

RURAL BASED MEDICAL PRACTICE IN NIGERIA – THE IBARAPA EXPERIENCE*

by

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INTRODUCTION

I wish to thank the Honourable Federal Minister of Health and the organizers of this conference for the invitation and honour to present a paper at this all important meeting.

It is often forgotten and not well appreciated that Nigeria provided the blueprint for primary health care delivery to the world when the Faculty of Medicine, University of Ibadan, initiated the Ibarapa Community and Primary Health Programme, in 1963.¹ This programme, based at the Rural Health Centre in Igboora, antedated the World Health Organization Alma Ata Declaration by 15 years.²

One of the founding fathers of the programme and the first director for 15 years, Emeritus Professor T O Ogunlesi, is alive and well in Sagamu, Ogun State. Although, a cardiologist, he is better known as a community physician. He holds many firsts in the medical history of Nigeria and has become the LIVING LEGEND OF MEDICINE IN NIGERIA.

The specific objectives of the programme are

- (a) 'To teach medical students and doctors, through practical work the principles and practice of community medicine.
- (b) 'To study the problems of health care delivery in the Ibarapa Community and to develop the health services of the district into a model of what an integrated local health service should be, in collaboration with the Government of Western Nigeria, in a manner which can be applied to other rural districts in Nigeria and other developing countries.
- (c) 'To carry out research into various aspects of health and disease in the community, and thus to build up a body of knowledge on the various factors (social, economic, epidemiological, statistical) which are involved in health promotion and disease prevention in rural communities.'¹

These objectives are exemplified in this case scenario:

A pregnant woman, in a rural community, attends antenatal clinic regularly and gets all the necessary promotive and preventive care until she is due for delivery. But suddenly at term, she starts bleeding. She is rushed in the village ambulance to the nearest general/district hospital where the resident physician performs a Caesarean section to deliver a live healthy baby(ies) and a surviving mother.

In 2013, Ibarapa programme will celebrate the golden jubilee and so, it is time to assess, reappraise and consider for amendment several aspects of the programme. These are the thrusts of my presentation.

MEDICAL TEACHING AND TRAINING IN IBARAPA

From the inception of the programme, Ibadan medical students spend eight weeks in the district including one week at the District Hospital, Eruwa where they learn the rudiments of secondary health care. We proudly call ourselves Ibarapa graduates on becoming doctors. A significant proportion of doctors in Nigeria today, including the two rural surgeons in Ibarapa, are Ibadan-trained.

I had all my professional training at the University College Hospital, UCH, Ibadan from 1972 to 1983 declining the optional training for one year in the UK during the residency training three decades ago. I was the only resident in the country that did not avail himself of that opportunity while it lasted. I was, again, at the district hospital in April 1980 as a surgical registrar.

Declining the opportunity to travel abroad was a deliberate decision on my part because 26 of my 30 teachers (from senior registrars to professors) trained in the UK while the rest trained in the United States of America. They were all world renowned and I had implicit confidence that they could train their kind solely in Nigeria.

Secondly, I volunteered to be the unsolicited control in a new training scheme that would provide a basis for future assessment. One of my teachers put it like this in one of his lectures: 'NO CONTROL, NO CONCLUSION in any scientific experiment.'³

Thirdly, I wanted to actualize the philosophy of Niccolo Machiavelli (1469 – 1527) which I had imbibed in my secondary school days:

"It must be considered that there is nothing more difficult to carry out, nor more doubtful of success, than to initiate a new order of things. For the reformer has enemies in all those who profit by the old order, and only lukewarm defenders in all those who would profit by the new order, this lukewarmness arising partly from fear of their adversaries, who have the laws in their favour and partly from the incredulity of mankind, who do not truly believe in anything new until they have had actual experience of it. Thus it arises that on every opportunity for attacking the reformer, his opponents do so with the zeal of partisans, the others only defend him halfheartedly, so that between them he runs great danger." – in 'The Prince'.

Another source of inspiration was the 'Red Devil', the battle tank of the Biafrans that was deployed in battle from Aba, where it was made, until it got stuck at Ore during the civil war, 1967 - 1970. I had inspected the disabled Land Rover-turned-battle tank at Ore and concluded that Nigerians could solve all their problems with little or no external help.

The most important inspiration was that I have always looked forward to a day like this when everything I am to talk about is home-grown in Ibadan and Ibarapa district with no foreign influence whatsoever.

At the end of my training in the UCH, I had 21 publications in national and international journals⁴⁻²⁴ including the subject of my dissertation for the fellowship in surgery in the prestigious American journal, *Diseases of Colon and Rectum*.¹⁸

So, it was like going back home when I returned to the district hospital in 1983 as a consultant rural surgeon, an employee of Oyo State government along with my wife, Atinuke, a radiographer/ultrasonographer, also a product of the UCH, Ibadan. In addition, I was appointed an Associate Lecturer in the College Medicine and became a honorary consultant to the UCH in 2007.

From 1983 to 2003, while my teachers were still in charge in UCH, medical students and surgical residents were posted to me on three months rotations. To the medical students, the crucial role of the surgeon at the primary and secondary levels of health care delivery, especially in the rural area, became clear. The residents acquired hands-on experience quickly and together we published papers on the common problems faced by the rural surgeon like inguinal hernia and frequency of twinning which was highest in Ibarapa district among other papers.²⁵⁻³⁴

But, with the exit of my teachers as a result of retirement, the postings ceased. In its place, I was requested to give lectures on primary care surgery which I declined because I would not condone the phenomenon of ALTERNATIVE TO PRACTICALS which had become all pervasive in the educational and training sectors of our nation from primary to the tertiary level. Although, I have complained to the Chief Medical Director of UCH that I am being paid as honorary consultant to UCH but no students to teach or doctors to train, no change

is forthcoming. I have continued to accept this salary in lieu of services rendered without pay from 1983 to 2003!!!

HEALTH CARE DELIVERY IN IBARAPA COMMUNITY

In 1970, the District Hospital, Eruwa was opened and secondary health care delivery was provided by UCH registrars from the departments of surgery, obstetrics and gynaecology. This arrangement was reinforced in 1975 by the appointment of the late Dr C A Pearson as the Chief Medical Officer of the programme by the Faculty of Medicine.

Dr Pearson was the British medical missionary who developed the Wesley Guild Hospital, Ilesa to the high standard that enabled the Obafemi Awolowo University consider taking it over as one of her teaching hospitals complex.³⁵ He was one of the founding fathers of the Faculty of General Practice of the National Postgraduate Medical College of Nigeria. He and his wife, Jean, resided at the Rural Health Centre, Igboora but performed elective surgery (mainly inguinal hernia repairs) at Eruwa.^{36, 37}

When I took up appointment at the district hospital in 1983, Dr Pearson literally handed the surgical baton to me while he moved on to Lagos to become the Director of Planning and Training of the new Faculty of General Practice.

In 1986, due to bureaucratic bottlenecks, I resigned my appointment from public service to establish Awojobi Clinic Eruwa in Eruwa with the mission statement "A PRIVATE HOSPITAL IN THE PUBLIC SERVICE".

At present, much of the medical/surgical services in Ibarapa are provided by private institutions manned by two rural surgeons, two medical officers capable of delivering safe and essential surgery, one medical officer with diploma in ophthalmology who is extracting cataracts at the Akeef EIMaghragby Eye Clinic, Eruwa, one radiographer/ultrasonographer, two pharmacists, a few registered nurses and several Community Health Extension Workers, CHEW's, who are the products of the revolutionary endeavours of the late Prof Olikoye Ransome-Kuti as Federal Minister of Health.

Table 1 shows the surgical operations performed from 1983 - 2010. The climax in abdominal surgery was reached when the two synchronous combined abdomino-perineal resections of the rectum for carcinoma were successfully performed by the two rural surgeons in April 2009 and October 2010 in our rural hospital. On 29th September 2011, we successfully inserted a ventriculo-peritoneal shunt in a 17-month old child with congenital hydrocephalus.

Another problem associated with the decline in the teaching hospitals was the gross delay in obtaining histopathology reports on operative specimens. By August 2003, we had 49 outstanding reports at the UCH, Ibadan dating back to 2001. We had paid one thousand five hundred naira (N1 500.00) for each specimen.

Again, we have overcome that bottleneck by procuring the microtome and other accessories to produce the slides which are read by a pathologist in UCH. Results are available within 10 days of obtaining the specimen by the routine we have established.³⁸

We offer preventive services as well in form of immunization for adults and infants and regular health education talks.

In the past two decades, the day at the outpatient clinic starts with a health talk on water-borne diseases among other common diseases like malaria, hypertension, diabetes mellitus, HIV/AIDS and tuberculosis.³⁹ Our usual health talk goes like this:

“Greetings.

“Typhoid fever, cholera, infective hepatitis, gastroenteritis and guinea worm are the common diseases in this environment that are acquired through the drinking of unwholesome water. The water we drink from all sources, except rain water that is harvested, is easily contaminated by faeces deposited in open spaces (which is the usual practice) and washed into these sources by the falling rain.

“Even pipe-borne water is not safe because most pipes are rusty and have burst. So, when Water Corporation is not pumping water, the contaminated pool of water at the leakage points will flow back into the pipes and will be pumped into households when the corporation resumes activity. It is not economical to drink sachet or bottled water routinely. It is meant for social events.

“To make the water from these sources potable, we advise you warm the amount you would need the next day in the evening so that it is cool by the following morning. You need not heat to boiling as all germs that cause these diseases will die as soon as the water is warm to touch.

“Please practice this piece of advice and pass it on to your relations and neighbours as prevention is not only better but cheaper than cure.”

In a retrospective review of mortality at ACE from 1987 to 2001 analyzed at five year intervals, we found that the incidences of typhoid fever, gastroenteritis, infective hepatitis and cholera as causes of mortality dropped by over 80 per cent.³⁰ There has been no cholera outbreak in rural Ibarapa district for over 15 years now even with no improvement in the municipal water supply.

So, while Nigerians are waiting for potable pipe-borne water, warming drinking water before use is a pragmatic option to prevent water-borne diseases.

Since 2006, another Ibarapa graduate has set up an NGO that assists people living with HIV/AIDS in Ibarapa.⁴⁰

From these elaborations, it can be deduced that 95 per cent of surgical patients can be taken care of in Ibarapa and it is a fact that there is now a reversal of the rural-urban drift in health care delivery in Ibarapa. Thus, it can be concluded that Ibarapa district has the best health care delivery system in Nigeria and it is a good example of the public/private partnership often touted to solve the health care and other challenges of Nigeria.

In 2009, we were the subject of an award-winning documentary, INNOVATING FOR AFRICA. UNCOMMON SERVICE!!

As early as 1988, our teachers had given their approval to our efforts in Ibarapa.

Professor E A Elebute, in the maiden Faculty of Surgery Lecture of the National Postgraduate Medical College of Nigeria in February 1988 said:

“We must work out through research, ways of assessing and thereby improving the quality of care that we give our patients. There are three approaches to the problem of quality of care. The most basic is paying attention to structural aspects such as financial resources, facilities (e.g. water and electricity), equipment and staff. I think most of Awojobi’s work in Eruwa is in this direction and he has been able to fashion equipment

from locally available materials and device treatment manoeuvres suited to the structural background of his working environment.”⁴¹

Prof Ransome-Kuti, who was our guest in August 2000, summed up the impressions of many of our teachers who had visited us thus:

‘Highly privileged to visit this hospital, an example of commitment, concern for fellow beings, innovation and imagination. I like the way he admits relations to the theatre to watch operations on their sick relatives. I like the way he fabricates everything and saves everything. I have visited an exemplary phenomenon and honoured to be here. Can this be replicated? It must take a particular kind of person!!’⁴²

Unfortunately, the General Hospital, Igboora, home of Ibarapa Programme and other government hospitals in the district still remain ‘mere consulting clinics’ as aptly described by our former military dictators who often used the state of our hospitals as an excuse for coup d’état. This is despite the expenditure of a fifty million naira grant from the Federal Ministry of Health to the College of Medicine, Ibadan to reactivate the programme in 2007.

MEDICAL RESEARCH IN IBARAPA

From the inception of the programme in 1963, medical research has been the bedrock of health care delivery and has put Ibarapa on the global health map. To mention but a few:

Ibarapa has the highest twinning rate in the world. Although, the initial studies were conducted among the Yoruba indigenes in the 60’s,⁴³ we have confirmed in 2006 that other Nigerian nationalities who have settled there, but not intermarried with the Yoruba, have acquired the same propensity for twinning.³⁴ I am happy to inform this audience that in a collaborative study with a food nutritionist at the University of Calabar, it has been established that the cause of the multiple ovulation in the women (for the twins are dizygotic) is present in the species of yam and an edible vegetable (*ilasa*) that grow abundantly in the district. This study has earned the food nutritionist the PhD degree of the University of Calabar.⁴⁴

Dr Pearson found that onchocerciasis was a cause of musculoskeletal pains⁴⁵ and patients with pulmonary tuberculosis had facial hypochromia unrelated to the degree of anaemia but which resolved with specific therapy.⁴⁶ He described an effective method of inguinal hernia repair which had the same principle that formed the basis of the mesh repair.³⁶

Several other university teachers based in Ibadan conducted researches in Ibarapa that contributed significantly to their promotion.

At ACE, we have firmly established the specialty of primary care surgery (which I prefer to call rural surgery) in Nigeria and in the process brought appropriate technology in health care delivery to the fore. In this respect, we have fabricated the operating table that uses the mechanical jack for elevation and depression,⁴⁷ the manual haematocrit centrifuge from the bicycle wheel,⁴⁸ the hospital still using copper tubing,⁴⁹ the modified trocar and cannula,⁵⁰ the intraosseus needle,⁵¹ the atraumatic suture from nylon and hypodermic needle⁵², the autoclave powered by maize cob furnace and the pedal suction pump using the bicycle valve.^{53,54}

In 2008, Bells University of Technology, Ota, Nigeria, a private university, honoured me as the Foundation Lecturer and thereafter set the pace in offering courses in biomedical engineering. I am an associate senior lecturer in that university.

In addition to publishing over 60 papers since arrival in Eruwa, I have been privileged to be the third editor, the author of eleven chapters and the publisher of the third edition of the standard textbook, COMPANION TO SURGERY IN AFRICA⁵⁵ and a book, PRIMARY HEALTH CARE IN WESTERN NIGERIA 1977 – 2007, commemorating the 21st anniversary of ACE.⁵⁶

We have ventured into building construction to provide affordable public buildings and housing for the rural people through the fabrication of a mobile concrete mixer that uses the back axle of the car, sandcrete mixer and vibrator, the rotating sand sieve and the interlocking cement blocks which have reduced the cost of setting the walls by 60 per cent. We have enunciated and put into practice the principle of convectional ventilation to ameliorate the effects of global warming in dwelling and public buildings.

THE CHALLENGES

This conference stated that:

“Health workforce issues are being closely addressed in the country because of the hope of the country to attain the Millennium Development Goals. However more resources need to be allocated to the Human Resources for Health programmes all over the country to make significant progress.

“In addition to the workforce shortages and mal-distribution, Nigeria is also confronted with other Human Resources for Health management issues such as inadequate and differences in pay and benefits, poor working conditions, poor supervision, lack of job descriptions, limited opportunities for continuing education etc. This lack of an enabling environment for good performance results in low motivation, less-than-optimal productivity, and high attrition, especially from rural areas.”

However, in the October 6, 2008 issue of the weekly magazine NEWSWATCH special anniversary edition tagged “HOW TO FIX NIGERIA”, Prof S K Gyoh, former chairman of Medical and Dental Council of Nigeria, MDCN, Director General under the late Prof Olikoye Ransome-Kuti and the World Medical Association, **Caring Physician of the World** wrote on the health sector:⁵⁷

“The persistence of Nigeria’s problems is not caused by lack of the knowledge of their solutions. It is often due to the dissociation of theory from practice. This is the case in health.

“The National Health Policy was launched in 1988. It adopted sound internationally accepted principles and adapted them to solve the health sector problems of Nigeria. It was acclaimed by the world as a good blueprint for delivery of first class health care in a developing nation, and requests for copies came from the four corners of the world. Attempts to implement it were seriously made in the first four years during the leadership of the late Olikoye Ransome-Kuti, the then minister of health. But, by the time he left office, it had not yet properly taken root. Despite the Primary Health Care Development Agency which he later returned to head, the Federal Executive Council had lost the missionary zeal he had earlier injected into its implementation, and his further efforts, he confided in me, met with several frustrations.

“Nigeria’s health status is deplorable. The revised health policy document admits that preventable diseases account for 70 per cent of Nigeria’s disease burden and that poverty is a major cause of these problems. It admits that our maternal mortality of 1 per

cent is 'one of the highest in the world,' that some of our health indicators, such as the under-5 and adult mortality rates are higher than the average for sub-Saharan Africa."

Having worked in a rural area of Ibarapa district of Oyo State for 28 years, the challenges of rural health care delivery in our country include:

1. The activities of professionals allied to medicine, traditional healers, bone setters, alternative medical practitioners and ordinary citizens who belong to none of the above but provide medical and surgical services.
2. The low morale of medical practitioners in the rural areas.
3. The level of competence required of a medical officer to perform effectively in the rural setting and deal with above case scenario of the pregnant woman in the village. Records at the Medical and Dental Practitioners' Disciplinary Tribunal show that over 95 per cent of the cases were for operations that went wrong, though many of the procedures were not necessarily performed by doctors with formal surgical qualifications.⁵⁸
4. The prospects for professional advancement while still based in the rural setting.
5. The infrastructural inadequacies in the health institutions.
6. The inappropriate administrative milieu in the health institutions.
7. The social problems of raising a family and securing a job for the spouse in the rural setting.

PROPOSED SOLUTIONS

Our proposed solutions include :^{38,59,60}

1. Activities of non-physicians.

These fellow Nigerians are inevitably responding to the phenomenon of WHERE THERE IS NO **COMPETENT DOCTOR** which is a variant of the dictum NATURE ABHORS VACUUM. Legislation will not solve the challenge as those who will make and enforce the law patronize them. However, the government can control the content of their advertisement and vet all programmes from such sources before broadcast to prevent the dissemination of inaccurate information to the populace. Statements that claim to cure hypertension and diabetes mellitus should not be heard in present day Nigeria. The eventual solution is to TRAIN THE DOCTORS HARD to deliver safe and essential surgery and EDUCATE THE POPULACE HARD to know their rights and responsibilities.

2. Morale of rural doctors.

In order to motivate and attract doctors to the rural areas and urban slums, the MDCN should put a moratorium on the payment of renewal fees for accredited doctors working in such disadvantaged circumstances. It should insist on acquisition of points from continuing professional development courses after the training institutions and universities have initiated postgraduate training courses in primary care surgery.

Putting an undue and inappropriate financial obligation on the Nigerian rural doctor is not good for his psyche while he battles daily with the atrocities of his non-physician compatriots who, without fetters, practise orthodox medicine next door to him and cause epidemics of faecal fistula,⁶¹ vesico-vaginal fistula, gangrene of limbs, etc. I would choose to retire than conform to such directive.

There is no place for the alternative medical practitioner on the MDCN because we do not know their ways and conduct. When I set out to train as a medical doctor in 1970, I did not look forward to the day my teachers and senior colleagues would sit at the same table with an alternative medical practitioner. If I knew that would be the case, I would have chosen to train as a biomedical engineer like my brothers.

On the issue of remuneration and having been self employed and an employer of labour for 25 years, I am of the opinion that in any system, remuneration should be based on productivity and where this is not so, *'what is good for the goose should be good for the gander'*. A situation where a councillor, who barely completed secondary school education, is earning multiples of a doctor's salary does not make for equity. I support the doctor who is fighting for equity with all the legitimate means at his/her disposal.

The Hippocratic Oath, often evoked to castigate striking doctors, presupposes that the physician is well psychologically, mentally, socially and physically. But, that cannot be said of a doctor who is owed several months' salary.

3. Level of competence.

The current training programme that produces a full-fledged general surgeon or a family physician is not adequately coping with the magnitude of the health challenges in rural Nigeria.

The need to train middle level surgical manpower specifically to address these challenges has been examined and debated for many years.⁶² The Malawians have been more pragmatic in this regard having successfully trained non-physician clinical officers to insert ventriculo-peritoneal shunts to treat hydrocephalus in children, resect and anastomose bowel in strangulated inguinal hernia and perform transvesical prostatectomy for benign prostatic hypertrophy.⁶³ Their outcomes compare favourably with those performed by surgeons. My teacher, Emeritus Prof A Adeloye, a neurosurgeon, taught the Malawians how to insert the VP shunt.

4. Professional advancement.

The frame work should provide for opportunities to undergo more training with the ultimate goal of becoming a consultant surgeon or family physician if so desired.

It is proposed that the structure of training at the National Postgraduate Medical College of Nigeria, the West African College of Surgeons, WACS and the West African College of Physicians be in stages and decentralized with accreditation of more nongovernmental health institutions for the training of specialists and middle level manpower as highlighted in the acceptance speech of the current President of WACS. Only the Faculties of Ophthalmology and Anaesthesia of the WACS have moved decisively in that direction with the diploma in the specialties. Certificates should be awarded for successful completion of each stage viz: diploma, membership and fellowship which should reflect appropriate degree of professional competence. These certificates should be registrable with the MDCN.

The major advantages of this scheme include:

a. Residents do not stay for five to six years in tertiary institutions during which they behave like career officers who specialize in labour union matters. Many

tertiary and public hospitals are closed for most of the year due to the demand of doctors for increased salaries.

b. More opportunities are created for training middle level man power for services in rural and remote areas.

c. Non-governmental hospitals with underutilized surgeons and family physicians (who practise primary care surgery) will become training grounds for service and research.

d. The products will be fully prepared to work at all levels of the health care pyramid. A staged training programme will be more acceptable in keeping the medical officers in the rural setting.

e. The critical mass to achieve the MDG's will be attained sooner than later.

The various institutions (teaching/tertiary) for training surgeons are facing difficulties due to deteriorating infrastructure and diminishing access to surgical care through prohibitive user fees which have altered their bed occupancy and changed the frequency ratio of diseases for the balanced experience of surgical trainees^{64,65}. Therefore the revitalization of the teaching hospitals is crucial at this moment so that the prohibitive user fee does not turn away patients that should be managed at this level.

The universities, especially the National Open University of Nigeria, should be encouraged to initiate the more apposite Master of Science (Primary Care Surgery) programme similar to the Master of Public Health degree. This will allow for the academically inclined rural practitioner to seek employment in the university after providing service and undertaking research in the rural area.

The colleges of medicine should, as a matter of urgency, create Departments of Family Medicine **but the faculty staff should be based in rural health institutions.**

Recently, the one year training abroad was reinstated. A review of that aspect of the training in the 80's, of which I was the unsolicited control, would show that it is not necessary in today's Nigeria. It will only encourage the flight of more Nigerian doctors abroad with the resultant deterioration in the human resources for health that this conference aims to solve. There is hardly any type of surgical care that is not available in Nigeria today and several of the superspecialists abroad are our compatriots.

Therefore, as long as patients keep falling from operating tables and there is persistence of poor attitude to work in our teaching hospitals, rich Nigerians will continue to go abroad for surgical treatment. One year training abroad will not change that attitude.

5. Infrastructural inadequacies.

The challenges of infrastructure and medical devices have been fully solved at ACE such that foreign NGO's have found the setup satisfactory enough to regularly conduct hernia and eye surgery missions at ACE.^{66,67} We need to replicate them in all the rural hospitals of our country.

6. Inappropriate administrative milieu.

The administrative structure in operation at present in the public service is inimical to the efficient running of rural health institutions. Governments should be encouraged to adopt the Bamako Initiative of revolving funds in the procurement of materials needed to efficiently run rural health institutions.

We initiated the Bamako initiative four years before its conception at the District Hospital, Eruwa (1983 – 86) and continued in our private clinic from 1986 to date.³⁸

Accountability in financial matters could be assured by the **open accounting system** in which **ALL** members of staff and some representatives of the community constitute the auditing team that meets EVERY month and the medical officer in charge sends written reports signed by ALL heads of departments quarterly to the state and local headquarters. Involving the junior staff is an antidote to embezzlement and other corrupt practices.

7. Social challenges.

The social challenges of raising a family are critical to retaining medical officers in rural areas. However, we have shown that it is **safer, better** and **cheaper** to do that in the rural area where there is a constant relationship between parents and their children while they are growing up.

Our two sons went to public schools although; there were private primary and secondary schools in Eruwa. We engaged their teachers to give extra coaching to them after school hours and during the holidays. Of course, we started off at home before they were five years old when formal education began in the public school.

We developed laboratories for physics and chemistry at home and used the hospital laboratory for biology. At the end of their secondary school years, we donated the instruments and chemicals to their school. The total cost of all these was much less than sending the children to a private school in the city. The joy and satisfaction of seeing them grow to their adolescence was gratifying.

Our older son has graduated as an electrical/electronics engineer from Obafemi Awolowo University, Ile-Ife. He is self-employed in the city of Ibadan producing inverters and rechargeable dc lamps. Our younger son is a medical student at the same university.

My wife is a radiographer. So, it was easy for us to be employees of the state government before we decided to establish our practice in the same town. We did this to obtain job satisfaction which was not possible in a public institution due to bureaucratic bottlenecks. The community was very cooperative in our transition into private practice.

There should be close collaboration between the governments at the three levels and the private sector in the rural setting to provide job opportunities for the spouses (usually the wives). Where the wife decides to be self-employed, soft loans from the banks should be guaranteed by the employer of the husband.

CONCLUSION

We have shown that the Ibarapa Community and Primary Health Programme of the University of Ibadan has achieved its stated objectives in the spirit of community participation and the public/private partnership. What is left to be done is for all the ministries of health in the nation to take the bull by the horn and replicate the programme in all the local government areas.

The training programmes of the postgraduate institutions “must be relevant, flexible, and adaptable **to reflect our needs at all the three tiers of the health care system** while we cannot lose touch with new developments and technologies that can be used to manage the changing patterns of disease or the emergence of a new pandemic of diseases common in industrialized countries. **The ability to make virtue out of necessity is the greatest and immediate challenge of all**”.⁶⁴

I thank you all for your kind attention.

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