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# An Inquest into the Quests and Conquests of the Radiography Profession in Nigeria Tom Adejoh

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#### **ABSTRACT**

**Background:** As at 1942, there were neither indigenous radiographers nor radiography training institutions in Nigeria. Presently, progress made is breathtaking. Despite the strides, there were no readily accessible records to give researchers insight on the trajectory of the profession since the beginning of the 20<sup>th</sup> century.

**Objective:** To trace the origin, investigate the quests, ascertain the conquests of the radiography profession in Nigeria and then document them for easy accessibility.

**Methods:** A prospective, longitudinal historical research spanning 6 years (2013 – 2019). Data emanated from records of the professional association (ARN), publications in the radiography profession, and interview of older radiographers, especially those who were witnesses to professional milestones. Internet search complemented retrieved information. The draft of the work was uploaded continually on radiographers' Facebook and WhatsApp platforms for inputs. The author resolved discrepancies in account through weight of evidence for or against.

**Results:** Approximately 5,000 persons have passed through basic radiography training in Nigeria, with  $\leq$  5% having postgraduate qualifications. Training institutions have evolved from two monotechnics to  $\geq$  10 universities, with three of those are involved in postgraduate education. Radiography has witnessed considerable role extensions from traditional x-ray to more advanced practices and complex modalities. Conquests were however, sometimes reversed, or jeopardized by internal upheavals and meddlesome interlopers.

**Conclusion:** Radiography in Nigeria has witnessed breathtaking evolution in training and practice from the time of World War II (WWII) until date. Radiographers themselves, with significant assistance from non-radiographers, engineered those milestones. A consolidation of intra-professional cohesion and inter-professional synergy is needful, for more focused and dedicated services to humanity.

Keywords: Radiography, Radiographer, Radiologist, Wilhelm Conrad Roentgen, Radiation Medicine, Think Tank

#### **Preamble**

Radiography, presently offered as a 5-year Bachelor of Radiography (B.Rad) programme in Nigerian universities, shall become a 6-year Doctor of Radiation Science (D.Rad) programme in the near future. As with other medical disciplines, a yearlong internship and another yearlong National Youth Corps (NYSC) scheme Service follows undergraduate studies. Subsequent education results in M.Sc, Ph.D and, or, Fellowship, which are presently unrewarded in Nigerian health sector, except the last of the troika, which has huge compensation for physicians, who go by the additional nomenclature of Consultant.

Discovery of x-ray birthed radiography, which is practiced both medically and industrially. Medical radiography is at the heart of diagnosis, intervention and therapy. Radiology, which evolved from radiography, is, in principle, not distinct, but in practice, defines physicians and their roles in

radiography. Eventually, other energy types were alloyed to x-ray resulting in *Radiation Medicine* (*Radmed*). Radiation Sciences is a broader term for Radmed and industrial use of radiation. Radiography or Radiology as broad term has logical lacunas.

Radiographers share practice space with medical physicists (MPS) and physicians. The former have  $\geq$  M.Sc and tackle quality assurance while Radmed physicians have a  $\geq$  5-year post-MBBS Fellowship, and by antecedence, interprete images. Radiographers carry out diagnostic, interventional & therapeutic procedures using relevant modalities and procedures. There are currently no conversion pathways among the trio, which all have separate regulatory agencies.

Conflicting historical narratives by stakeholders, and inaccessible records from radiography domain, inspired this work. This pioneering effort, despite its perceived flaws, should give a sombre review of the past, and a sober view of the horizon ahead.

#### Introduction

A German Professor of Physics, William Conrad Roentgen (1845–1923), like other scientists of his era, had a burning ambition to imprint his name in the marble of history through discoveries that would benefit humanity. 'Fortune,' it is said, 'favours the bold' [1]. Roentgen's quest was rewarded with a somewhat, serendipitous discovery of a hitherto-unknown electromagnetic radiation on 8<sup>th</sup> November 1895, in Germany. Borrowing from the mathematical notation of 'x' to connote 'unknown', he introduced 'x-rays' to scientific lexicon for the first time, and for good. Roentgen's feat opened up a floodgate of possibilities in sciences, technology and medicine, and set the foundation for radiography and radiation medicine [2, 3].

Etymologically, radiography denoted imaging using x-ray. In reality however, it involves imaging, interventional as well as therapeutic procedures. Medical Radiography, which is conventionally but erroneously, a synonym for clinical imaging, is actually a subset of radiation medicine, which encompasses x-rays, gamma rays, magnetic resonance imaging, kilo- and megavoltage electrons, and infrared radiations [4, 5]. Medical radiography found great relevance during WWI (1914-1918) and WWII (1939-1945). Radiographers; physicians (those who had photography as a hobby: radiologists, radiation oncologists, nuclear medicine physicians); and medical physicists; are core professionals in radiation medicine [6, 7].

#### **Photography**

Joseph Nicephore Niepce popularized photography in 1826. Current sizes of films and cassettes in medical radiography were those introduced by photographers of the 19<sup>th</sup> century for their clients. They assumed that x-ray was a branch of photography and embraced it enthusiastically. Those early carefree encounters soon revealed the contradiction in x-ray; an oracle of medicine and an undertaker (carcinogen). So, as *photo-radiography* boomed, so did carcinoma. Sadly, Roentgen's wife, Anna Bertha Ludwig Roentgen and Roentgen himself were not spared for their romance with photons, as they fell from the sledgehammer of

carcinoma in 1919 and 1923, respectively. The discipline of radiation protection evolved primarily from this tragedy in conquest [2, 3, 5-7].

#### Radiography in Africa

South Africa may have pioneered radiography on the Africa continent. Sparse but accessible documents have it that there was an x-ray machine in that country as early as 1897, just two years after Roentgen's discovery. The first radiographer there, and perhaps, on the African continent, is a woman named May Tomkins, who was trained in London in 1930 by another woman, the iconic K.C. Clark [8].

#### Radiography in Nigeria

X-Ray machines were first installed in Lagos (Lagos Island General Hospital, a military hospital) in 1913, and Calabar (St. Margaret's Hospital Calabar), in 1914 [9]. The former was founded two years before Roentgen's discovery, and is reportedly the first general hospital in Nigeria. By 1950, twelve hospitals in Nigeria had x-ray units. Expatriates held on until indigenous radiographers began to emerge, the first being Mrs Olga Rhodes-Miller, a Yoruba from Lagos who was born on 27<sup>th</sup> May, 1922. She was trained in Leeds in 1943. Olga Rhodes who married a Briton (Miller) had a Sierra Leonean mother.

There were rapid establishment of hospitals by the Colonial administration during WWI, for the rehabilitation of war casualties. By WWII and after, more were added. Olga Rhodes-Miller was already practicing as a radiographer by WWII. The Royal Orthopaedic Hospital, Igbobi (ROHI), which was founded in 1945 and later christened National Orthopaedic Hospital, Igbobi - Lagos (NOHI), was one of those new hospitals. Mrs Rhodes -Miller and her expatriate colleagues were too few to cater for the large throughput of patients. As a result, it became imperative to recruit and train more hands. Youths with some modicum or entirety of post-primary school education were recruited as radiographers' assistants, trained and re-designated as technicians. Those pioneering and sadly, no-longer-known expatriates themselves, were a motley crew of engineers, chemists and nurses [9, 10].

#### Training of technicians

Britain pioneered formal radiography training in 1910 [8], and a formal professional body, the Society of Radiographers (SoR) in 1920. Britain, as at that time, and perhaps still so, set the pace in training, practice and research. As a result, their template was replicated in commonwealth countries. National Orthopaedic Hospital, Igbobi-Lagos (NOHIL), pioneered radiography training in 1947. In 1949, Lagos Island General Hospital became training base [10, 11]. Technicians worked under strict supervision of radiographers. Due to limited knowledge, they could not critique radiographs. From 1947 to 1960, about four hundred (400) technicians were graduated with only sixty (60) still in service at independence from Britain in 1960 [10]. Most of those names are now lost to history. Overseas-trained indigenous radiographers were trickling in as at that time. In 1958, they teamed up with technicians to establish Association of Radiographers of Nigeria (ARN) [11].

### Federal School of Radiography, Lagos (FSRL)

By 1962, due to increasing demand for core radiographers, training of technicians was supplanted with that of radiographers, although in a similar hospital setting [10]. Mr Effiong Philip Akpan, a staff of Federal Ministry of Health (FMoH) Headquarters, Lagos, and a technician-turned-radiographer, was given credit for that paradigm shift [11-13]. The training became campus-based in November 1965 with 'Federal' added to the name. It was also affiliated to Society of Radiographers (SoR), London. Mr EP Akpan was a tutor at School of Radiography, Lagos (SRL) before its upgrade [6, 11-14].

#### School of Radiography, University College Hospital, Ibadan

To improve access to training, another School of Radiography (SoR) was conceptualized at University College Hospital (UCH), Ibadan, in December 1972. According to Mr. R.S.J. Babatunde, an erstwhile Registrar of Radiographers Registration Board of Nigeria (RRBN), credit for the Ibadan school should go to Prof B.S. Lagundoye (radiologist), Mr. M.B.O. Ore (radiographer) and F. Cole (Director of Administration, UCH). Unlike FSRL which awarded

Member, Society of Radiographers (MSR), with later upgrade to, Diploma, Society of Radiographers (DSR), the Ibadan school awarded Diploma, College of Radiographers (DCR), London and had a 4-year duration of training. The FSRL equally adopted both DCR certification and moved from 3 to 4-year training duration as from 1972 [14, 15]. Regrettably, SoR, UCH Ibadan thrived briefly (1972 – 1987).

The reason for its closure was traced to the *brain-drain* syndrome that commenced from the 1980s in Nigeria. The Kingdom of Saudi Arabia (KSA) was alluring then for Nigerian professionals, same way Europe does today. Unable to resist the pull and push of *brain-drain*, the Principal and his academic crew emigrated abroad. The school shut down eventually in 1987, same year decree 42 (now Cap R1 LFN 2004) which established Radiographers Registration Board of Nigeria (RRBN), was promulgated. That (mis)adventure of *brain drain* was not peculiar to radiography, but due to dearth of radiography tutors specifically, the consequences were dire [11-15]. Stranded students were transferred to FSR, Lagos.

Apparently, the closure was not due to mischief from without as may be insinuated in some quarters, but hinged on poor display of foresight from within. Subterranean resistance from without is however, not completely ruled out, in view of the perplexing absence of first degree radiography programme at Nigeria's premier University (Ibadan) from 1948 till date (2019) [10 - 15]. Meanwhile, DCR in FSRL was eventually halted in 1993, when Britain joined the rest of the world in producing degree holders in radiography. The development in Britain did not come to Nigeria as surprise but rather exacerbated agitations for the conversion of FSRL to a degreeawarding institution. Regrettably, as at 1993, FSRL was yet to attain the desired status. The Institute of Radiography (IoR) which is responsible for training in RRBN, stepped in to award Diploma, Institute of Radiography (DIR), effective from 1993 till 2005 [4, 9]. Pre-1993 alumni of radiography monotechnics were awarded MSR, DSR or DCR while post-1992 ones had DIR. A DIR certificate purportedly awarded after 2005 should be deemed fake.

#### **NYSC** for radiographers

The NYSC scheme enrolled only university graduates at inception in 1973. The exclusion fueled agitations in other tertiary institutions until government succumbed. Lagos and Ibadan Radiography schools were first enlisted around 1976/1977 and 1978, respectively. This was however, halted in 2001, in a sweeping ban of monotechnics by the President Olusegun Obasanjo's government.

#### Principals of radiography monotechnics

At the FSRL, the inimitable Mr Effiong P. Akpan was pioneer Principal (1965-1992). He handed over to Mrs C.O.O. Ademokun, who retired in 1996. Mrs C.E. Obaseki, a Liberian married to a Nigerian, took over and retired in 1997. The last of the principals is Mrs Oluranti Olukoya. She who was there until 2005, when the DIR certification was terminated, and FSRL was handed over to UNILAG as her radiography department [11]. For SoR Ibadan, the succession was as follows: Rev'd Mubo B. Ore (1972 - early 1980s); Ms Conroy, a Briton; Mrs Onabanjo. The last of the titans was Mr B.K. Ogunro [11, 15].

#### **Quest for B.Sc radiography programme**

In the 1970s, the civil service favoured first degree over and above diploma. That reality discouraged would-be students. There were other setbacks. Radiography in the recent past was mono-modality, lackluster, menial and monotonous. Machines were often bulky and noisy, rooms for film-processing (darkroom) were truly dark, wet and the air reeked of chemicals. The untidy nature of some was nauseating. X-Ray units were tucked away in isolated - and rightly so - corner of the hospital. Practice was indeed primitive [9]. Drop in radiography enrolment was bemoaned at ARN annual conferences in the 1970s and 1980s. Clamour for B.Sc programme consequently, became major quests in the profession. This was attained in 1981 [10, 12, 14, 16, 17].

#### From obscurity to limelight

Despite the commencement of B.Sc Radiography, enrolment of students and number of radiographers remained low. As editor of Radiography Students' Journal, at University of Nigeria, Enugu Campus

(UNEC) between 2000 – 2003, Tom Adejoh undertook a census of UNEC Radiography students in 2001 and documented less than one hundred and twenty (<120) [18]. A decade later, Registrar of RRBN between 2012 – 2017, gave total number of registered radiographers in Nigeria to be one thousand, two hundred and eighty-six (1,286) [19]. That was a paltry figure when juxtaposed with a national population of one hundred and eighty-four million (184,000,000) persons [20]. Gleanings of available evidence as at November 2018, suggest that approximately 5,000 radiographers may have been trained in Nigeria. Introduction of B.Sc programme contributed little in enrolment *ab initio*, but it blossomed later on [18, 21–30].

## Radiography programme at University of Calabar (UNICAL)

The B.Sc radiography programme at UNICAL in 1981 was first of its kind in Africa. Prof Olufemi A. Williams, a Pathologist who was pioneer Dean of Medicine, UNICAL / CMD University of Calabar Teaching Hospital (UCTH), established it. However, a now unrecognizable female radiographer who was related to him lobbied him. *Ab initio*, the programme was subsumed in radiology department. Pioneer head of department was a radiographer-turned-radiologist, Dr O.E.O. Ani. It was eventually 'weaned' in 2005, but first own HOD was in 2008 (Mr, now Dr Valentine C. Ikamaise). Due to poor visibility, majority of the first six sets of students were gleaned from candidates who applied for medicine or basic medical sciences [9, 31].

Mr S.D.I. Okonta (DCR, FCR) and Mr Wale Akande (DCR) both trained in UK, handled core radiography courses. Mr Baptist Futado, a physicist handled radiation physics, while Mr. J.J. Akpan, first chief radiographer at former St. Margaret General Hospital, which transformed into University of Calabar Teaching Hospital (UCTH), helped in clinical grooming. The two tutors left the system in mid-1990s on the wings of brain drain syndrome, and two graduate assistants from UNEC (Messrs Felix Erondu and Chyke Ohuegbe) were delegated to sustain the programme [32, 33].

## Creation of Faculty of Health Sciences & Technology (FHST), UNN

The Faculty Board of Medicine of University of Nigeria (UNN), Nsukka resolved in 1981 that a College of Medicine be established. The resolution was approval by UNN Senate (1982), University Council (March 1982), National Universities Commission, NUC (1982), Federal Ministry of Education (June 1982) and Federal Executive Council (July 1982). The College of Medicine was formally born on 3 December 1982, with the signing of the University of Nigeria Statute No. 2 by the Nigerian President, Alhaji Shehu Shagari. The College took off with two faculties; Medical Sciences & Dentistry, and Health Sciences & Technology (FHST). Four departments were accommodated in FHST: Radiography, Medical Rehabilitation, Medical Laboratory Science (MLS) and Nursing [34-36]. Due to challenge with infrastructure, FHST took off in an uncompleted, abandoned, storey building that was hitherto university secondary school [32].

Radiography programme in UNEC appears to be the model in training and research in Nigeria. Its pioneering role in undergraduate and postgraduate radiography education may have given her that edge. Consequently, her graduates constitute the bulk of academics of newer radiography departments in universities. The motto of UNN, 'To restore the dignity of man,', and the lions and lionesses honorific titles of her alumni, naturally invigorates them into feats of leadership. A lion's share of space shall therefore, be devoted to the lions' den.

## Radiography programme at the University of Nigeria, Enugu Campus (UNEC)

The UNEC program began in 1983, due largely to the positive attitude and visionary spirit of a radiologist, Prof B. C. Umerah who was Head, Department of Radiation Medicine at the University of Nigeria Teaching Hospital (UNTH), Enugu. He was pioneer Dean of FHST. His colleague, Dr A.A. Ofodile, was pioneer Head of Department (HOD) of Radiography. The HOD passed the baton on to Dr Ude, his colleague (1983 – 1988). First Radiographer-HOD was Dr Ikechukwu Oze in 1989 [32, 34 - 36].

Recruitment of staff was difficult for radiography department due to dearth of academic qualification among radiographers as only two, Obong Effiong P. Akpan and Mrs Cornelia O. Ademokun had something and it was not M.Sc but M.A. in Education. They were also comfortably settled in Lagos as staff of FSRL [32].

The UNTH, Enugu had some radiographers who desired to join UNEC but only Mr Clement Tom Utin, had a semblance of additional qualification; Higher National Diploma (HND) in Business Administration. He alone was appointed, from senior radiographer to Principal Technologist, a nonacademic position. From 1983 to 1985 Mr C.T. Utin labored alone. As from 1985, other radiographers joined him: Oze, Ikechukwu (Ph.D) in 1985; Mrs C. Eze (MPH), Mr Kenneth K. Agwu (M.Sc) in 1988; and Mr Andrew Onyema (M.Sc). With an MBA in 1989, Mr Utin was upgraded in 1992, to academic cadre as Lecturer I. That created a vacancy in the technologist cadre that brought in Mr (now Dr) Kalu Ochie (DCR) in 1992. Ms Agu, Ugochinyere Felicitas (now Dr F.U.Idigo), came next in 1993. The last wave of employment in that decade was in 1999, in which Messrs Charles Eze and Sylvester Ogbu came in as graduate assistants [32].

It is to Mr Utin's credit that he persuaded Prof Basil Oli, a Nuclear Physicist from Enugu State University of Technology (ESUT), the adjoining campus at that time, to help teach Radiation Physics in gratis. That was a huge sacrifice on the part of the Professor who walked through cracks in the fence to access the department [32, 37]. Mr Utin was also responsible for the first curriculum of UNEC. He polished that of FSRL, added a few courses for 500 level, and submitted. For hands-on practice, he fortuitously discovered some abandoned rooms at the extreme wing of a block and converted those to demonstration arena, complete with darkroom. That was, and remains, initial stopgap, on-site 'clinical posting' experience for 300 level students. That particular legacy remains till date. However, like UNICAL, students were enticed or entrapped into Radiography [32, 33].

Students of College of Medicine of the University of Nigeria, Nsukka (UNN) spend their first year at the main campus in Nsukka before 'emigrating' to Enugu Campus (UNEC) in second year. Only four students crossed over in 1984; Mr Nerius Okoye (Deputy Director Radiography, National Hospital, Abuja), Mrs Oghenerume Okoh (nee Amreore, Deputy Director Radiography, University of Benin Teaching Hospital, Edo State), Mr Nnamdi Nwangwu, and Mr Edmund Okoro. Mr Christian Nzotta (now Professor) who was a pioneer student crossed over to Optometry. He later returned and joined the second set. In sharp contrast to radiography, the other three departments had surplus students [32].

Dr Oze and his colleagues conceptualized PgD and M.Sc Radiography (Medical Imaging) programme in FHST in 1994. However, it was only Mr K.K. Agwu who was on ground to sustain it. Pioneer students of the M.Sc programme included Mr Clement Utin (who dropped out), Ms Felicitas Ugochinyere Agu (now Dr Idigo), Mr (now Prof) Felix Erondu, Mr (now Dr) Chyke Ohuegbe, and Mr Nestor Okoro. With the exception of the last student, all other three became graduate assistants *parri passu* with their studies, and only the trio graduated from the programme, timely [32, 33].

A Dean (not Prof B.C. Umerah) once attempted to change FHST to Faculty of Dentistry and Maxillo-Facial Surgery, an action that traumatized staff of FHST. His reasons and motivations were hazy. Dr Ikechukwu Oze uncovered the plot, and he mobilized his co-HODs who ferociously thwarted it. That excruciating experience spurred academic staff in FHST to scheme for a dean from within. Soon after, a medical laboratory scientist was appointed their first 'indigenous' dean [32, 33].

The malady of brain drain, spurred primarily by economic considerations, found its way to UNEC [38]. Four out of seven staff employed between 1983 to 1993, caved in, including Mr C.T. Utin. He retired voluntarily on the rank of senior lecturer in 1996 and relocated to USA same year [32, 33]. However, he ensured that graduate assistants and a technologist

had been recruited before heading to town, leaving the gown behind. Shortly after the quartet emigrated, two graduate assistants out of three, rode on the wings of a prolonged industrial action in UNN in 1996, and relocated to clinical domain. Those left behind were Mr Kenneth K. Agwu (DCR, B.Sc, M.Sc); Mr Kalu Ochie (DCR); and Ms Felicitas Ugochinyere Agu (B.Sc) [32 - 34, 38, 39, 40].

#### Contemporaries of Mr C.T. Utin

Three tertiary hospitals in Enugu metropolis trained radiography students of UNEC. Contemporaries of Mr Utin when he was a staff of UNEC included: Rev'd MC Ifezue, Mrs H. Williams, Mrs G. Afam, Mrs Nkechi Onyia, Mrs Patricia Nkpe, Messrs A. Obetta, AC Nworka, JNC Onyia, Enefiok Ndem, Raymond Emeribe, Frank Egwuonwu, William Ololo, Chidozie Ejiaku, Fred Ohanu, Andrew Onyema, KK Agwu, Emmanuel J. Akpan (UNTH); Mrs Clara Obinwa, Messrs CC Njotteh, Augustine Okaro, Amechi Okudo, Eugene Onwuzurike, Sam Ilogbenu, Austine Nwachukwu, BE Okoro (National Orthopaedic Hospital); Messrs Sam Otti, Eddy Uzowulu, Edwin Nwosu, Frank Offor (ESUTH).

Mrs Clara Obinwa remained the most visible female amongst her contemporaries. She was trained in Switzerland and received awards in Nigeria for diligent services in her duties. She served as Council member of ARN for several years and Board member of Aminu Kano Teaching Hospital (AKTH), Kano. Despite her age, she rarely missed ARN annual conferences, with that of 2018 in Abuja being her last outing. That vivacious elder of elders, shall be missed.

#### Elder (Dr) Clement Tom Utin; a silent hero

As they say, "East or West, home is the best." Mr Clement Tom Utin relocated back to Nigeria for good in 2008 as an expert in echocardiography, having undergone numerous training in the US. He has been training radiographers and other health personnel in his institute in Uyo, Akwa State, since then. The 1977 graduate of FSRL was born on 27 June 1951, at Oniong Iman, in Etinan Local Government Area of Akwa Ibom State, Nigeria. He is Ibibio.

The ARN journal was issued an ISSN in his time as editor (1992–1994). He was also chairperson of education committee (EDUCOM) of ARN. The soft-spoken radiographer has publications to his credit. The Elder of Qua Iboe Church is married and has four children. Although Fate did not empower him with Ph.D by research, Faith honored him in 2017 through Tennesse Christian University, USA (Ph.D Christian Theology, honoris causa) [32, 33].

#### **UNEC** from an earlier student's perspective

Lecturers of external courses in their decisions and plans ignored radiography students. Frustrated, the students resolved to assert, and to make themselves more visible. As follow up, they established *University of Nigeria Radiography Students Association* (UNRADSA) with Mr Nerius Okoye as pioneer president, and Mr Livinus Chibuzo Abonyi as next. They also created an academic honours list for best graduating student(s). Population of students then was 1988 (4), 1989 (6), and 1990 (6). Although many students eventually moved on to other departments, those who stayed back and graduated found it a rewarding leap of faith [37].

#### The struggle for survival of UNEC programme

After losing four staff, the radiography department tottered on tenterhooks. The three remaining radiographers standing were fully aware of the life of grandeur abroad but did not succumb. Their decision to stay saved the department from folding up. Radiologists who were benevolent allies helped to sustain the postgraduate (PG) programme. As at 2019, at least 23 and 55 candidates have graduated with Ph.D and M.Sc, respectively. Graduate population from 1988 - 2018 and undergraduate population in 2018 were one thousand, three hundred and eighty-five (1,385), and one thousand and thirty students (1,030), respectively. The department now has three professors, while the least qualified lecturer is a Ph.D scholar. Radiologists still assist, but as external examiners [18, 19, 21-28, .33, 34, 39 – 46].

#### The Association of Radiographers of Nigeria (ARN)

Roller-type automatic processor was invented in 1956. A year later, Obong EP Akpan qualified as

radiographer from UK. In 1958, he and nine other colleagues met at Adeoyo State Hospital, Ibadan, Nigeria and formally founded the professional association known since then as the Association of Radiographers of Nigeria (ARN). The ten pioneers were probably: (1) Obong EP Akpan, Lagos; (2) Major (Mrs) Akinsete, Lagos; (3) Mr MA Okafor, Lagos; (4) Mr JA Somoye, Lagos; (5) Mr RO Akpabio, Lagos; (6) Mrs Olga Rhodes-Miller, Lagos; (7) Rev'd MB Ore, Ibadan; (8) Mr VJ Iwuoha, Ibadan; (9) Rev'd MC Ifezue, Enugu; (10) Mr EO Jimoh, ABUTH Kaduna [11,13]. About thirty (30) radiographers and technicians constituted membership at inception. It is said that, "If you must go fast, go alone; if you must go far, go with others." Obong EP Akpan truly went fast. Nevertheless, he was wise enough to know that radiography ought to go far. From then onwards, professional quests became a collective affair [11, 47].

Conferences, constitution, modalities for meetings and award of honorary fellowship were perfected in those early days. The ARN of yesteryear was reputed to be cohesive and responsive [10 - 12]. Annual conferences held so far were 50 as at 2018, with the chain remaining unbroken since the end of Nigeria - Biafra civil war in 1970. Continuity of ARN is credit to the vision of the founding fathers, and love for the profession by practitioners [47 - 49, 50].

#### Journal of the ARN

The ARN launched a newsletter christened 'X-Rays' in 1972. Dr. Dlama Joseph, a member of EDUCOM (2017 – 2019) baptized it with a new name in 2017; 'Journal of Radiography & Radiation Sciences' (JRRS). It is currently in its thirty third (33) volume. It had the following editors:

Vol 1- 3 (1972–1975): Mrs COO Ademokun; MSR, MA Vol 4 - 8 (1976 -1981): Mr. CC Njoteh; MSR Vol 9 -14 (1982–1991): Mrs CE Obaseki; MSR Vol 15 -16 (1992–1994): (Dr) CT Utin; DCR, MBA Vol 17 - 18 (1994–1997): Mr (now Prof) KK Agwu Vol 19-20 (1998–2000): Mr (now Prof) OF Erondu Vol 21–32 (2011– date): Ven. (Prof.) NO Egbe EDUCOM Chair (2017 – 2019): Dr. Tom Adejoh

## International Society of Radiographers and Radiologic Technologists (ISRRT)

After coming on board in 1958, the ARN teamed up in 1962 with 14 other radiography associations in Montreal, Canada to establish a global unifying body; International Society Radiographers of Founding Radiologic **Technologists** (ISRRT). members are Australia, Canada, Denmark, Finland, Israel, Norway, Nigeria, New Zealand, Holland, Mexico, South Africa, Sweden, Switzerland, United Kingdom and Uruguay. One Mrs Oldenburg represented Nigeria while May Tomkins represented South Africa. Miss Van Dijk, President of the Dutch Society for Radiological Technicians, was her first President. It once bore International Society of Radiographers & Radiological Technicians, but 'Technicians' was changed to 'Technologists' in 1992. As at 2018, ISRRT had over 90 affiliated national societies, out of  $\geq$  195 countries [51].

#### Other affiliations of ARN

The ARN is affiliated to Pan-African Congress of Radiology & Imaging (PACORI). West African Society of Radiographers (WASR) and Africa Radiography Forum (ARF) are incubating.

#### Affiliates to the ARN

Affiliates to ARN have since emerged, notably: Nigeria Association of Radiation Therapists (NART), Nigerian Radiographers in Diaspora (NIRAD), Nigerian Society of Radiography Lecturers (NSLR), Nigerian Association of Radiography Students (NARS) and Medical Imaging Society of Nigeria (MISON). Association of Medical Ultrasound Practitioners of Nigeria (AMUPN) is a strong partner of ARN. Affiliates have ethical obligation to align their quests in tandem with the mission and vision of ARN. Furthermore, honorary fellowship is a prerogative of mother associations, not offshoots. This writer is of the view that honorary Fellowship (FARN), with undocumented and ambiguous criteria. and which has been awarded to almost all retired elders, has supplanted academic fellowship, and should be halted or modified. That is, acquired fellowship, rather than bestowed fellowship, should be the norm.

## Obong Effiong Philip Akpan (1932 – 2016); foremost founding father of radiography practice

Obong is an honorific Ibibio title. Effiong Philip Akpan, an Ibibio, was born on 15 February 1932, in Ikono, Akwa Ibom State of Nigeria. He trained as technician at School of Radiography, Lagos (1951-1954), and as radiographer at Glasgow Royal Infirmary School of Radiography, UK (1954–1957). He worked with (Nigerian) Federal Ministry of Health (1958–1961) before being deployed as tutor to School of Radiography, Lagos from 1961–1962. He went back to UK for post-graduate training in radiography at Middlesex Hospital Post-graduate School of Radiography (1962–1963). On his return, he was appointed (pioneer) Principal of FSRL in 1965. When RRBN was established in 1987, he was appointed its (pioneer) Chairman. Before then he had obtained an M.A. (Education).

Obong Akpan's imprimaturs are all over landmarks in the profession. Aside being longest-serving President of ARN, he was first black President of ISRRT (1989 –1993). The legend, who had a wife and four children, was a devout Methodist. In recognition of his services to the radiography profession, a hall was named after him at the defunct FSRL. That great leader passed on, on 4 March 2016, at 84 years [29, 30].

## Professor Kenneth Kalu Agwu; champion of academic radiography

Professor K.K. Agwu hails from Abia State, Nigeria. He made Distinction and Division 1 in First School Leaving Certificate (FSLC), and West African School Certificate (WASC, 1972), respectively. He graduated from FSRL in 1977, passed out of NYSC scheme in 1978, and was employed at UNTH from 1978 to 1988. Within that time, he was at University of Surrey (UK) for a bridging course and came out with Distinction. He also obtained M.Sc (Medical Physics) there in 1987 and joined UNN in 1988. His Ph.D is in Medical Physics from Department of Physics & Astronomy, UNN in 2004 - 2005, making him the 4th Nigerian radiographer behind Drs Oze (1984), Okaroh (1999) & Erondu (2001). He became professor (of Radiography/Medical Physics) in 2008.

Table 1. Presidents of Association of Radiographers of Nigeria (ARN) from 1958 to 2019

S/No	President	Qualification	Location	Year
1.	Major (Mrs) A. Akinsete	Technician	Lagos	1958 – 1959
2.	Rev'd M.C. Ifezue	MSR	Ibadan	1960 - 1962
3(a).	Mr Effiong P. Akpan	MSR, TE, TTC, FCR	Lagos	1963 – 1974
4.	Mr Jonathan A. Somoye	MSR, TE, TTC	Lagos	1975 – 1977
3(b)	Mr Effiong P. Akpan	MSR, TE, TTC, MA, FCR	Lagos	1978 - 1980
5.	Ms Ivy Y. Williams	MSR	Lagos	1981 – 1983
6.	Mrs Cornelia OO Ademokun	MSR, TE, TTC, MA	Lagos	1984 – 1989
7.	Mrs Julie O. Oshunkiyesi	MSR, R & T, TTC	Lagos	1990 - 1992
8.	Rev'd BAA Olulode	DCR	Lagos	1993 – 1995
9.	Mr Chioma L. Abara	DCR, MBA	Lagos	1996 - 2001
10.	Mrs Olasumbo O. Oyedele	DCR	Ibadan	2002 - 2004
11.	Mr Emmanuel J. Akpan	DCR, M.Sc	Enugu	2005 - 2007
12.	Mr Ayo A. Okhiria	DCR, MBA	Lagos	2008 - 2010
13.	Dr Mark C. Okeji	B.Sc, M.Sc, Ph.D	Enugu	2011 - 2016
14.	Mrs Ola Elizabeth Balogun	DIR, B.Sc QMU, M.Sc	Lagos	2017 - 2019
15.	Dr Dlama Z. Joseph	B.Rad, M.Sc, Ph.D	Kano	Incoming

**Source:** [11, 48]

Professor Agwu's students identify him most with radiation physics and research methods and will always recollect his sober style of teaching. He was HOD (1992-2005), Dean of FHST (2008–2010, 2014–2016), and member of high-powered university committees and panels. He also consulted for, and had been external examiner to other universities, as well as West African Postgraduate Medical College (Faculty of Radiology).

Radiography profession found an editor in him as well as chairperson of EDUCOM of both the ARN (12 years) and RRBN. The RRBN's *Journal of Medical Imaging and Radiation Therapy (JMIRT)* is his legacy. In radiography profession, his opinions are akin to that of the legendary Ahitophel. Prof Agwu supervised four out of five pioneer M.Sc candidates in UNEC (1996), and graduated his first Ph.D scholar in 2010. He is presently replicating professors, and not just Ph.Ds. From being a lone supervisor of postgraduate programme in UNEC, he has multiplied more supervisors, and this greatly enhanced its impact.

This soft-spoken man is proud of his Christian identity. He came under the influence of Brother (now Pastor) Williams Kumuyi, the revivalist, when he was a student of FSRL. From 1976 when he

made a life-long commitment to Christ, he has not looked back. Outside academics, he could be found with Christian groups like Healthcare Christian Fellowship, Nigeria (HCFN); Scripture Union (SU); Chapel of Redemption, UNEC; Joint Campus Christian Body of UNEC, amongst others. He is happily married and blessed with successful scions. There is general acquiescence in radiography domain that Professor Kenneth Kalu Agwu is the champion of academic radiography in Nigeria, and perhaps, in West Africa. His desire for his mentees is that they serve humanity as unto God [32 – 35].

#### Radiographers Registration Board of Nigeria (RRBN)

Although practiced in Nigeria before Roentgen's demise on 10 February 1923, radiography became a regulated profession by military Decree 42 of 1987 (now Cap R1 LFN 2004). The regulatory agency is Radiographers Registration Board of Nigeria (RRBN), which is superintended by a governing board (GB) which has a chairperson. A Registrar, who reports to GB, is the CEO. Determination of scope of knowledge for students; registration, licensing, and proficiency re-evaluation practitioners; monitoring of radio-diagnostic centres for appropriate personnel; award of fellowship by examination; amongst other responsibilities, are within the purview of RRBN.

The first office of RRBN was at FSRL. Later, it relocated to Federal Secretariat Complex, Ikoyi-Lagos, where, sadly, a fire incident destroyed records in 2002. After that tragedy, it got a permanent space at Medical Library Compound (MLC), Yaba-Lagos, where most health regulatory agencies in Nigeria are. The RRBN now operates from Federal Capital Territory, Abuja. Acting Registrars were appointed by FMoH except in 2001, when the GB exercised her powers. The radiographer they appointed is regarded as the first substantive Registrar [11, 52 – 53].

#### Table 2. Chairpersons of RRBN since inception

- 1. Obong Effiong P. Akpan (MSR, DCR, MA, FARN, FCR), 1987 1992
- 2. Alhaji Sahada Mohammed Sahada (MSR), 2000-2003
- 3. Dr Felix O. Erondu (Ph.D), 2004 2007
- 4. Alhaji Sani Ibrahim Nas (MSR), 2008–2010, 2013–2015
- 5. Alhaji AbdulFatai K.Bakre (M.Sc), 2017– date

#### **Initial challenges**

As at 2001, only the Acting Registrar who doubled as Principal, FSRL, was the radiographer in RRBN. The agency owned no personal movable and fixed assets. There were no publications, CPDs for practitioners or avenues for contact. Interractions with universities were nil. In clinical sector, skilled practitioners on MRI and CT were few. For ultrasound, some older radiographers were sponsored abroad for training by government. Their memory is all but forgotten because of inability to transfer skill to many radiographers, maybe due to absence of CPD opportunities [16, 17].

The RRBN had a mere 20% (200/1000) of practitioners in her Register with not more than ten (≤ 10) as radiation therapists. In those days, Ph.D was rare in the profession. The first Ph.D was in 1984, but the personality is unknown to the writer because, he emigrated in early-1990s, and was not in touch with the profession. Second, third and fourth came in 1999 (Dr Okaroh), 2001 (Prof Erondu) and 2005 (Prof Agwu). The first from UNN postgraduate programme and in core radiography was in 2010 (Prof Okeji). Population of

radiography students was also poor. The three training institutions at that time (FSRL, UNICAL, & UNN), had a combined student population of three hundred or less ( $\leq$  300). Most undergraduates (s) tumbled into radiography in those days, and they looked around and walked over to disciplines considered more popular. That radiography was not attractive and that RRBN had much ground unconquered, was glaring [53].

#### **Ominous clouds**

At inception in 1987, Mr E.P. Akpan was tasked with take-off logistics of RRBN. In 1989, the first governing Board (GB) was inaugurated, and with no B.Sc holder as member. The GB hit the ground running with a policy that mandated university graduates to write examinations meant for students of FSRL, a monotechnic. Those who passed were rewarded with an appellation of 'Registered Radiographer (RR)'. The RRBN may have taken a cue from Britain, where DCR was fundamental certification for clinical practice [4, 9]. In Nigeria, 'victims' considered the policy humiliating and alienated themselves from RRBN and ARN.

University of Nigeria Radiography Students Association (UNRADSA) led agitations on campus. Frank Chukwu, a passionate UNRADSA President was at the forefront of agitations. The frontier of agitation was enlarged to UNICAL where they met kin spirits. On 1 June 1999, at the residence of Mr. Ikenna Ubadigha in Abuja, Medical Imaging Society of Nigeria (MISON) was born. Present were Messrs Frank Chukwu, ASC Uzosike, Olisaemeka Akukwe and the host. Mr Ubadigha was nominated pioneer President. Their new association exerted a strong centripetal force on B.Sc clan, and conversely, a stronger centrifugal force on diploma clan (www.mison.org/).

The new group moved from quests to conquests rapidly. They influenced federal government (FG) in 2003, to change the nomenclature of B.Sc clan to 'Medical Imaging Scientists (MIS)' & concomitantly, created an own scheme of service (SoS). Excluded distinctly from MISON and MIS cadre, DCR/DIR found themselves stuck with Radiographer nomenclature [16, 17, 35, 37, 39].

Internship for fresh graduates commenced in 2001, another milestone by MISON, but a feat already achieved by Pharmacy and other sister professions. Subsequent graduates after 1999 were fully ready to boycott diploma exams. Akin to a pat on the back of MISON, in 2001, the FG banned DIR holders (who constitute the bulk of ARN membership), and all monotechnic graduates from the dignifying NYSC scheme. There were other reversals of fortune for ARN: her journal went comatose, B.Sc members thinned out, state Branches took a long leave of absence, while her meetings and AGMs became arenas for lamentations against 'enemies of the profession.' Not surprisingly, the altercation weakened cohesion and exacerbated indiscipline in the profession. Furthermore, the warm radiography - radiology embrace rapidly transmuted to casual handshake. The health sector on its part was flummoxed with the self-inflicted injury. If ISRRT attempted to intervene atall, the impact was not felt. Worried by MISON's trajectory, ARN vehemently counteracted them. The scenario was clearly drumbeats of war, and it lasted from 1999 to the week of St Valentine's Day in 2018 [16, 17, 59].

The ARN led by Mr Chioma L. Abara, still on a quest for control, implored FMoH to set machinery in motion for a Registrar who would be catalyst for cohesion, emancipation and discipline. The FMoH, fully aware of internal wrangling, heeded their advice and inaugurated a governing board (GB) in 2000, still with no single B.Sc clan as member.

## Table 3: Inaugural Governing Board of RRBN (1989 - 1992)

- (1).Mr EP Akpan, MSR, FCR (Chairman);
- (2).Mrs CE Obaseki, MSR (Ag Registrar, 1989-1996);
- (3).Mrs COO Ademokun, MSR;
- (4). Mrs Julie O Osunkiyesi, MSR;
- (5).Mr SOI Okonta, MSR;
- (6). Alhaji Shahada M. Shahada, MSR;
- (7).Mr VB Tobin-West, DCR;
- (8).Mr BAA Olulode, DCR;
- (9).Mr JA Oga, DCR;
- (10).Mrs OA Ekanem;
- (11). Hajia Balkisu Abdulrahman;
- (12). Dr Demuren; (13). Dr MA Ser [11, 34].

## Table 4: Second Governing Board of RRBN (2000 – 2003)

(1).Alhaji Shahada M. Shahada; MSR (Chairman); (2).Mrs Oluranti Olukoya, MSR (Principal, FSRL/Acting Registrar); (3). Prof A. Tahir, Radiologist (UNIMAID); (4). Dr C.C. Unogu (Represented FMoH); (5). Mr Kenneth .K. Agwu, DCR, M.Sc; (6). Mr Frank Offor, DCR, LL.B; (7). Alhaji Sani Ibrahim Nas, MSR; (8). Alhaji Isiaka Salawu, MSR; (9). Mr Shem Laushugno (snr), DCR; (10). Chief (Mrs) Kehinde M. Omiyi, DCR; (11). Mrs Ugbodaga, DCR; (12). Mrs Bisi Ekisola, DCR; (13). Mr Chioma L. Abara, DCR (ARN President/Representative) [11, 15, 34].

#### **Appointment of first substantive Registrar**

Aside satisfying statutory requirement, inauguration of GB was expected to lead to appointment of a substantive Registrar, a position that wielded enormous influence. Both clans were interested in the position, and keenly contested it, when it was advertised. The GB settled for a Radiographer from DCR clan. The B.Sc clan grumbled and insinuated that their kins people were edged out despite being the best two. The writer made enquiries from two members of the GB who clarified that they used their prerogative to appoint a qualified Radiographer from the list of contestants, not necessarily any of the best three. Due to prevailing distrust in the profession, the appointment of Registrar in 2001, who assumed office in March 2002 did not therefore, in the opinion of the writer, quench the raging inferno, but seemingly stoked it.

#### **Post-appointment appeasement**

The writer is a witness to subsequent narratives. To douse tension, RRBN governing board quickly nullified the policy of diploma examinations for university graduates. The new policy seemed fair enough and it was not resisted. Another radical action to heal real or perceived wounds was that, in the inauguration of a new GB between 2004 -2006, a B.Sc clan member was appointed as chairperson. The wisdom of the 2<sup>nd</sup> GB actually went a long way to douse tension. Ceasefire was however, short-lived as many policies of RRBN were resisted. This resulted in long-drawn counterproductive conflict that subsided in 2012, when MISON surprised everybody, again.

## In memory of the great minds who were GB members of RRBN between 2000 – 2003

In the opinion of the writer, that was an outstanding GB. They were a link between the past and the future of radiography. Their courage to suspend diploma exams for B.Sc holders was commendable. Their greatest legacy however, was in the choice of Registrar; they chose a man whose charisma, brilliance, boldness, creativity, foresight and personal integrity gave the profession a quantum leap of progress. He took radiography and radiographers from obscurity to limelight, from gloom to glamour, and from the past to the future.

In his words, "To equip myself for the task ahead, I read the law that established RRBN. I also discussed with Mr Abara and we identified a number of problems. I made up my mind not to steal and I did not allow anyone to steal. Major challenge was that there was this very thick dissatisfaction on the minds and faces of radiographers throughout the country, no one was really happy. So, there was the task of bringing happiness to the professionals and boosting their deflated ego. Some of our legacies were enhanced entry point for radiographers, classification of RRBN as category 'B' parastatatal by NSIWC, establishment of radiography programmes in five more universities, huge infrastructure in Lagos office of RRBN, and much more. Calabar programme had been there for decades but when I got there in 2002, I discovered that they had no office, no signpost and the lecturers were under trees. We got the VC to allocate a whole floor in one of the buildings there. My last day in office was 31st July, 2012. I was asked to retire, not dismissed, suspended or sacked" [53].

#### **Renewed hostility**

Increment in annual license fee from two thousand, five hundred naira (N2, 500) to twenty thousand naira (N20, 000) was severely criticized. Although not a MISONite, even this writer lost goodwill for the Registrar for that decision. The fee was the highest in the health sector then. As at the time of increment, a post-NYSC Radiographer in federal civil service earned less than forty-five thousand naira (N45, 000) only. The Registrar explained that it was a decision of the GB. He added that it was a temporary sacrifice

from all, and assured that once the number of practitioners increased, the fee should reduce [53]. Registered radiographers then were approximately: 700 (2005) [50]; and 2,000 (2015) [52].

The M.I.S. nomenclature so dear to MISON was neutralized. In 2012 and 2015, federal government released circulars that re-designated practitioners to 'Radiographer' while also enhancing their entry point into civil service. MISONites were so sensitive to the issue of nomenclature, therefore, an attempt to reverse their gains was viewed as direct confrontation. There were other issues that were flashpoints of conflict.

#### **Abrupt retirement of first substantive Registrar**

The battle of wits between MISON and others spanned roughly a decade until 2012, when MISON finally stampeded the Registrar into retirement. They reasoned that his position was for a term of 4 years, renewable once. After 8 years in 2010, they thought he would retire but were shocked to hear that the GB renewed his appointment. They went to government with their observations that the Registrar had clocked 60 years and had served two terms. The government, despite the fact that it was RRBN GB that renewed the Registrar's appointment, sent him on retirement in June 2012, after ten years and five months in office. In addition, MISON played a significant role in the choice of the succeeding 2<sup>nd</sup> substantive Registrar, a B.Sc holder who had been a staff of RRBN. That succession opened up a new battlefront involving litigation. The foregoing narrative seeks to point out that succession in RRBN was knotty [53 – 54].

#### Professional conquests between 1999 - 2019

- 1. 1999: Medical Imaging Society of Nigeria (MISON) was founded by proactive UNEC and UNICAL radiography graduates. The group acted like a catalyst, spurring the profession into action and reaction, from the usual tranquilizing gradualism.
- 2. 2000:Federal Government constituted governing board (GB) with full powers for RRBN.
- 3. 2001: Internship for radiography graduates commenced.

- 4. 2001: First ever university graduate to obtain Ph.D appeared. He is Dr Felix O. Erondu. However, his degree is in Medical Physics, rather than core radiography. Before him and with Ph.D in Management were Drs Ikechukwu Oze and Augustine Okaroh. As at 2019, there were at least 45 Ph.Ds.
- 5. 2001/2002: RRBN reversed itself on the policy of diploma exams for B.Sc clan. As a result, 'Registered Radiographer' appellation for graduates ceased to be awarded.
- 6. 2002 (wef): Continuing professional development (CPD) programmes, a prerequisite for annual practice license renewal, initiated under the ARN presidency of Mr C.L. Abara, around 1996-1997 was taken over by RRBN and enhanced in scope, quality and relevance. Ab initio, the most enticing CPD programme was CT update course, with Mrs Sumbo Oyedele, DDR UCH, Ibadan (retd) as pioneer resource person. Institutes radiotherapy and ultrasound training were also established at National Hospital, Abuja (NHA) and Jos University Teaching Hospital (JUTH), respectively.
- 7. 2002 (wef): The RRBN commenced accreditation visits to universities, a tradition sustained ever since.
- 8. 2002 to date: Zonal offices of RRBN were established in Abuja (FCT), Enugu (SE), Nnewi (SE; liaison office), Port Harcourt (SS), Calabar (SS), Asaba (SS), Kano (NW) and Sokoto (NW). North Central and Northeast were regrettably, omitted!
- 9. 2003: Creation of an own scheme of service for practitioners.
- 10. 2003 2019: New radiography departments in universities started appearing. Chronology: UNICAL (1981), UNN (1983), UNIMAID (2003), NAU (2004), UNILAG (2005), BUK (2008), UDUS (2013), ABU (2017), Evangel

- University, Ebonyi State (2018), Gregory University, Uturu (2019), Lead City University, Ibadan (2019). About ten universities are also set to admit scholars. Approved Universities in Nigeria were  $\geq 170$ .
- 11. 2005: Minimum qualification to practice radiography became B.Sc, rather than DCR/DIR. Current trend is B.Rad. In the near future, it shall be D.Rad.
- 12. 2008: First professor in radiography appeared. The honour came through a renowned academic in UNEC, and 1977 graduate of FSRL, Kenneth Kalu Agwu. He is Professor of Radiography/ Medical Physics. As at 2019, there were ≥ 7 radiography lecturers in professorial cadre.
- 13. 2010: First Ph.D in core radiography appeared. It was from UNEC's postgraduate programme which commenced in 1994. The recipient is Mark C. Okeji (now Professor), wore obtained B.Sc from UNEC in 1992.
- 14. 2013 2019: History of radiography profession in Nigeria was attempted by Rad Tom Adejoh. It was a self-motivated project to ensure that future generations of radiographers did not agonize as he did, to access sparsely existent documentations on radiography.
- 15. 2014: Enriching innovations ensued from Radiology Department of Nnamdi Azikiwe University Teaching Hospital (NAUTH), Nnewi:
- (a). Seminars by interns was made a core research affair with senior radiographers as supervisors. That strategy generated journal manuscripts and conference papers, in which supervisors and interns were co-authors.
- (b). Design of pocket badge on clinical gowns showing radiation logo, profession and name, to improve visibility of radiography. Tom Adejoh conceptualized these with the goodwill of NAUTH radiographers.

- 16. 2015: First and only Doctor of Medical Imaging (DMI) in Nigeria appeared. It was obtained in UK by Chyke Ohuegbe, one of the pioneer M.Sc Medical Imaging graduates of UNEC (1996), former UNEC lecturer, founding President of NIRAD, and specialist in Ultrasound elastography.
- 17. 2016: First radiographer in West Africa to become Professor of Medical Imaging emerged. He is Charles U. Eze, an academic at UNEC, who obtained B.Sc from same place in 1996.
- 18. 2017 2019: ARN Education Committee (EDUCOM) between 2017 2019, with Tom Adejoh as chairperson, did things differently and left uncommon feats:
- (a). EDUCOM became the most visible and popular committee in radiography.
- (b). X-Rays, the ARN journal was renamed Journal of Radiography & Radiation Sciences, JRRS.
- (c). For the first time ever, X-Rays/JRRS had  $\geq 10$  years unbroken consistency in publication. However, it is yet to have DOI, and it is not yet indexed in popular bibliographical databases.
- (d). Hardcopies of X-Rays/JRRS effective from the 1970s were digitized and uploaded online (www.jarnigeria.com)
- (e). Hardcopies brochures of ARN annual conference from inception in 1958 till date (2019), were also digitized and published online.
- (f). Electronic Book of Abstracts (e-BOA) was introduced (in 2017).
- (g). Interractive and appealing journal website was created (<a href="www.jarnigeria.com">www.jarnigeria.com</a>)
- (h). Celebration of World Radiography Day (WRD) in Nigeria became a nationwide affair. Six out of 37 possible Branches marked it in 2016 before EDUCOM took over. As at 2018, there were  $\geq$  26 Branches that marked that day.
- (i). EDUCOM conceptualized a nationwide award to reward outstanding leadership; the only reward

- scheme in radiography profession so far. It is titled 'Most Outstanding ARN Branch/Chairman Award' and was presented to the ARN Branch that most distinguished itself in any particular year, especially during WRD celebration. It reached season 3 in 2019. Past winners are Shem Samuel Laushugno (Gombe, 2017) and Alhaji Modu Ali (Borno, 2018, 2019). The ARN sponsors the award.
- (j). A detailed handover document (PDF) was passed on from Tom Adejoh to his successor. As simple as that was, it was a strange practice in EDUCOM before his era.
  - 19. 2017: Think tank for Radiography (TTR) sprung up through the wits and charisma of Dr Polycarp C. Okoye, a 1998 graduate of UNEC. It was a 40-member committee of radiographers that resolved the 2-decade old hostilities between ARN and MISON, instituted an orderly succession of Registrars in RRBN, and proffered solutions to myriad of professional challenges. If MISON was a catalyst, TTR was a buffer of stability.
  - 20. 2018: Censuses of imaging modalities were painstakingly undertaken:
    - (a). Computed tomography (CT) by Adejoh, et. al. There were  $\geq 190$  CT scanners in Nigeria as at 2018 [60].
    - (b). Magnetic resonance imaging (MRI) by Akanegbu, et. al. There were ≥ 67 MRI scanners in Nigeria as at September 2018 (www.jarnigeria.com/conferences)
  - 21. 2019: Rad Tom Adejoh advocated for and popularized 'Rad' as a title to be adopted by radiographers. 'Mr', 'Mrs', 'Pastor', 'Malam', 'Alhaji', 'Honorable', and 'Chief' are what existed hitherto.
  - 22. 2019: Rad Tom Adejoh generated and archived multiple rare records: list of radiographers with postgraduate degrees, radiographers who graduated before 1980, and much more.

#### **Professional Setbacks**

This compilation is to expose future generations of radiographers to unconquered terrains.

- 1. Radiographers remain eclipsed from ultrasound suites in tertiary hospitals.
- 2. Radiographers are not appointed Heads of Department in tertiary hospitals.
- 3. M.Sc and Ph.D earned by radiographers have no financial or promotion benefits in hospitals. That fate is however, shared with sister professions like Pharmacy, MLS, Physiotherapy, Nursing, etc.
- 4. Sour relationship between traditional allies; radiographers and radiologists. As at 2019, there was no common scientific conference, or training institute. November 8<sup>th</sup> that should unite them erupted in another cold war; radiographers tag it as World Radiography Day (WRD) while radiologists prefer International Day of Radiology (IDR). In the opinion of this author, it should be jointly marked as International Day of X-rays (IDX). Regrettably, as at 2019, the allies were also slugging it out in the court of law on multiple fronts.
- 5. Doctor of Radiography (D.Rad) programme, already taking root in sister professions, is yet to commence in radiography profession.
- 6. There is no academic Fellowship programme yet in radiography. Only an honorary one (FARN) conferred by

- Association of Radiographers of Nigeria (ARN) exists. This is hardly admirable.
- 7. The regulatory agency is still a Board, rather than a Council that has more clout.
- 8. A strong central authority to whom radiographers will defer to has not yet materialized.
- 9. No fora exists to unify radiographers in Africa. PACORI, is for all professionals in radiation medicine. Presently, PACORI appears to be losing its enthusiasm.
- 10. Radiography journals in Africa are rare. As at 2018, only Nigerian and South African radiographers visibly have publications.
- 11. Regulation of allied personnel like image processing technicians, and sonographers, who are not radiographers, is yet to be fine-tuned.
- 12. Encroachment and, or, quackery by inappropriate personnel is still an overwhelming issue.
- 13. The most recent constitution of ARN was drafted in 1980. Attempts to review it were executed with the usual tranquilizing gradualism. Concomitantly, some issues appear chaotic. For e.g., rather than have a single President (of ARN) and multiple affiliate chairpersons, there is a proliferation of Presidents. This has created, and shall keep creating confusion in international fora.

Table 5. Generations of Nigerian Radiographers [59]

Generations	Year of qualification	Certification	Distinctive characteristics of the majority	
First	1949 - 1969	MSR, DSR	Hospital-based training schools; technicians	
Second	1970 - 1979	DCR	Monotechnic-based training in SW Nigeria; radiographers	
Third	1980 - 1989	DCR & B.Sc	University training in SS/SE Nigeria; RRBN established	
Fourth	1990 - 1999	DIR & B.Sc	Post-graduate training introduced	
Fifth	2000 - 2009	B.Sc/B.Rad	Multi-modality training, and practice	
Sixth	2010 - date	B.Sc/B.Rad	Explosion in university admissions, & postgraduate qualifications	

Table 6. Evolution in basic radiography training in Nigeria [10, 14, 42 - 46]

Year	Duration of training (years)	Location of training	Certificate awarded	Designation
1947 - 1959	6 months; later 2 years	Hospital	Proficiency	Technicians
1960 - 1964	3	Hospital	MSR	Radiographer
1965 - 1971	3	FSR, Lagos	MSR, DSR	Radiographer
1972 - 1981	3	FSR, Lagos	DCR	Radiographer
1972 - 1987	4	SOR, UCH	DCR	Radiographer
1982 - 1992	4	FSR, Lagos	DCR	Radiographer
1993 - 2005	4	FSR, Lagos	DIR	Radiographer
1981 - 1993	4	UNICAL	B.Sc	Radiographer
1994 - date	5	UNICAL	B.Sc	Radiographer
1983 - 2013	5	UNN, Enugu Campus	B.Sc	Radiographer
2003 - date	5	UNIMAID	B.Rad	Radiographer
2004 - date	5	NAU, Nnewi Campus	B.Sc	Radiographer
2005 - date	5	UNILAG	B.Sc	Radiographer
2008 - date	5	BUK	B.Rad	Radiographer
2013 - date	5	UDUS	B.Rad	Radiographer
2014 - date	5	UNN, Enugu Campus	B.Rad	Radiographer
2017	5	ABU, Zaria	B.Rad	Radiographer
2018	5	Evangel Univ., Ebonyi	B.Rad	Radiographer
2019	5	Gregory Univ, Uturu	B. Rad	Radiographer
2019	5	Lead City Univ, Ibadan	B.Rad	Radiographer

Table 7. Radiation medicine scope and modalities in Nigeria [43 – 48, 51, 60]

S/No	Modality	Invented	Appearance in Nigeria	Location	Probable number in Nigeria
1.	X-Ray	1895	1913	Lagos Island General Hospital	≥ 3100
2.	Mammography	1960s	?	?	≥ 180
3.	Fluoroscopy (static)	1896	?	?	≥ 28
4.	Computed tomography	1972	1987	UCH, Ibadan	≥ 186
5.	Ultrasound (B/M mode)	1942	1972	UCH, Ibadan	≥ 4,500
6.	MRI	1977	1999	National Hospital, Abuja	≥ 78
9.	Thermography	1970s	Nil	Nil	Nil
10.	PET (Nuclear Medicine)	1977	Nil	Nil	Nil
11.	SPECT (Nuclear Medicine)	1963	2006	UCH, Ibadan	3
12.	Radiotherapy	1896	1968	LUTH, Lagos	≥ 11 centres
*13	Anthropomorphic phantom	*Accessory	2019	UDUS & GUU	≥2

Table 8. Pioneer benefactors/leadership of radiography schools/department [9, 11 – 15, 41, 44]

Institution/Year founded/Year students were first admitted	Conceptualization of radiography department (most likely personality)	Pioneer HOD	First Radiographer HOD/Year	Graduands
Federal School of Radiography, Lagos; 1965:1965	Mr Effiong Philip Akpan (M.A); Radiographer	Mr Effiong P. Akpan (M.A); Principal	Mr Effiong P. Akpan (M.A); Principal (1965)	
School of Radiography, UCH Ibadan; 1972:1972	The ARN (with collaboration of Professor Botsende S. Lagundoye; HOD, Radiology UCH, Ibadan 1969, 1973, 1975, 1977 – 1980, 1982–1984)	Mr (later Rev'd) Mubo B. Ore; Radiographer	Rev'd Mubo Bamidele Ore; (1972)	≥ 750
University of Calabar; 1975: 1981			Dr Valentine C. Ikamaise (2008)	≥ 1,400
University of Nigeria, Nsukka; 1960: 1983	Prof Benjamin C. Umerah; Radiologist (pioneer Dean, Faculty of Health Sciences & Technology, UNEC)	Dr A. Offodile; Radiologist	Dr Ikechukwu Oze (1989)	≥ 1,385
University of Maiduguri; 1975: 2003	Prof A. Tahir; Radiologist (1st radiologist in northern Nigeria)	Prof Ahmed Ahidjo; Radiologist	Dr Chigozie I. Nwobi (2006)	≥ 700
Nnamdi Azikiwe University, Awka; 1991: 2004	Prof Benjamin C. Umerah; Radiologist (pioneer Provost, College of Health Sciences, UNIZIK)	Dr Sidney C. Abuchi (Medical Physicist)	Prof Christian C. Nzotta (2008)	≥ 550
University of Lagos; 1962: 2005	High Chief Reuben S.J. Babatunde (Registrar, RRBN 2002 – 2012)	Dr (Mrs) Kofo Soyebi; Radiologist (Initiator, Centre for Ultrasound Research & Education (CURE), UNILAG	Dr Livinus C. Abonyi (coordinator, 2010 – 2017) Dr Charles U. Eze; (on sabbaticals from UNEC, 2018); 1st substantive HOD	≥ 275
Bayero University, Kano; 1962: 2008	Prof A.M. Tabari; Radiologist	Prof A.M. Tabari; Radiologist (coordinator)  Prof Akintade Dare; Dental Surgeon ( specialized in radiation sciences); 1st substantive HOD	Musa Y. Dambele (M.Sc); Radiographer (2017)	≥ 120
Usmanu Danfodio University, Sokoto; 1975: 2013	Prof Sadisu Muhammed Ma'aji; Radiologist	Paul S. Obed (M.Sc); Radiographer	Paul S. Obed (M.Sc), 2015	≥ 50
Ahmadu Bello University; 1962: 2018	Radiographers in ABUTH, Zaria: Chris A. Ishiekwen (with support from Messrs Simon Nwafor & Emmanuel Esien- Umoh, and Dr Emmanuel Nwokorie)	Dr Muhammad Ibrahim; Radiologist	Nil	Nil
	Radiologists in ABUTH stepped in to succor them and ran the last lap			
Evangel University: 2012: 2018	Prof K.K. Agwu & Dr Kalu Ochie	Dr Kalu Ochie	Dr Kalu Ochie	Nil
Gregory University: 2012:2019	University Management	Dr Tom Adejoh	Dr Tom Adejoh	Nil
Lead City University 2005:2019	University Management	Prof Akintade Dare	Nil	Nil

Table 9: Registrars of Radiographers Registration Board of Nigeria (RRBN) since inception [11, 52]

S/No	Names	Qualification	Duration	Zone/ Tribe	Remarks
1.	Mrs C.E. Obaseki; FARN	MSR	1989 - 1996	SS (Edo/Liberian)	Acting Registrar
2.	Mrs Oluranti Olukoya	MSR	1996 - 2002	SW (Yoruba)	Actg Reg/ Principal FSRL
3.	Mr R.S.J. Babatunde; FARN	DCR, B.Sc, LL.B	2002 - 2012	NC (Yoruba)	1 <sup>st</sup> Substantive Registrar (SR)
4.	Mr Micheal S. Okpaleke	B.Sc, M.Sc	2012 – June 2017	SE (Igbo)	2 <sup>nd</sup> SR (Acting: 2012 – 2013)
5.	Mr Thaddeus C. Chidiebere	B.Sc, MBA	2017 June– 2018 Feb	SE (Igbo)	Acting Registrar
6.	Prof Mark C. Okeji; FARN	B.Sc, M.Sc, Ph.D	March 2018 - Date	SE (Igbo)	3 <sup>rd</sup> Substantive Registrar

<b>Tabl</b>	Table 10. Feats in Radiography domain (author's subjective opinion)					
S/no	Recor	d	Name	Location	Remark	
1.	Fastest Ph.D ever (8 years post-B.Sc)		Olarenwaju, Lawal (B.Sc 2010, UNILAG; Ph.D 2018, UK)			
2.	Encyclopaedia of radiography history		Elder Abara, C. Luckey	Lagos	Fmr ARN President	
3.	Radiographers who		etus Amedu & Victor Edeh); 201	3 (Moyosola A. A	Akinyanju, Opeyemi T.	
	made 1st Class in 1st	Olagunju, & Viva N.		0 (M V: 4	Ol C. Mala	
	degree		1 (Osita C. Anusiogu); 201 s Nwokeocha); 2019 (Somtoo			
			Uchechukwu V. Mbanefo, Chid		onjinje 2. cenenau,	
		UNICAL: 2014 (Raj				
	TI CT 11	UNN: 2017 (Theodor				
4.	First CT radiographer (		Oyedele, O. Olasumbo	Ibadan	Retd DDRad,	
	Nigeria was installed in	•	(Mrs)		UCH, Ibadan	
5.	First widely-acclaimed sonographer		Geogiana Afam (Mrs)	Enugu	Retd CRad, UNTH	
6.	First Director, Radiography (2013)		Okoloku, Esther (Mrs)	FMC, Asaba	Retired	
7.	Most generous radiographer (longstanding		Pastor Wole Adeoye	Retd Manager, NNPC; now a		
	financier of professional	· · · · · · · · · · · · · · · · · · ·	(Abuja) pastor with Winners' Chapel			
8.	Presidents of NARS		UNICAL, 2006/2007); Anthony			
	(Nigerian Association of Radiography Students)		8/2009/2010); Asuquo Aniekan (/2013); Dauda Maikudi (UNIN			
	resuscitated in 2005/2006		Joseph Akwaifiok (UNICAL 201			
	by Paul Awah		Abubakar Al-Ameen (UDUS,	2018/2019); Ama	ara Favour Ikegwuonu	
			rst female president of NARS)		- · · · · ·	
9.	Radiography journals is	n Africa	1. The South African Radiographer, 2. Journal of Radiography & Radiation Sciences (Nigeria), 3. Nigerian Journal of Medical Imaging			
			& Radiation Therapy (NJMIRT		of Medical imaging	
10.	Student journal editors	(UNEC)	OF Erondu, 1991; T Adejoh, 2001; PDO Anumihe, 2004, 2006; BNC			
	J	Ezenwuba, 2010; JE Agwu, 2011; AE Chukwuani, 2012; TO Digwoke,				
11	Dual - 1.1 41 1'	1	2013; GE Adimekwe, 2015			
11.	Probably the radiograp	-	Mr Babatunde Alfred Adepoju, of Two-Tees, Ibadan (late)			
12	private radio-diagnostic		T A1:1 (2017 2020)			
12.	Radiographer who made ARN EDUCOM a popular brand Tom Adejoh (2017 – 2020)			on (2017 – 2020)		

Table 11. Summary of postgraduate qualifications amongst Nigerian radiographers as at 2019

Zone	Total number of Ph.D	First Ph.D graduate	State of origin	Number of M.Sc (≥)
North-West	Nil	Nil		40 (for
North-East	2	Joseph, D. Zira	Bauchi	NW, NE, & NC)
North-Central	1	Adejoh, Thomas	Kogi	
South-West	2	Lawal, A. Olanrewaju	Ogun	25
South-South	5	Egbe, O. Nneoyi	Cross River	25
South-East	37	Oze, Ikechukwu	Abia	75

#### Change of guards in RRBN

In the first quarter of 2017, the FMoH constituted a new governing board for RRBN. The new GB declined the incumbent Registrar an automatic second term. The next ranking radiographer in RRBN was appointed Acting Registrar instead. Those bold actions sent signals that things would not be business as usual. Predictably, insults, threats and petitions, inundated professional airspace. The FMoH was compelled to step in to play mediatory roles, but those interventions appeared platonic.

## The Think Tank for Radiography (TTR); catalyst for renewed cohesion and stability

A cloud of gloom hung over the profession due to issues that appeared intractable, and which had apparently overwhelmed ARN, RRBN, and influential elders. Quite unexpectedly, hope came from a tactful 4<sup>th</sup> generation (1990 – 1999) radiographer who had watched from the sidelines. On 6 March 2018, he courageously decreed into existence a committee of stakeholders he called 'Think Tank for Radiography (TTR).'

This happened on ARN WhatsApp platform. The aim of the TTR was to bring stakeholders together to x-ray challenges, and subsequently, make realistic recommendations that will take the profession out of continual regress. Okoye, Polycarp C. (Ph.D), who conceptualized and convened TTR is a 1998 graduate of Medical Radiography from UNN. He was neither pro-ARN nor pro-MISON.

### Modus operandi

The TTR was a 40-member-strong group cutting across all strata in radiography: the convener himself; incumbent and former Registrars of RRBN: incumbent and some former Presidents of the ARN: notable elders from academia and clinical domain; radiographers in diaspora; student leaders; ARN delegates with radiographers from all parts of the country; and MISON delegates with no northerner or Yoruba member. Drs Felix Erondu and Tom Adejoh were nominated as Chairperson and Secretary, respectively. The secretary was saddled with the task of creating and administering an email address and WhatsApp platform for TTR. He also had the distressing task of reaching out to nominees, including antagonistic ones. The task was successful although laborious.

The TTR was self-funding. It set business rules, appointed sub-committees and reconciled all former opponents in order to have hitch-free deliberations. They received numerous memoranda radiographers. In all, they participated in 19 virtual meetings on WhatsApp starting from 20 March 2017, and capped it up with a physical meeting in Lagos on 17 November 2017, where proposals from previous meetings were finally vetted and converted to resolutions. Furthermore, a reconciliation meeting was midwifed by TTR between ARN and MISON in Abuja on 10 February 2018. The former and latter left that meeting with a memorandum of understanding recognizing them as association and pressure group, respectively. The TTR also influenced an orderly succession in Registrarship in March of RRBN Furthermore, resistance to a certain 'National Council on Radiology Bill (2017)' sponsored by Dr Patrick Asadu in the National Assembly, was coordinated by TTR. Eventually, in February 2018, a 195-page document detailing present and future quests of Nigerian radiographers was produced and was widely circulated to RRBN, ARN, MISON, HODs of radiography departments in universities and some relevant stakeholders in the profession. It is hoped that future generation of radiographers would endeavor to read it for bearing and direction when they are in positions of influence [59].

#### Limitations of this historical research

There were conflicting accounts from witnesses to some events. Consequently, the work may suffer from both witness and author biases. Future works should improve on this.

**Conclusion:** The radiography profession in Nigeria made commendable strides in education. However, intra-professional and inter-professional frictions dogged her step, stunting many prospects of growths.

**Acknowledgement:** The invisible co-author for this work is Elder Chioma L. Abara, a boy to the 'ancients.' Rad Robert Ochigbo, a cousin and mentee, helped with transcribing ms-word to WhatsApp text for onward posting on radiographers' platforms. The author deeply appreciates the duo, as well as other sources consulted.

Fading away like the stars of the morning Losing their lights in the glorious Sun Thus would we pass from the earth and its toiling Only remembered by what we have done



**Fig i. Recommended badge on clinical gowns/scrubs** (Logo less 'Radiographer' was *Conceptualized in 1946 at the University of California Radiation Laboratory*)



## Roll Call of Doctorate Degree Attainments as at 2019

#### 1. Professor Kenneth K. Agwu (UNEC)

- \*DCR (London, 1978)
- \*Bridging course in Physics (Surrey, UK)
- \*M.Sc Medical Physics (Surrey, UK, 1987)
- \*Ph.D Medical Physics (Nigeria, 2005)
- \*Professor of Radiography/Medical Physics (2008)

#### 2. Professor (Ven.) Christian C. Nzotta (NAU)

- \* B.Sc Radiography (Nigeria, 1989)
- \* M.Sc Medical Physics (UNILAG, 1998)
- \* Ph.D Nuclear Physics (ABU, 2007)
- \*Professor of Radiography/Medical Physics (2014)

#### 3. Professor (Ven.) Nneoyi O. Egbe (UNICAL)

\*B.Sc (UNICAL, 1990)

- \*M.Sc Physics (Ibadan, 2000)
- \*Ph.D Medical Physics (Aberdeen, UK, 2009)
- \*Professor of Radiography & Medical Physics (2016)

#### 4. Professor Charles U. Eze (UNEC)

- \* B.Sc Radiography (Nigeria, 1996)
- \* M.Sc Medical Imaging (Nigeria, 2004)
- \* Ph.D Medical Imaging (Nigeria, 2011)
- \*Professor of Radiography & Medical Imaging (2016)

#### 5. Professor Mark C. Okeji (UNEC)

- \* B.Sc Radiography (Nigeria, 1992)
- \* M.Sc Medical Imaging (Nigeria, 2000)
- \* Ph.D Radiation & Environmental Protection (Nigeria, 2010)
- \*Professor of Radiography (2017)

#### 6. Professor Felix O. Erondu (GUU, Abia State)

- \*B.Sc Radiography (Nigeria, 1992)
- \*M.Sc Medical Imaging (Nigeria, 1996)
- \*Ph.D Medical Physics (RSUST, 2001)
- \*Professor of Radiography (2019)

#### 7. Associate Prof. Anthony C. Ugwu (NAU)

- \* B.Sc Radiography (Nigeria, 1998)
- \* M.Sc Medical Imaging (Nigeria, 2007)
- \* Ph.D Medical Imaging (Nigeria, 2014)
- \*Asso. Prof. of Diagnostic Medical Ultrasound

#### 8. Associate Prof. Benjamin E. Udoh (UNICAL)

- \* B.Sc Radiography (UNICAL)
- \* M.Sc Medical Imaging (Nigeria)
- \* Ph.D Medical Imaging (Nigeria, 2015)

#### 9. Professor Akintade O. Dare (UNILORIN)

- \* Bachelor of Dental Surgery (UNILAG, 1983)
- \* M.Sc Dental Radiography (Japan, 1989)
- \* Ph.D Oral-Maxillofacial Radiology & Radiation Sciences (Showa University, Tokyo, Japan, 1996)
- \*Associate degree in Medical Radiography (USA, 2007)
- \*Professor of Medical Radiography & Prof of Oral Maxillofacial Radiology

#### 10. Dr Ikechukwu Oze (UK)

- \*DCR (London), MBA, B.Sc Radiography
- \*M.Sc Nuclear Medicine
- \*Ph.D Management (USA, 1984)

#### 11. Dr Augustine O. Okaro (Enugu)

- \*DCR (London, 1974), B.Sc (UNILAG, 1986)
- \*MBA (Nigeria), Ph.D Management (USA, 1999)

#### 12. Dr Sylvester O. Ogbu (UNEC)

- \* B.Sc Radiography (Nigeria, 1996)
- \* M.Sc Medical Imaging (Nigeria, 2004)
- \* Ph.D Medical Imaging (Nigeria, 2011)
- \*Passed on in Zambia (Sabbaticals), January 2019

#### 13. Dr Kalu Ochie (Evangel University, Ebonyi State)

- \* DCR (London, 1979), PgD Radiography (Nigeria, 1996)
- \* M.Sc Medical Imaging (Nigeria, 2005)
- \* Ph.D Medical Imaging (Nigeria, 2013)

#### 14. Dr AngelMary C. Anakwue, Mrs (UNEC)

- \* B.Sc Radiography (Nigeria, 1992)
- \* M.Sc Medical Imaging (Nigeria, 2000)
- \* Ph.D Medical Imaging (Nigeria, 2013)

#### 15. Dr Hyacienth U. Chiegwu (NAU)

- \* B.Sc Radiography (Nigeria, 1990)
- \* M.Sc Medical Imaging (Nigeria, 2005)
- \*Ph.D Radiation/ Environmental Protection &

Dosimetry (NAU, 2014)

#### 16. Dr Ndubuisi O. Chiaghanam (UNICAL)

- \*B.Sc Radiography (Nigeria, 1998)
- \*M.Sc Human Physiology & Radiation Effects (UNICAL, 2005)
- \*Ph.D Medical Imaging (NAU, 2014)

#### 17. Dr Felicitas U. Idigo, Mrs (UNEC)

- \*B.Sc Radiography (Nigeria, 1991)
- \*M.Sc Medical Imaging (Nigeria, 1996)
- \*M.Sc Health Administration & Management (Nigeria, 2009)
- \*Ph.D Radiology Administration & Management (Nigeria, 2014)

#### 18. Dr Emmanuel O. Ehiwe (UK)

- \*DIR (Lagos, 1994)
- \*PgC Musculoskeletal Ultrasound (MSK), UK
- \*Ph.D Cancer Epidemiology in Public Health (UK, 2014)

#### 19. Dr Polycarp C. Okoye 2014 (Port Harcourt)

- \*B.Sc Radiography (Nigeria, 1998)
- \*M.Sc Radiation & Environmental Protection (RSUST, 2009)
- \*Ph.D Radiation & Environmental Physics (UNIPORT, 2014)

#### 20. Dr Benson, Oguneme (Trinidad & Tobago)

- \*BSc Radiography (Nigeria, 1990), M.Sc
- \*Doctor of Business Administration

#### 21. Dr Chyke I. Ohuegbe (UK)

- \*B.Sc Radiography (Nigeria, 1991)
- \*M.Sc Medical Imaging (Nigeria, 1996)
- \*M.Sc Musculoskeletal Ultrasound (Bournemouth, UK, 2011)
- \*Doctor of Medical Imaging, DMI (Portsmouth, UK, 2015)

#### 22. Dr Joseph C. Eze (NAU)

- \* B.Sc Radiography (Nigeria, 1992)
- \* M.Sc Medical Imaging (Nigeria)
- \* Ph.D Medical Imaging (Nigeria, 2015)

#### 23. Dr Ulu O. Ulu (JUTH)

- \*B.Sc Radiography (Nigeria, 1994)
- \*M.Sc Medical Imaging (Nigeria, 2008)
- \*Ph.D Medical Imaging (Nigeria, 2015)

#### 24. Dr Emmanuel Nwokorie (Abuja)

- \* B.Sc Radiography (UNICAL, 1995)
- \* M.Sc Radiation Biophysics (ABU, 2006)
- \* Ph.D Nuclear & Radiation Physics (NDA, Kaduna, 2016)

#### 25. Dr Christopher C. Ohagwu (NAU)

- \* B.Sc Radiography (Nigeria, 1998)
- \* M.Sc Medical Imaging (Nigeria, 2008)
- \* Ph.D Medical Imaging (Nigeria, 2016)

#### 26. Dr Ernest U. Ekpo (UNICAL/Australia)

- \*B.Sc Radiography (UNICAL, 2007)
- \*Ph.D Imaging (Sydney, Australia, 2016)

#### 27. Dr Okorie Udo (LAGOS)

- \*DCR (London, 1989), PgD (UNN, 2001)
- \*M.Sc Environmental Management (IMSU, 2003)
- \*Ph.D Environmental Health Sciences (ABSU, 2015)

#### 28. Dr Valentine C. Ikamaise (UNICAL)

- \*B.Sc Radiography (UNICAL, 1988)
- \*M.Sc Human Health & Environment (OAU, 2000)
- \*M.Sc Human Anatomy (UNICAL, 2012)
- \*Ph.D Radiographic/Clinical Anatomy (UNICAL, 2017)

#### 29. Dr Jerome Njoku (UNILAG)

- \*DCR (London, 1988)
- \*M.Sc Medical Imaging (Nigeria, 2012)
- \*Ph.D Medical Imaging (Nigeria, 2017)

#### 30. Dr Cletus U. Eze (UNILAG)

- \*B.Sc Radiography (Nigeria, 1996)
- \*M.Sc Medical Imaging (Nigeria, 2012)
- \*Ph.D Medical Imaging (Nigeria, 2017)

#### 31. Dr Innocent U. Nwadike (UNEC)

- \*DCR (London), M.Sc Medical Imaging (Nigeria)
- \*Ph.D Medical Imaging (Nigeria, 2017)

#### 32. Dr Uloma B. Nwogu (UNEC)

- \*B.Sc Radiography (Nigeria, 2001)
- \*M.Sc Medical Imaging (Nigeria, 2012)
- \*Ph.D Medical Imaging (Nigeria, 2017)

#### 33. Bernard Olisemeke (UK)

- \* M.Sc Environmental Management/Control (OAU)
- \* Ph.D (University of Birmingham, 2017)

#### 34. Dr Christopher O. Arimie (UPTH)

- \*DCR (London, 1987), B.Sc Management (UNIPORT, 2000)
- \*PgD Statistics (UNIPORT, 2005)
- \*M.Sc Applied Maths/Optimization Option (RSUST, 2009)
- \*Ph.D Statistics (UNIPORT, 2018)

#### 35. Dr Chigozie I. Nwobi (UNIMAID)

- \*B.Sc Radiography (Nigeria, 1998)
- \*MHPM & MPA (UNIMAID, 2002 & 2004)
- \*M.Sc Medical Imaging (Nigeria, 2012)
- \*Ph.D Radiological Health Management (NAU, 2018)

#### 36. Dr Dlama Z. Joseph (BUK)

- \*B.Rad (UNIMAID, 2009)
- \*M.Sc Radiation & Medical Physics (NSU, Keffi, 2014)
- \*Ph.D Radiation/Environmental Protection & Dosimetry (NAU, 2018)

#### 37. Dr Thomas Adejoh (GUU, Abia State)

- \*B.Sc Radiography (Nigeria, 2003)
- \*M.Sc Medical Imaging (Nigeria, 2014)
- \*Ph.D Radiation/Environmental Protection & Dosimetry (NAU, 2018)

#### 38. Dr Olanrewaju A. Lawal (UK)

- \*B.Sc Radiography (UNILAG, 2010)
- \*M.Sc Medical Imaging (UK, 2014)
- \*Ph.D Medical Imaging (Salford, UK, 2018)

#### 39. Dr Chibuzo L. Abonyi (UNILAG)

- \*B.Sc Radiography (Nigeria, 1989)
- \*M.Sc Medical Physics (UNILAG, 1999)
- \*Ph.D Clinical Research (Texila American University, Guyana, 2018)

#### 40. Dr Emmanuel A. Odumeru (FMC, Owerri)

- \*DIR (Lagos, 1995), PgD (Nigeria, 2004)
- \*M.Sc Medical Imaging (Nigeria, 2012)
- \*Ph.D Medical Imaging (Nigeria, 2018)

#### 41. Dr Anayo C. Okwor (FETHA)

- \*B.Sc Radiography, (Nigeria, 1995)
- \*M.Sc Medical Imaging (Nigeria, 2013)
- \*Ph.D Medical Imaging (Nigeria, 2018)

#### 42. Dr Daniel C. Ugwuanyi (NAU)

- \*B.Sc Radiography, (Nigeria, 1998)
- \*M.Sc Medical Imaging (Nigeria, 2012)
- \*Ph.D Medical Imaging (Nigeria, 2018)

#### 43. Dr Christopher A. Ishiekwen (ABUTH)

- \*B.Sc Radiography (UNICAL, 1992)
- \*M.Sc Radiation Biophysics (ABU, 2007)
- \*Ph.D Radiation & Medical Physics (NSU Keffi, 2018)

#### 44. Dr Silas A. Moi (UNIMAID)

- \*B.Rad (UNIMAID, 2009)
- \*M.Sc Medical Physics (NAU, 2014)
- \*Ph.D Medical Physics (NAU, 2019)

#### 45. Dr Amechi J. Agbo (UNEC)

- \*B.Sc Radiography, (Nigeria, 1992)
- \*M.Sc Medical Imaging (Nigeria, 2005)
- \*Ph.D Medical Imaging (Nigeria, 2019)

#### 46. Dr Michael S. Okpaleke (NAU)

- \*B.Sc Radiography, (Nigeria, 1998)
- \*M.Sc Medical Imaging (Nigeria, 2011)
- \*Ph.D Medical Imaging (Nigeria, 2019)

#### 47. Dr Kester I. Egwuanumku

- \*B.Sc Radiography, (Nigeria, 1998)
- \*M.Sc Medical Imaging (Nigeria, 2012)
- \*Ph.D Medical Imaging (Nigeria, 2019)

## **48. Ongoing Ph.D studies:** ≥ 40 Nigerian

Radiographers globally

## RADIOGRAPHY: PAST, PRESENT AND PROSPECTS

https://www.facebook.com/groups/radiography .nigeria/permalink/48891178518383/

https://m.facebook.com/groups/2867720347303 02?view=permalink&id=575122925895210

(Being paper presented as Guest Speaker in Ibadan, Oyo State of Nigeria during 'World Radiography Day' Celebration on 7 – 8<sup>th</sup> November, 2014)

#### Why I took the route of discourses

In life, we form opinions about anything and everything to give us psychological bearing and direction. Our opinions influence our attitude and vice versa. Attitude is strongly eulogized by some writers as a pillar of altitude. Infact, "attitude is everything" has been adopted as creed by many motivational speakers. To enhance our attitude, information is vital. Such information could come from amongst other things, in discourses.

Discourses consolidate what one already upholds or sharply challenge one's convictions. A philosopher once said, "It is not enough to have the courage of our convictions but the courage to attack our convictions." Therefore, discourses sometimes attack convictions and help us reach refined and sustainable conclusions. My goal therefore, is to use this discourse(s), as I do with many others, to scratch the surface of our intellectually fecund minds in order to spur us into introspective and retrospective analyses of our quests and conquests, with a view to refining the former and consolidating the latter.

Our past and present: To fully appreciate where we are as a profession and where we ought to be as professionals, a cursory glimpse at our very recent past may be helpful.

(a). Unpopular course? In the recent past, radiography undergraduates were hardly proud of their department. Their comportment was akin to one who (s)tumbled into the department by 'error.' They bemoaned their fate until Fate gave them a leeway of escape to 'more dignifying' departments

or endured until they graduated and then jumped into the popular van of Medicine and Surgery.

Radiography was not popular, not glamorous and definitely was not reckoned with as a dignifying profession by a large proportion of the society. In my first year as undergraduate in the University of Nigeria (UNN) in 1998, all science/medical scholars took similar courses. The number of scholars in each department was > 25 (Botany), > 30 (Zoology),  $\geq$  40 (Medical Rehabilitation),  $\geq$ 150 (Medical Laboratory Science), ≥ 150 (Human Medicine/Surgery),  $\leq 200$  (Veterinary Medicine), and  $\geq 200$  (Biological Sciences). What was the population of 100 - 500 level scholars in Radiography? Between 5 - 25 with a total population less than 100. Meanwhile, UNN was the most attractive of the three radiography schools then.

In addition, as Editor-in-Chief of University of Radiography Students Association (UNRADSA) Editorial Board between 2000 -2003, I took a census of all Radiography students in UNN as at 2001 and what was my finding? A mere eighty-six (86) in all. I traveled to Federal School of Radiography, Yaba, Lagos in 2000 to get them contribute manuscripts to our magazine. Although it was a full-fledged campus with great structures and infrastructure, I noticed that there were more hostel rooms than scholars. Their population was not better than that of UNN! At our sister institution, UNICAL, I met a graduand in 2003 who said they were just two in class. That was our past and we cannot change its distasteful taste. The strategy instead, is to put on our thinking cap to change the status quo.

Radiography was seemingly so unpopular that universities nationwide did not deem it fit to establish the programme more than two decades after UNICAL and UNN took off from the start line. We are talking of universities, which had existed for over two decades and have ample space, facilities and capacity to establish Radiography programme.

It is gladdening that today that the bulk of students in the department chose Radiography as first choice. I can imagine it that new radiography students, after escaping the rigours and stiff competitions of qualifying examinations (UME and post-UME) will do thanksgiving in their places of worship and at home. If it were in the past, they and their parents would probably blame witches and wizards for not securing their first choice course of Medicine and Surgery.

That candidates choose Radiography as first choice now, that some lobby HODs passionately, that some do not mind paying to secure admission through 'change of course' leeway, that some young physicians and other professionals, from personal experience, envy our course is not only morale boosting but also equally thrilling and gladdening. It is solid proof of a sustainable paradigm shift in professional popularity and a great plus for our profession. I saw that unpopular past and I am witnessing the present glamour.

(b). Low self-esteem: If we were barely visible in university space, barely visible in hospital domain, barely visible in the society, how would we not have low self-esteem? It might be that visibility problem was responsible either for the apparent low self-esteem or vice versa. I rarely saw clinical mentors in English suit during my undergraduate days. In addition, only very few had cars, with no car being a modern, glamorous one. Furthermore, never did I read or see a radiographer on news media. Very annoyingly, in hospital setting, it was common to see other health professionals refer to us with uncertainty as radiologists. That would be tolerable from patients but for those who spent 5 years in university with us not to really know us, was troubling.

Still in clinical setting, our elders were restricted to x-ray procedures by their employers, by radiologists also, but much more, by their own fears and feelings of inadequacy to tackle ultrasound. In many centres in Nigeria then and even today, barely-literate quacks did and do x-ray procedures. Therefore, naturally, it was easy to assume that our elders who were armed with diploma, were intellectually incapable,

unintelligent folks just accustomed to doing 'breathe in, breathe out' for 35 years. Some radiologists, from what we heard and what we saw, did not regard our elders as partners-in-progress at all but as 'boy-boys.'

Many of our elders also did not help matters as they obeyed instructions as if they were truly *boy-boys*, even when some directives were highly abnormal and inconsistent with civil service rules. In this present age, while a couple of such elders have improved in their approach to issues, some are still tied to the apron-springs of radiologists, obeying them abnormally and hurting their profession as if the radiologists could sack them from work. It was not uncommon to see some elders relinquish office spaces to radiologists while their junior colleagues stay on corridors and in diagnostic rooms. Personally, I see this attitude as inferiority complex.

(c) Lapses of our heroes past: As an intern at University of Benin Teaching Hospital between 2003 - 2004 and an NYSC member at Federal Medical Centre, Umuahia from 2004 – 2005, I wrote an article from each location in the newsletter of our regulatory agency, RRBN. They were my first ever post-university publications and, they were an outpouring of frustration that I met in my few months of practice. I titled them, 'The Lapses of our Heroes Past.' The articles made me popular because, when radiographers ran into me, I was commended for it. The implication was that I ventilated the frustration of the majority. What were some of those lapses?

Radiographers are tactically barred (not banned) from carrying out ultrasound, scans in federal teaching hospitals and, our elders appeared to look on without protest. That was a battle that should have been fought head-on to a logical conclusion. In addition, while radiologists were sponsored for update courses home and abroad, it was rare for such privileges to trickle down to radiographers. There are evidence to show that they complained during AGMs or fashioned out strategies to change the status quo. If we are to pursue this matter further, we shall ask our elders to show us the spoils of war, if any, and nothing else.

There are some rays of hope however. Seated in this audience is a great elder who is an icon in her own rights. Unlike her generation who started their career on x-ray and retired on same, she courageously advanced her career to take on new role of CT radiographer. Not only that, she passed on the knowledge. I am referring to our ARN President between January 2002 to January 2005, our mummy, retired Deputy Director, Sumbo Oyedele. She worked for many years at UCH Ibadan here, and retired honorably. We, the younger ones heard that she is not that kind of elder who left annoying lapses in their trail. I am told she never lost her voice and convictions before anyone. Those who know her and who read this will approve or disprove this statement. However, mummy Oyedele was in the minority.

The grounds lost by radiography to vicious allies and meddlesome interlopers are huge. It was so huge that radiography programme was confined to only two universities for two decades. Moreover, for you in Southwest Nigeria, you have only UNILAG offering radiography despite having the chunk of investment in infrastructure and modalities in the entire federation. Your university, University of Ibadan, has no justification not to train radiographers.

The tide is however, changing today because we have internet-informed, self-confident, well-dressed and versatile Radiographers who can look any Professor eyeball-to-eyeball and sustain an argument. The way things stand now, it is (still possible but) highly unlikely for a radiologist or any physician to call a Radiographer a technician, hospital photographer or 'breathe-in-breathe-out' expert. The physical and intellectual courage demonstrated by the Radiographers of today makes the aggressors, oppressors and suppressors of their fathers to see the scions as threat rather than 'boy-boys.' That, for us is flattering.

(d). **Dormant RRBN:** As a corollary to our tale of woes, RRBN was dormant for two decades. Radiographers practiced without registration, there were no accreditation visits to universities and induction of recent graduates into the profession was nil. Without a regulatory body, how could

there be effective registration and licensing of professionals? It is worthy to note that some senior colleagues who graduated 15-20 years ago from UNN and UNICAL only got registered with RRBN in the early 2000s! Is it those Radiographers who never renewed their practicing licenses that will rear up their heads to talk in public? Therefore, it was not a case of elders alone having lapses; our seniors did as well.

We are told that Principals of the defunct Federal School of Radiography (FSR) acted concurrently as Registrars, and their major achievement? Generating ill will for RRBN and ARN by compelling B.Sc holders 'found worthy in character and learning' by their universities to come write 'Institute of Radiography' professional exam after graduation! The fact that some B.Sc holders failed the institute exams did not make it logical or justifiable. To me, that was the remote cause of the recent "I-am-B.Sc-you-are-DCR" brouhaha.

Thank God that today, we now have a Board that could be as effective as any Board or Council in Nigeria depending on the abilities and capabilities of whoever is Registrar. The hard work of the Board, especially under the former Registrar, chief RSJ Babatunde, has narrowed the divide between us. He worked hard to get whoever was a Radiographer registered and licensed. We now have a Board that any Radiographer with 10 years' experience would like not only to be Registrar of, but may go to court if their rights and privileges in the process are not guaranteed. We now have a Board with visibility, authority, power and glamour. We have a Board that can bark and bite if unlawful deeds or quackery is practiced.

I was privileged in November 2013, to convene the first re-union of my secondary school, Unity Secondary Ode-Aye in Ondo State of Nigeria. There, a classmates whose husband, a radiologist, has a private radio-diagnostic centre in Abuja told me that 'the fear of your RRBN is the beginning of wisdom.' I felt proud to hear that. We have a Board that does not believe in dichotomy or segregation. Infact, irrespective of our leanings and idiosyncrasies, we are all united in RRBN.

It is a plus for our profession. Because our Board was dormant, there was no induction, no internship, no accreditation visits to universities, there was poor entry point into civil service, the issue of nomenclature and title for practitioners was a sore thumb, and several other policy thrusts that would have given us a quantum leap of progress were lacking. A licensed profession cannot, I repeat, cannot grow faster than the quality of leadership by its regulatory agency.

RSJ Babatunde was the first substantive Registrar of our Board (I stand to be corrected). He had just a professional diploma and LL.B., not necessarily B.Sc and M.Sc in Radiography. Yet he gave us the infrastructure, the structure, the visibility, the glamour, and the organogram that made the RRBN relevant today. Here is an elder who transformed an almost-moribund, unglamorous institution nowhere government from somewhere, left behind policies that have no superior alternatives, and handed over organization that Radiographers would long to head in their lifetime. Definitely, it is not his type that I lambasted in my article, 'Lapses of our Heroes Past.' I do not know much about the icon called E.P. Akpan who is so revered by the elders. However, I know much about transformation agenda because it came in my time. In my opinion, amongst all our icons, Mr Reuben S.J. Babatunde brought the greatest transformation to the practice of Radiography in Nigeria. Let us see if the future will give us more effective heroes.

(e). ARN: Just like the regulatory agency in our recent past, our professional association, ARN was equally not visible. From time to time, I try to ask my students who the ARN President is and I never got up to 50 % accuracy. I do that to test my hypothesis that ARN is obscure. State Branches of ARN are either dormant or non-existent. Infact, aside annual conference attended by less than a hundred radiographers, there is nothing more to prove that ARN exists. Her journal is comatose. She has no vehicle, no building, no appearance in news media and no glamour to entice young professionals.

(f). Intellectual progress: The first time any Radiographer in Nigeria got a PhD was in 2001 (Dr O.F. Erondu). Well, two elders got Ph.D in Management but I am not interested in straying. Therefore, if Dr Erondu is our first ever, that implies that since the formation of the ARN (1958) and ISRRT (1962) until now, our best academically was an M.Sc. An M.Sc in a certificate-adoring country like Nigeria? It was a minus. I wonder how government would view a profession that could not boast of any PhD.

Thank God that today we have a long list of M.Sc and Ph.D holders. We even have some lecturers who are in professorial cadre already. In addition, we have two core Radiography departments offering postgraduate degrees up to PhD level viz UNN and NAU. There are several other Nigerian universities who admit Radiographers into their PG courses without the necessity for a PgD. That is a plus for our profession.

(g). Our fate in NYSC scheme: In 2001, when the government of chief Olusegun Obasanjo decided to bar some categories of Nigerian graduates from the National Youth Service Scheme, painfully, Radiography graduates of the Federal School of Radiography, a monotechnic, were affected. Yet, Polytechnic graduates were left alone. It was a clear-cut message from government that our certificates and our relevance in the comity of professionals were doubtful. Whether they are right or wrong is left for posterity to arbitrate. Anyway, we got the message and stopped issuing diploma in radiography effective from 2005. Some of you listening to me here are victims.

#### (h). Mono-modality

In the recent past that we are talking about, every radiography student was trained on and for x-ray. Ultrasound, Mammography, CT and MRI scans as well as radiotherapy and nuclear medicine were modalities and procedures students had inadequate exposure to. Whatever skills any radiographer picked up in these was due to personal self-development and aptitude.

It was equally highly unlikely that any 'Scheme of Service' (SoS) for radiographers before the latest (the 2003) edition, would extend the roles of radiographers into those modalities. It appeared therefore, that right from school we were shackled to 'breathe in and breathe out.' Ultrasound was snatched from our (in)timid(ated) elders while CT scan was shared between our seniors and radiologists. Fluoroscopy, where they existed, was equally shared. Other modalities are relatively newer on the scene and came in when we had become better organized, determinedly focused and reasonably militant, and so had a say.

(i). No national student unionism: While our sister professions had student professional unions that had national and international spread and presence, and had influence with their major professional associations, radiography students could not organize themselves to do same as late as 2004. There were separate institutional unions whose influence did not go beyond the walls of their schools. They could not even influence their lecturers in their policy thrust let alone the ARN or RRBN.

The major tragedy of the absence of a common union amongst radiography students was that UNICAL students remained strangers to UNN and FSRL and vice versa, for many generations. There was no avenue for peer review and to consolidate common ties. So, it was not uncommon to see students promoting divisive tendencies like saying FSR students did not write JAMB and were not grounded in Anatomy, Physiology Biochemistry (and so?); UNICAL students were groomed by non-Radiography lecturers and were thus half-baked (says who?); UNN students are arrogant (really?).

Till date, the Nigerian Association of Radiography Students (NARS), of which I have the privilege to be a Staff Adviser from 2011 to 2016, has not found its footing and as such is not too influential in the scheme of things in radiography. Perhaps, we shall feel their impact in the nearest future but for now, they are too new (less than a decade old), and the students too young, too comfortable and

too spoon-fed to find anything serious enough to catch their attention for aluta.

#### **Present giant strides**

The preceding points were some of the setbacks we had in our profession in the recent past. That the very young generations of Radiographers might be unaware of these limitations is possible. An informed reader of this discourse would know that conversely, those points are no longer relevant today because God has been our help and given us a quantum leap of progress to catch up with our sister professions in many ramifications. Thanks to the labour of our heroes, retired and active.

I do hope our younger colleagues would appreciate the fact that internship in radiography commenced just recently in 2001. In addition, for the rest of us it would not be difficult to recollect that no radiographer was an Assistant Director in Federal Civil Service until a decade or so ago. The zenith for our elders with diploma then was 'Chief Radiographer.' Today we have full Directors of Radiography. Although I do not support acquisition of medical degrees online as was done by our DCR/DIR colleagues from a certain Queen Margareth University in UK, I must rejoice that at least, stagnation has given way to progression.

In the recent past too, students completed their 5year training without seeing a conventional Fluoroscopic or Theatre C-arm unit. Computed Radiography or Direct Digital Radiography was just in theory. Even the simple darkroom Automatic Processor looked like a complex machine to many. Students also heard about but hardly saw functional Mammography machines. It was mentioned but some never saw CT or MRI scanners. Today, we do not only hear, we see. We do not only see, our students now touch and experiment with knobology on modalities that some retired elders heard about but have still not seen till date. Even Radiotherapy and Nuclear Medicine do not sound strange or too distant anymore because professional colleagues are there, and actively so.

What is more, there are more universities offering radiography now, and with more to come up, especially in northern and south south Nigeria. Furthermore, some classes in our universities have over 200 undergraduates! That means a single school could have as much as 1000 radiography undergraduates. It is also becoming commonplace now to see NARS in action. Newer schools are no longer pursuing own departmental student association but see themselves as a Branch of NARS. This is commendable. Our ARN is becoming more visible. That we are marking World Radiography Day as a nationwide affair is due to the efforts of ARN. The list is more.

Indeed, we have made giant strides in so short a time. Our uninspiring past has given way to a glamorous present. The future appears bright for us. Yeah, 'this is our story, this is our song, praising our savior, all the day long.'

#### How did we get here?

Some elders and courageous colleagues paid price. We heard of radical departmental student association executives who troubled authorities for their own academic progress. Elders like the E.P. Akpans wrote our name in the international sphere (ISRRT) by their committed and visionary leadership at home and abroad. We got here through the foresights of the elder C.T Utins who pioneered the department of Radiography, UNN but later went abroad for greener pastures. We got here through the doggedness of the K.K. Agwus who remained behind in Nigeria to sustain radiography education when the fad was to seek fortune in Saudi Arabia, Europe and Americas in the late 1980s and early 1990s.

We also got here because of the foresight, vision and brilliance of RRBN Registrars like RSJ Babatunde. We got here through the efforts of some intelligent, brilliant, foresighted and bold senior colleagues like the Chykes, the Efughis, the Erondus (and others whose great deeds I do not yet know) who courageously ventured out into ultrasonography and spread the skill amongst their radiography brethren. Today, it is commonplace to see even our 3rd year students do ultrasound procedures, at least obstetrics to start with.

We got here through some the efforts of some pragmatic chiefs who dared to venture out into new areas of skill that gave the rest of us an open door to rush in. Prominent amongst such are Mrs Sumbo Oyedele (retd DD Radiography) of UCH, Ibadan and her CT scan efforts; Mr Ezinma, (DD Radiography) of UCH, Ibadan and his exploits in Nuclear Medicine; Mr Nerius Okoye, (AD Radiotherapy) of National Hospital, Abuja and his success in Radiotherapy; Mrs Gertrude Oti and her conquest in the field of Industrial Radiography, amongst others.

We equally got here through the appearance of MISON, a potent professional catalyst. If colleagues having the zeal, the zest, the abilities and capabilities of MISON led ARN, one can confidently affirm that we would be proactive rather than reactionary. The writer wishes strongly that rather than abandon ARN, MISON would come in to brighten our perspective and synergize with others for the welfare of our members and the glory of our profession.

We shall not forget the contribution radiography lecturers who influence us subtly in and outside the classroom. Their quest for research, teaching and learning has continually kept clinical radiographers on their toes to translate research into practice (evidence-based practice they call it?). However, the lecturers have not maximized the influence they wield sufficiently by intervening in times of crises that threaten our cohesion. They have equally not sustained our journals despite being intellectual think-tank of the profession. Their presence in, and the quantity of their papers in conference is neither adequate nor encouraging. Surely, if they take ARN more seriously, their mentees would follow suit.

Finally, we got here through the covert and unsung intervention of 'unknown' radiography soldiers who are lifting high our banners in their different niches and in different climes. Their glory is our collective glory and their pain is our gain. The conquest that they got, even if unsung, will eventually speak for us positively in the days ahead. May posterity reward all.

## **Present challenges and recommendations**

a. The MISON challenge: MISON still holds tightly to her ideology of non-involvement in ARN affairs. However, I do not know how patriotism comes in here when they are attempting to weaken our collective foundation. If they are indeed the leaders they want us to see that they are, then they will not weaken or destroy but reform, transform and energize whatever structure we inherited. In my opinion, MISON has outlived her usefulness and should be dismantled now that the ovation is waning, since they missed the opportunity to do so when it was loudest. For goodness sake, do we have two NMA, or PSN, NSP, AMLSN, NANNM? All cleavages in medicine are associates of NMA but none whatsoever runs as a parrellel association.

Although I have strong sympathy for MISON because of their past conquests, my sympathy is turning to irritation because of present unjustifiable recalcitrance. It is easy to destroy, so there is no glory in that. Because of our small population, coupled with our slow progress in comparison to other sister professions in the health field, what we need dearly now is cohesion rather than dichotomy. MISON should think of how we can move together as one strong force rather than running a parallel interest group. Radiographers do not need parallel associations although nothing stops us from having homogeneous cleavages tied to modalities. If MISON were, an association tied to clinical practice there would be no problem. Nevertheless, it operates as a parallel association to ARN. This is uncalled for and condemnable.

Any ideology that cannot change in line with realities is questionable because men change and circumstances change. Both the men and circumstances that threw up MISON have changed. Why has the MISON ideology not changed? Anyway, there was gladdening news that radiographers in Abuja irrespective of ideological leanings jointly anchored the 'World Radiography Day' (WRD) activities in Abuja. That should be sustained.

**b. ARN:** The ideology that ARN should be propagating now should be how to consolidate the great works of the elders and capture new grounds. The elders when they organized conferences had at least 100 Radiographers in attendance. Students would be as much as 60. Students were also comfortably accommodated free of charge. The attendance at our conferences since the past four years has reduced drastically. Moreover, students have been sparse because their accommodation was not guaranteed. It is akin to self-denial to consider a marking of time as progress. The loss of goodwill from students, elders and contemporaries cannot be progress. The most glaring is that the elders are gradually abandoning conferences; their past time.

These same elders gave us a journal that we have been unable to sustain. Is this retrogressing or progressing? We have an association, which in this ICT age has no medium of communication with her members except they attend General Meetings. Haba! Infact, we carry on as if we do not give a damn (sorry for my manners) but I do know that some colleagues also do not give a damn about ARN. Is that what we want?

This is not the dream people like me talked about and looked forward to. I presumed that possession of B.Sc tantamount to superior logic but I have been proven wrong. I sigh with nostalgia knowing that the ARN presidency of DIR/DCR elders like EJ Akpan, Prince Ayo Okhiria and Mrs Sumbo Oyedele had more focus, goodwill and gave me more fulfillment. Men of goodwill should arise to rescue ARN from the ARN. Henceforth in ARN elections, let no one vote based on DCR-B.Sc cleavage; let us rather vote on merit, irrespective of the background. I have seen that B.Sc is not an evidence of competence in leadership.

**c.** Court case: A Legal action to invalidate the selection of the incumbent Registrar of RRBN by the Federal Ministry of Health was instituted on behalf of ARN by her President, in a Federal High Court in Abuja in 2012.

It was fortunately or unfortunately, thrown out a few months ago. The matter was quickly and surreptitiously dragged to the Court of Appeal in Abuja. The decision to go to court was taken by a single person on behalf of the whole ARN again. For goodness sake, are we a banana association subject to every fiat of its President? This has thoroughly wounded the feelings of many elders and the RRBN Registrar who himself, is a member of ARN Council and who vehemently disagrees that a person should act on behalf of the whole. In fairness to him, he has a valid point there.

It is an open secret that MISON played an active role in changing the leadership of the RRBN in the very recent past. Infact, they were the 'godfathers' that crowned and dethroned Registrars, if one is to be fair to them. Attacking a man they crowned is akin to attacking them. How do we then expect them to joyfully partner with us? MISON has a pedigree of fighting to a logical conclusion. Taking a battle to their frontage is not a wise move. The next leadership of ARN should manage the sensibilities of those friends and colleagues of ours. That we are irritated that they refused to collaborate with ARN does not mean we should take them for granted. ARN should be circumspect with our MISON friends, please.

The single-handed nature of prosecuting the court case and with ARN funds to boot is disturbing. My support for it ended at the Federal High Court. Further prosecution, in view of the resistance of the 'who is who' in radiography no longer has my goodwill. If the icons who are also stakeholders have said 'no more court case,' how can a handful of people feel more aggrieved than the majority and continue to stubbornly drag it on?

Do they own Radiography? Perhaps, if this matter were instituted in personal capacity it would have been tolerable. However, for 5% to feel more aggrieved than 95% is abnormal. I think this is a typical case of abuse of power and crass opportunism. In my opinion, the matter should not just be withdrawn but a refund of the hundreds of thousands of Naira spent on it be refunded to ARN coffers.

This highly consequential decision taken surreptitiously without my input as an ARN Council member has been the major cause of the breach in my relationship with the ARN President. It has really been turbulent, at least for me, as a Council member. The RRBN Registrar, MISON or anybody, does not instigate my one-man protest in this regard, no, no, no, but I act solely on principle. I might be wrong in my stance, but I am much more comfortable being sincerely wrong, than being a silent onlooker.

- d. Nomenclature: We are Radiographers and not 'Medical Imaging Scientist.' I have an M.Sc in Medical Imaging so, if anyone should be so called, I qualify much more but I refuse it. We are Radiographers. Our most current scheme of service says so. The rest of the world said so through ISRRT (International Society of Radiographers and Radiologic Technologists). Are there nations bearing Medical Imaging Scientists? Yes, but not giants like UK, USA or Canada.
- e. Unusual duration of M.Sc and PhD Radiography programmes: Without fear of contradiction, it is an open secret in radiation medicine domain that postgraduate radiography programme in UNN is prolonged. Now that we have  $\geq 15$  PhD radiographers in our universities, supervision of postgraduate students should be swifter. 18-months M.Sc programme should at worst be  $24 \pm 6$  months. The stagnation of yesteryears we learnt was occasioned by unavailability of hands to supervise students thus necessitating collaboration with radiologists, who withdrew services in the middle of the game.

Today, radiologists no longer supervise our students so why is M.Sc in UNN still a minimum of 4 years and Ph.D a minimum of 5? Nnamdi Azikiwe University (NAU) came out with a transformation agenda to reduce the duration but the time-lag malaise has equally struck them. Comparatively though, they are more time conscious. O! That our radiography lecturers forum would look into this phenomenon with dispatch and give the younger generations hope. For the avoidance of doubt, I started M.Sc in UNN in 2009 but was only let go in June 2014.

Was the fault mine? No, I was ready as early as October 2012! I was fortunate however, as a multitude who started the programme ahead of me were still there groping in the valley of indefinite duration.

**f. Technologists are autonomous**: The Darkroom Technicians under the aegis of 'Medical Imaging Technologists' claimed that they were neither answerable to radiographers nor subject to the dictates of RRBN. They affirmed that they could be trained in any Schools of Health Technology without the intervention of RRBN. They took their hypotheses to court and had it validated.

As it were, what we feared has come upon us. Chief RSJ Babatunde made moves to bring this large army of peripheral entities under the control of RRBN by creating a cadre for them and making them middle-level work force (in line with the strong advice of government to do so) but the majority of radiographers nationwide resisted that. Now they have become lawful quacks that can no longer be harassed.

For most of us from the North where they had been 'lawful quacks' even without court ruling, we advocated that RSJ's idea be supported but we were over-ruled by the vociferous majority. Where do we go from here? Appeal and Supreme Courts? It would be exercise in futility. Even if we win, that judgment cannot be implemented in Northern Nigeria where the State governments recognize those we call quacks. Some are even chief Radiographers earning fat salaries already. They will even sit at interviews to employ you who are the real person!

With our loss in court, or if we prefer to say 'partial loss,' or setback, "it is time to generate critical ideas on how to manage this people and make them our friends before the radiologists woo them from us." This line of thought is the original idea of Hon Bakre AFK, the Lagos State ARN Chairman. My opinion? I align with AFK Bakre. RRBN should license these do-or-die fellows and design and define their job schedules and limitations.

g. Encroachment: There is too much and too glaring encroachments into our traditional territory. Some radiologists with private radiodiagnostic centres either operate x-ray machines or train some school-leavers to do so, and our RRBN is still 'planning' counter measures. Every Tom, Dick and Harry sets up a radio-diagnostic centre without registering with the RRBN or even having a licensed radiographer, and RRBN is still 'planning' counter measures. I know centres in my home state of Kogi that have made millions from x-ray without having a licensed radiographer in their employment. When RRBN was criticized, the Registrar requested radiographers nationwide to furnish her with relevant information but the tons of information provided so far, have yielded no commensurate actions.

The monitoring by RRBN is akin to barking without biting. The few cases in court in Abuja and Lagos are a tip of the iceberg because Anambra State alone where I work has > 50 centres without radiographers. It is also interesting to note that some centres have radiographers and quacks working in unholy alliance. The head of monitoring in RRBN should not be cool, calm and collected like Dr Paul Orhii of NAFDAC, but proactive, vigorous and tireless like that late Amazon, Prof Dora Akuyili. What is needed now is real action. RRBN, please arise!

Let 'judgment begins from the altar.' That is, we should start with radiographers who use quacks in their centres so that we can have the moral courage to confront centres that are nearby to our colleagues' own. All colleagues with radiodiagnostic centres should prune themselves of this malaise even without the RRBN asking them to. They owe the profession a duty to live above board and be exemplary. If we can tackle these internal saboteurs effectively, the courage to confront externals aggressors will not be in short supply. May God give our Registrar or give us a Registrar with the courage to change what he/she could without being coerced.

- h. Ultrasound practice: Our enabling Act is equivocal on our powers in this regard. I guess that we forgot to include ultrasound when the 'Decree' and later on, 'Act' was drafted. Ultrasound is non-ionizing radiation quite okay, nevertheless, it falls within the purview of radiation medicine. Who regulates its practice? No clear authority. RRBN has some weak tentacles in that regard though. We can therefore run to the National Assembly for a review of our enabling Act to incorporate Ultrasound. While we are at it, I agree with some colleagues who reason that we can control the Dicks, Toms and Harries who have presently tumbled into scanning by designing a curriculum, setting exams and licensing them. Let us do this as a sign of wisdom while laboring hard underground to get the Act to empower us fully. To resist the meddlesome interlopers without a clear locus standi is not wise. If they too go to court and win just like the Darkroom Assistants, we shall lose grip of them and it would take a steep price to bring them under control.
- i. Quota in admission: National Universities Commission (NUC) will definitely give quota but how many universities stick to that when they know their graduates will not be licensed by NUC but by regulatory agencies like RRBN? In my opinion, RRBN needs to give admission quota to institutions. radiography Benchmarking should be done and perhaps, using the formula I espoused earlier on. That is, student admission should be tied to definite objectives. For e.g. Professor (10 students), Associate Professor (7 students), senior lecturers (5 students), lecturers 1, 11 (4 and 3, respectively), Assistant lecturer and graduate assistants (2 and 1, respectively). In addition, each decade of existence of the school should give them 5 students. Postgraduate programme should give 5 as well. Running radiography as faculty should earn 25 students. A school with thriving radiography journal of 10 unbroken publication should earn 5 students. There could be other innovative award scheme.
- **j.** World Radiography Day (WRD): Aside Lagos branch of the ARN, ably led by Hon Bakre AFK, the most-inspiring young leader I have seen in recent times, no other branch was wont to celebrate WRD consistently. The scenario

however, changed this year as some states in Nigeria marked that day.

I am aware of Lagos (as usual), Oyo State, Kwara, Rivers/Bayelsa and FCT. Radiographers anywhere and everywhere should endeavor to mark that day to create awareness about our profession. We need to infuse November 8 radically into the consciousness of Nigerians. If the celebration goes on simultaneously nationwide, it would foster a sense of oneness and give our profession more visibility, relevance and voice. In 2015, let us see many more branches rising up to the occasion.

- **k. License fee:** Twenty thousand naira (N20, 000) is much. Ten thousand naira (N10, 000) is fair enough. If RRBN were up and doing in monitoring centres, by now we would be a multimillionaire Board as there are hundreds of radio-diagnostic centres nationwide.
- **l. Radiography journals**: Every Department of Radiography in Nigeria ought to have a journal. I would suggest that a standing rule be in place for postgraduate students. Before an M.Sc student is graduated, they should have published a minimum of two articles in a journal and presented a conference paper. Postgraduate training is to build capacity in the intellectual domain rather than to multiply dormant researchers. A Ph.D scholar should be two times more intellectually fecund. In addition, good B.Sc projects should be packaged and sent to the radiography journals of a sister school so that the journals will have regular articles for publication.
- m. Registrarship position: Any contestant for the position of the RRBN Registrar in future who has not attended ARN conference for five times in ten years is not worthy. Such a person has abandoned radiographers and is not fit to lead us. That means they are not in touch with us and are obscure. Let them remain in obscurity instead of seeking to lead us. It is alarming that lecturers who should be around to critique conference papers during ARN conferences keep away. It is not as if they attend another conference all year long. We need intellectuals who are in touch with radiographers to head RRBN.

- **n.** Units and unit heads in our hospitals: Our chiefs should urgently create units and appoint unit heads as we have done in NAUTH, Nnewi. It would lead to better management of radiographers and create a feeling of being in control before our adversaries. It would also make younger colleagues to have a sense of accountability. This may also be the remote route to specialization that is a *desideratum* in this profession now.
- o. Interns' seminars: The RRBN stipulates that requires interns should to deliver/attend several seminars during the course of internship. Some hospitals are yet to comply in spirit and in truth. If we still dilly-dally to start, the fault is not with radiologists this time around, but in us, that we are overwhelmed by our fears. A junior radiographer could should be delegated to coordinate it, that's all. However, I urge that we avoid 'download and paste seminars,' but that pure research should be undertaken to adequately consolidate what the interns know in research. We invite you to come to NAUTH and see what progress we made.
- p. Website: RRBN needs a standard website both for the parastatal and for her journal. From the website, one should be able to confirm personal registration details. One should be able to investigate if a quack is registered or not. One should be able to access the register of radiographers that our enabling Act mandated RRBN to maintain. One should know radio-diagnostic centres nationwide that have RRBN goodwill to operate. One should be able to write to the Board and get real-time replies. One should be able to pay for services and much more.
- **r. Title:** I think it is time we got title for our profession just like physicians (Dr), pharmacists (pharm), and physiotherapists (PT). My recommendation is 'Rad.' Yes Rad. It follows the pattern of many professions to adopt the first few letters of their discipline. I first heard about it when I visited JUTH in 2001. Interns there addressed themselves as 'Rad Aniebo', 'Rad Magene', 'Rad Eboh', etc. I liked its prestige. I urge us to adopt it. This should calm many tempestuous minds who see themselves as

colorless radiographers due to the absence of a dignifying title.

#### Commendation

I use this opportunity to thank profusely the Oyo State branch for making me their guest speaker during their WRD celebration on November 7<sup>th</sup> and 8<sup>th</sup>. Their T-Shirt design was the best. They were also great time managers. The caliber of guests that honored them was intimidating. To crown it all up they spoilt me with food until I left there with my trouser unable to zip up properly. Oyo State branch of radiographers are people we look up to, to chart the way for us but they had been dormant. Thank God that they are rising forcefully again.

I commend the great minds behind this 'Radiography Nigeria' platform. It has indeed been a relevant parliament of great minds. I urge consistent parliamentarians and, or secret readers to add other radiographers not yet here because, "the more, the merrier". My thanks also to those of you who have been consistent and painstaking in following my discourses, whether boldly or secretly. I doff my hat however, for those who were thoughtful, humble and courageous enough to embellish my thoughts with their comments, either for or against. I have become better in logic because of this fruitful interaction.

Conclusion: I urge the younger generations not to allow their faith in the radiography profession be dampened by our comedy of errors or present setbacks. The restoration we need and which we seek is in you. I am afraid; whatever has a beginning in the affairs of men surely has an end. This is where I shall sign off for now. These are my thoughts about confounding issues in our profession.

May God, our help in ages past, remain our hope in the years ahead.

Thank you, for your attention.

Adejoh, Tom (adtoms@yahoo.com; 08135820550)

#### **FEEDBACK**

- 1. <u>Edozie O. lweka</u>: A very good way to end this very instructive, educative and motivating discourse. Unfortunately, I may not be looking forward to a continuation (from you as it seems). I do hope that more of this be seen and encouraged in this forum. I think I should do a compilation right from the first post, and go through them again. There are several thought-provoking submissions along the posts, that I suggest should not be thrown into the wind. Perhaps, convert it to a pdf, and have colleagues download it. Thanks again. The future I see is a very bright one, but it must come to fruition through our collective contributions. 30 November 2014 at 06:57
- 2. <u>Sani Kabir Hamza</u>: Very good write up. There is hope in the future. We are progressing. All these rancor is as a result of the progress being made so far. It's like a reaction, it will generate heat. The good thing is that time is on our side. More advancement is coming in the field of radiography. The DCR/DIR and BSc issue is fading away now as most DCR are retiring and DIR are converting to BSc. And B.Rad is replacing B.Sc. All we need is to be patient, as time will resolve things. No one with DCR has more than 5 years in active service and all DIR have less than 20 years to go. I have DIR, and BSc now. I have about 10 years to retirement.

What we need is that ARN should be united. ARN will be the redeeming feature for RRBN. The radiologists or any other group like the medical imaging technologists or technicians can hijack the RRBN. But with strong ARN, it will be impossible. What the Registrar, Mr Okpaleke need to do now is to use his office to get the elders to unite the ARN and RRBN. He needs to also start the process of getting technicians to register and medical imaging technologist too.

That way we can control the future and encourage them to be radiographers. I will like to use this medium to say that we need national ARN to try and make state chapters functional and to try and reclaim their money in all state and federal hospitals since union dues are deducted in all government hospitals. 30 November 2014 at 17:18.

- Ogunmefun Gboyega: Tom, brilliant once again, I am so proud of you. When you see a talent, you must encourage him/her.You visited UCH? That's my hospital, I was not around then. .All well and good, like I said before they should withdraw that ARN case and come into an amicable settlement chaired by the Elders.I bet you in 10 years time Radiography landscape would change totally. I am in the UK presently doing M.Sc at the University of Bradford in Medical Imaging and my dream is to come back and Lecture. My only one prayer is for University of Ibadan to start Radiography. It has been in the pipeline for close to 3 years now. Curriculum has been drawn up but we don't know the extent of progress that has been made. I would just advise that you keep informing us like this through this well researched write ups, it will sensitize us the more, encourage the young graduates and students and improve our profession for the better1 December 2014 at 06:47 ·
- 4. <u>Wisdom Ejimss</u>: I quite appreciate your effort on this podium, Mr Adejo, and totally agree with you on the points raised. Rivers State branch of ARN celebrated her WRD in grand style, with much awareness created in the media. I, for one, as the Vice Chairman of the Branch was a lead speaker on the said date on NIG.INFO 92.3 radio FM Port Harcourt among other displays. <u>1</u> December 2014 at 21:06
- 5. <u>Geofery Luntsi</u>: You are really a great mind. <u>8 December 2014 at 22:08</u>

## To fellow Radiographers of Nigerian origin

Our professional domain in Nigeria is Radiography A family encompassing both diagnoses & therapy. Our sights & insights earned us 'oracle of medicine' And by dedicated services bring humanity blessing.

Of a truth, we aren't immune to distressing setbacks The pains and images are many during flashbacks. Yet, we shall not mark time on yesterday's errors But bestir ourselves boldly to face today's terrors.

However, we must define & understand our quests That tomorrow may rightly take stock of conquests. Compilation & suturing of those tidbits of our story Is that arduous undertaking here to cook our history.

In a family, it's said that, 'everybody is somebody' Nonetheless, history hardly focuses on everybody. If my searchlight embraces your price and labours Then it's your turn for posterity's prize & favour.

Those in penumbra of heroism may someday glow I therefore, beseech that their feats continue to flow. For now, arise & let's rejoice in our heroes' stride Since their honour and glory is our collective pride.

This self-imposed difficult labour is my contribution To illuminate our course for collective emancipation. From your niche please, "do something worth writing" Or emulate Adejoh, "write something worth reading".

And may Ojo omachi ala (Igala), our help in ages past My never-failing shield from stormy blasts & fiery darts Cause posterity to remember us all for what we've done And hinder those who'd interr our good with our bones.

Tom Adejoh 22<sup>nd</sup> December 2013 Nnewi, Nigeria

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