CD for patients as requested
- •Film reports are handwritten on paper by residents, then typed by the typist, after which its vetted by residents for error
- •Attendings review the reports and co-sign with the residents

Background on Residency Program:

After senior secondary school which is equivalent to high school in the US, students take a general exam called Unified Tertiary Matriculation Examination (UTME) and a post UTME for individual schools. UTME passing score varies depending on individual schools (universities)

100 levels: Math, English and basic science courses

200 levels: Departmental splitting (college of medicine). Students learn anatomy, embryology, histology, biochemistry and physiology

300 levels: Students continue 200 level courses and prepare for Medicinae Baccalaureus et Medicinae Chirurgiae (MBBS) which is a mandatory exam before clinical posting (similar to USMLE step 1)

400 to 600 levels: Students do clinical posting

After 600 level students take a final MBBS before housemanship

Next is 1 year of housemanship (similar to a preliminary year)

Then students go through National Youth Service Corps (NYSC) for 1 year

Residents take primaries examination in radiology to check their eligibility. After successfully passing the exam, they apply to teaching hospitals and go for interviews

First 2 years in, residents start with dark room, next is learning how to properly position a patient followed by rotating through different units such as CT, MRI, Ultrasound etc, physics lectures are also incorporated weekly

Junior Residents then take either the National Post Graduate Medical College of Nigeria examination or West African College of Surgeon examination (part 1) which comprises of radiological anatomy, physics and clinical radiology

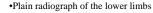
After passing Part 1 exam, Residents become senior registrar where they spend a minimum of 2 years, then residents take Part 2 which comprises of clinical radiology and complete a project. After passing Part 2 exam, residents can now be referred to as fellows.

Case Presentation 1



- •Plain radiograph of the wrists
- •Widened growth plate
- •Fraying, splaying and cupping of the metaphysis
- •Thin bony spur extending from the metaphysis to surround the uncalcified growth plate

Case Presentation 2





- •Bowing of the femur (genu varum)
- •Widened growth plate
- •Fraying, splaying and cupping of the metaphysis
- •Thin bony spur extending from the metaphysis to surround the uncalcified growth plate

Sample Chest Radiograph



8 year old male with productive cough, tympanic breath sound on exam. Rule out Pulmonary TB

Thank You Note:

- Dean, Student Affairs at RWJMS for granting me approval
- Dr Judith Amorosa and Dr Omolola Mojisola Atalabi for facilitating this placement and for the mentorship
- Dr Escobar, Dr Kalbag, Rachel and the entire staff of Global health department for their support in making this elective possible
- Dean Laumbach for her tremendous efforts towards the approval of the elective
- All residents who have actually thought all that I have learnt, I really appreciate the brotherly and sisterly love. I pray that God will continue to prosper you all and hope that a formal collaboration can be nurtured
- All the other staff of the department at UCH including the radiographers, the nursing staffs, clerks and secretarial staff