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B.O. OSOTIMEHIN and A.O. UWAIFO

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Medical education, healthcare and development in Africa

S.H. BREW-GRAVES
WHO representative and resident programme coordinator in Nigeria

Introduction

The history of medicine is a reflection of human civilization and the story of man's search for longevity and amelioration of pain. Medical care is as old as man himself and has from time immemorial aspired to the promotion of human well-being. The history of scientific medical education and practice, however, is more recent. The father of medicine, Hippocrates himself, was first a philosopher and a mathematician whose interest in medicine was aroused by the mystique of creation and the then inscrutable human body. Thus, medicine was closely linked with the ordinary man, with religion and therefore, culture. At that time, liberal arts and the sciences were prerequisites for education and thus, it was more the monks who were versed, not only in the scriptures but also in rhetoric, logic, geometry, arithmetic, music and astronomy, who tended the sick and prayed for the departing souls. St. Luke, the evangelist, who is also the patron saint of physicians, was a writer, a mystic, a historian and a healer. Thus, scientific medicine evolved in the 19th century among people whose liberal backgrounds permitted them to absorb the sciences and practice the healing arts. In fact, after God and His men of religion, it was the physician who was everything rolled into one. This liberal background which prepared him for the mysteries of healing continued into the 20th century when a candidate was selected to read medicine on the basis of his intellectual capacity and vocational disposition.

History of the African Pioneers of Modern Medicine [1] reinforces liberal education as a prerequisite for medical education. In West Africa, for example, Sierra Leone, which was the cradle of christianity and early education, was also the crucible in which the selection for training of early African doctors took place. Products of the era were more than doctors, as leaders of thought, in a social, political, philosophical and ecclesiastical sense. Their socio-political activities were extensive and included prudent leadership of their people.

They may have been blinkered or 'Afropeans' in their outlook by virtue of their training environments, but they, in all the areas of community development - urban as well as rural - were prepared to serve and administer unto the poor and the otherwise unreachables. Their training obviously prepared them liberally for the vocation and they went willingly to hamlets and villages, practising the art and bringing succour to the sick in mind and body. This was the individual or patient-centred era of health care when service was the watchword and was marked by a focus on the sick.

The period after the Second World War saw the beginning of medical schools in Africa and this was the community care era of medical education which started in the 1940s with some emphasis on public and preventive health services. The schools naturally were generally modelled on institutions in the home countries of the colonial governments and their intellectual traditions, with very little adaptation to African socio-cultural tenets. The products without the cultural attributes required for that multiplier effect on the societies in which they worked were neither 'Afropeans' nor 'African doctors'. Thus, whilst the much derided 'Afropeans' often had a missionary zeal to serve the rural communities, the newbreed African doctors, trained in the open ivory towers, were often unwilling to serve in the outreach districts.

The post Independence challenges

The pre-independence era could be seen as the period of limited but quality education, while the post-independence environment led to a marked expansion of the educational base without the necessary commensurate positive adaptations, at the initial stages, for a sustained quality of the western models, on the lines of which, the institutions had been established. The unrestrained creation of numerous institutions of higher learning was a prominent feature in the ill-planned development of Africa and it contributed greatly to what Fieldhouse[2] has termed "the deceleration or arresting of Black Africa's development during the 60s and the 70s. Inability to maintain the pre-independence colonially administered political structures, political instability, the pomp and pageantry of sovereignty, the over optimism of the national elite, the economic potentials of the individual countries without considering the manage-

ment and administrative capacities of the balkanized states, the symbolic political gestures of shedding or discarding whatever was considered colonial, including the breaking-up of the tenuous linkages that held sister African countries together, clearly precipitated the stagnation and arrest of any sustained growth in Africa. The issues were based both on erroneously thought-out policy and non-policy programmes and included the massive expansion of the Civil Service and the Armed Forces, with intolerably high expenditures, and the creation of national institutions of higher education, including medical schools most of which were undertaken, using loans borrowed from private and commercial sources. Education and health benefited immensely from these loan-financing projects and it led to the massive debt which was later to be the major constraint to socio-economic development.

Other policy issues included artificially high rates of exchange of the new national currencies, ostensibly, to offset excessive public spending and encourage exports whilst in reality these discouraged domestic production. Parastatals were established to pay lower prices for farm produce and commodities, with the result that many farmers were forced to abandon or cut down agricultural production whilst turning over farmlands for other development projects. After Makerere and Ibadan, the number of medical schools increased rapidly and today, 20 - 30 years post-independence, there are nearly 70 on the continent.

The proliferation *per se* did not necessarily lead to adulteration, but the loss of a sense of direction with the unplanned or misplanned increases in the number of these institutions, led to a watering down of the ideals, especially when Africa did not have enough competent personnel to man these institutions and had to depend on expatriates who subsequently, following the massive devaluation of the currencies of most African countries, went home never to return whilst African lecturers left for greener pastures elsewhere.

The lost decade of the 80s

The deceleration of development reached its nadir in the 1980s when, as a result of the global recession as well as other natural and man-made crises, Africa was plunged into socio-economic reverses. It had become obvious during the 70s that Africa could not survive in its balkanized state. The inability to contain and overcome structural problems at independence and the policy issues which essentially related to failure of leadership, were responsible for the most critical socio-economic period in the history of Africa.

Africa's debt which had accumulated over the immediate post-independence period reached US$48.3 billion in 1978 and was US$250 billion in 1989 at a time when the 10 leading industrialized countries saw favourable developments in economic growth, trade and investment[3]. The value of exports declined from US$95 billion in 1979 to US$60 billion in 1989, during which time world commodity prices fell from an index of 100 in 1979 to less than 40 in 1989. Servicing of the debt alone required nearly 30% of the total export earnings annually. Global inflation combined with high rates of population growth to reduce the purchasing power of per capita income, which had decreased from US$854 per annum in 1978 to less than US$370 or approximately US$1.00 per day in 1989. The total number of illiterates increased from 124 million in 1978 to 162 million in 1987 and is still rising in spite of the increase in expenditure for education. Unemployment was 6% of the labour force in 1978 and had doubled to 13% in 1988. Refugees had considerably increased as a result of internecine and fratricidal wars and of the 15 million in the world, one third or about 5 million are in Africa.

National and international child survival programmes which included the Expanded Programme on Immunization (EPI) and Oral Rehydration Therapy (ORT) introduced by the World Health Organization (WHO) in 1974 and 1978 respectively, continued to support the lives of children who would otherwise have died, with the result that the natural population growth in Africa at a mean of 3.04%, as compared to 1.67% in the developed world, meant that Africa's population of approximately 400 million will double by the year 2007, at a time when their quality of life is decreasing. Reduced agricultural production, diminishing purchasing power, high dependency ratio, drought, desertification and famine have combined to produce hunger and malnutrition which rose eight times between the seventies and eighties. Africans consumed less than 2,000 kilo-calories per person as compared to more than 3,200 kilo-calories in the developed countries. Stunted growth rate was more than 30% in Africa as compared to 5% in the developed countries and there are 2 - 3 times more under-weight children in Africa than there are in the industrialized world.

Water Supply and Sanitation deteriorated in spite of the activities of the International Drinking Water Supply and Sanitation Decade (IDWSSD). As at the end of the decade, the water supply in the urban areas in Africa covered 66.5% of the population as opposed to 93.6% in the developed countries and 27.6% as compared to 91.7% in the rural areas of the developed world[4]. Preventable causes continued to account for most of the morbidity and mortality in the region with more than 60% deaths occurring among young persons under 15 years of age as against 3% in the industrialized nations. Infant mortality rate was in excess of 100 per 1,000 and in three countries more than 200 per 1,000 live births or 7 - 10 times more than in the developed countries. Under 5 mortality is between 100 - 200 per 1,000 in Africa as opposed to less than 10 in the developed countries, that is, 10 - 20 times higher. Maternal mortality is even more striking. Each time a woman from Africa is pregnant, she runs a 200-fold greater risk of dying than does one in a developed country. In fact, in the 80s, one woman out of every 15 died as a result of pregnancy as compared to one in 10,000 in say the Netherlands - an outstanding 700-fold rate[5].

Diseases like yellow fever and tuberculosis which were under reasonable control emerged again as a result of overcrowding and unhygienic living conditions. Acquired Immune Deficiency Syndrome (AIDS) appeared mysteriously in 1982 and has since become the most serious health challenge of all time, affecting mainly the age group of 18 - 40 and directed at the most productive section of the population. In Africa where AIDS affects both males and females, unlike the developed countries, where it is mainly a disease of males, the disease could decimate the young and educated urban dwellers for whom the nations have invested most heavily. A plethora of other health problems combined during the decade to stem Africa's socio-economic progress. Malaria which is a leading cause of mortality and morbidity started showing a spreading resistance to chloroquine. Shortage of drugs and the saturation of the market with fake drugs compounded the problems of medical care in the continent. A growing problem of alcoholism and drug abuse, especially cannabis, which was only used by adults, have become a serious problem in some African countries, particularly, among young city dwellers. All the global indicators show impoverishment and deterioration of the quality of life in the 80s. Of the over 1 billion people living in absolute poverty in the third world, Asia has 64% whilst Africa has 24% but with a faster growth rate of absolute poverty which, between 1970 and 1985, increased by about two-thirds. Human development index which computes life expectancy, literacy and income for a decent living standard was lowest in Africa where access to health services was 45% during the 1980s [6].

Education and development

The effects of all these post-independence policies and non-policy issues specifically on education in Africa were so important as a causative factors in the arrested or reversed development, that the World Bank [7] reviewed the subject extensively as a preliminary consideration for supporting the expansion and improvement of education in the 1980s. The review, indicated that the most significant single achievement in post-independence Africa was the spread of education. The number of students enrolled in African institutions which more than quintupled between 1960 and 1980, has however been offset by the rapid population growth with the result that more children than ever now seek placement in schools which are constrained because of financial inadequacy. The quality of education was also noted to have generally dropped as a result of overcrowding and the inadequacy of trained teachers and teaching materials, although many African governments had allocated over 20% of their budgets to education.

In higher education, it was observed that enrollment had increased from 21,000 in 1960 to more than 430,000 in 1983 but its contribution to development was being threatened by four interrelated weaknesses. First, higher education now produced relatively too many graduates of programmes of dubious quality and relevance, thus, generating too little new knowledge and direct development support. Second, the quality of these outputs showed unmistakable signs in many countries of having deteriorated so much that the fundamental effectiveness of the institutions was also in doubt. Third, the cost of higher education had become needlessly high; and fourth, the pattern of financing higher education was socially inequitable and inefficient. More specifically, in the area of medical education, it was noted that:[8]

- the absence of national health manpower policies had led to a disparity between producers and their employers.

- many doctors trained over years at public expense were leaving their countries for non-African countries.
- the curriculum was essentially foreign-based and highly structured.
- the training was hospital-based and essentially, clinical-oriented and ignored culture and socio-economic background.
- the training was discipline-oriented and departmentally organized rather than competency-based, problem-oriented and inter-disciplinary.
- teaching rather than student responsibility for learning was emphasized.
- there was no team approach.
- the products were uninterested in the rural areas; and
- they were unsympathetic, gains-oriented and lacked leadership.

The report emphasized that policy reform should seek four objectives: to improve quality; to increase efficiency; to change the output mix which may imply smaller number of enrolments in certain fields of study and to put in relief, the pattern of public sources of finance by increasing the participation of beneficiaries and their families to quality improvements. The first objective will cost money. Thus, implementing adjustment policies to achieve the other three objectives will, almost everywhere in Africa, be a prerequisite for freeing the resources needed to achieve the first.

Alma-Ata Declaration

It was as a result of the mounting post-independence challenges to and the stalemate in development which had affected everything that promoted and impacted on health, especially in the developing world, that in 1977, the World Health Assembly (WHA) resolved that by the year 2000, all the peoples of all countries should attain a level of health that will permit them to lead socially and economically productive lives. In September 1978, at Alma-Ata[9] the representatives expressed "the need for urgent action by all governments, all health and development workers and the world community to protect and promote the health of all the people of the world" by adopting the Alma Ata Declaration which in principle directed that Primary Health Care was to be the vehicle and strategy for achieving the social goal of Health For All by the Year 2000 (HFA/2000). In 1979, the World Health Assembly endorsed the Alma-Ata Declaration and invited all member states to act individually and in concert in formulating national, regional and global strategies on the basis of the tenets of Primary Health Care which are:

- equity and social justice;
- political commitment and will;
- community participation and involvement;
- intersectoral action; and
- the use of appropriate technology.

The adoption of the Alma-Ata Declaration and the social goal of Health For All by the Year 2000 by the World Health Assembly raised a number of critical issues namely:

- a change from the basic or health services or the community care era to the population era of health care;
- a change in the roles of the physician, and thus the need for training doctors who will be culturally attuned leaders, capable of community diagnosis, community mobilization, health planning and management, integrated health care and the organization of continuing education; and
- a new era in which health was to make an entry into the socio-economic development formula.

Thus, the Alma-Ata Declaration opened out a new vista in which the tenets of Primary Health Care were to guide the leadership of member states into a new era of governance.

The crucial training programme to orientate health workers to health needs and problems and give them actual responsibility for dealing with the problems at community level constitute innovative approaches which are evolving in a number of developing environments including Ilorin and Lagos Universities which have a problem-based, community-oriented approach to learning and seek to provide students with skills attuned to management with limited resources in health care delivery situations.

The agenda for medical education in Africa

Earlier discussions on the need for change in medical education resulted in Resolution WHA 37.31 in May 1984 on the role of the universities in strategies for Health For All. The resolution enjoined universities throughout the world: to ensure that students in all faculties are made aware of the concepts of the goal of Health For All by the Year 2000 (HFA/2000) and actively support the

measures for attaining it. In Africa, the resolution gave birth to the special WHO project "Universities and Health For All in Africa" which was based in Lagos, Nigeria.

The African Ministerial Consultation on Medical Education at Abuja [10] where African Ministers of Health and Education met together for the first time, to take a critical look at the character and content of medical training with the aim of making it both relevant and responsive to the needs of society. The plan of action agreed upon, included a structured programme of activities within a designed time frame. A format based on institutional, national, regional and international programmes directed at the desired objective of relating medical curricula to the delivery of primary health care was also adopted.

Health For All reviews

The strategy for Health For All by the year 2000 has been reviewed, to assess the relevance of the concept of Primary Health Care and the adequacy of the conceptual framework as well as the effectiveness, progress and impact of its implementation[11]. The WHO Regional Committee for Africa resolved to accelerate its progress, using a 3-year overlapping three-phase health development scenario starting from 1986 and continuing through 1989 [12]. The scenario was conceived as a community-based, action-oriented and systematically organized programme which focuses on the district or periphery, where 70-80 per cent of the African population still live and work in abject poverty, extreme ignorance and unacceptable ill-health. The three-phase health development scenario which began with a situation analysis in 1986, has inbuilt self-evaluation instruments at three levels - the district or periphery; the intermediate, state, provincial or regional and the central or policy levels. Operational support at the district level is composed of a functional framework, management cycle, referral system and district health activities, selected and organized according to the needs of the community and utilizing locally generated and managed resources.

Technical support at the intermediate, state, provincial or regional level, consists of the activities of a strengthened state Ministry of Health in terms of interpretation and conversion of national policies into operational activities and programmes and the supervision, training, administrative and logistic supports to the district level.

Strategic support at the central or the highest level involves institutional strengthening, policy formulation, planning, legislation, information and research assistance. WHO is emphasizing the need for a National Health Development Unit which involves a network to mobilize support and stimulate action at the intermediate level. A review of the scenario in 1988 indicated the need for strengthening health management systems and therefore, during the years 1990 - 1994, these would be further strengthened at national levels through continuing education, operational research and a continuous mechanism of programme evaluation and reviews.

In March, 1988, ten years after Alma Ata and 12 years to the year 2000, another global review undertaken by interested parties at Riga, reaffirmed the 5 tenets of the Alma Ata Declaration as having become a living reality which "cannot be stopped by any reactionary forces in the health world" [13]. The report, adopted by the World Health Assembly in May 1988, admitted that there had been significant gains, progress and impact of the Health For All strategy; but there had also been considerable lapses and challenges as the implementation though universal, has had varied expression of commitment. The concluding remarks sum up the challenges ahead for Africa and all those innovators in the health sector. "As WHO turns around the corner of the first decade after Alma Ata, it needs to ready itself to face a new set of problems. In particular, it must appreciate that tomorrow will not be yesterday and yesterday's answers will not serve tomorrow".

The watershed decade

Riga reaffirmed the tenets of PHC as being as relevant today as they were in 1978; what is required are innovative strategies and approaches, new directions and partnerships for acceleration.

The decade of the 90s constitutes a watershed in Africa's socio-economic development. It is clear from all the available evidence that, unless Africa is able to advise itself and optimally harness its resources, the 90s will not only be an additional lost decade, it could sound the death knell of the continent. What are the options open to Africa?

Africa must awaken from her slumber; it is my submission that the tenets of Alma Ata must be interpreted in a wider socio-political dimension, so that equity and social justice translate to a declaration of fundamental human rights which include: health, education, peace, freedom of

speech and worship, etc. Health services must be available, accessible, acceptable and affordable; basic education must be free, qualitative, quantitative and relevant. Higher education, which includes medical education, should involve a comprehensive restatement of goals and specific strategies for meeting such definite goals. Potential doctors must be educationally prepared for the long-term benefits of their people and must develop politically sophisticated leadership as a cadre of moral, ethical administrators that are intellectually disciplined to provide community direction. Political commitment and will must be translated so that health becomes that common denominator and platform from which the unity of the continent can emanate. The universities should constitute a network to support the Lagos Plan of Action for an African approach to the solution of the continent's problems. There needs to be a coming together, a pooling of resources and a concerted action to free Africa from its neo-colonialist shackles of under development in the midst of plenty. Regional organizations such as ECOWAS, with its health arm as well as umbrella organizations, to wit, the Organization of African Unity (OAU), should take a bold step for a decisive action on restructuring education - medical, scientific, technological and humanist - to give a new direction to the economic pursuits and generally push Africa geo-politically forward on the path to progress.

Conclusion

These are very difficult and trying times in the history and development of Africa. Except during the enslavement of its people, never before has this continent gone through such crises and challenges for its very existence. But as the Chinese point out, the two characters which form the word crisis are "threat and opportunity" and there must be a psycho-analytic base from which any crisis can become a turning point for better or for worse. Crisis, therefore, can provide the warning signs of impending disaster or catastrophic doom, but could also be the time of decision. Africa is at that critical juncture.

The 1990s and the prospects for the 21st century demand that education, which is the first of the eight basic components of Primary Health Care, does not ignore the African's cultural circumstances, otherwise, we run the risk of producing young men and women whose vision is distorted and irreconcilably bi-focal. It is a fact that education is a prerequisite for development, it is also a fundamental for health which is the foundation for development. History did justice to the African medical pioneers who, as the elite of their time, could not, but play their eminent roles as healers and leaders in the political climate of colonial Africa and they left their marks on the sands of time for those of us who had to follow. We have a responsibility to be adequately prepared for that task because we do make a difference wherever we are without necessarily going into political office. The developmental hiccups of the post-independence era and the global socio-economic events of our times, marked by the debt debacle, with its attendant economic depression, the brain-drain and the progressive marginalization of the continent, the structural adjustments, as well as the economic realities of the future demand a critical introversion and policy realignment for self-reliance and social readjustments. Development as a guided, steered and controlled positive social change that is directed at widespread acceptance of desirable goals and improved quality of life of the people, can only be created for Africa by Africans; and it is obvious that the salvation of a balkanized Africa lies in its unity of purpose. At this time, more than ever before, the African physician to whom much has been given, must be prepared to give much more so that he can demonstrate his moral elitism and disciplined mettle to rise to the occasion through appropriate intellectual development.

The ultimate purpose of education is to provide the individual with the capacity for value judgement whilst that of socio-economic development is to provide increasing opportunities based on those value judgements, and consequently improve quality of life. Health, education and development are synergistic in an interlinking formula or equation which must be addressed. If the training of the African doctor is to achieve the goals of education for development, then he must be appropriately prepared for the extended functions which are more social and preventive and less clinical and individualistic. The African doctor must not only be a healer and a sympathetic friend of the poor and down-trodden; today, he must be a manager, an educator, the guide to the 'inaccessible', a scientific historian and a populist leader in his catchment area. I submit that this is only possible through a pragmatic and well modulated curriculum, competent pedagogical systems, relevant infrastructural support in an environment propped

by political commitment and refined in the crucible of medical pedagogy. But who are to be taught and what is to be taught to achieve the set goals of the population care era? How and for how long must the selected candidate be taught? Where must they be taught? These are crucial issues which the new era of health care raised by the Alma-Ata Declaration demand of us.

The questions raised need to be answered by the universities individually and collectively. But, as demanded of us by Resolution WHA 37.31, these should be the subject of constant dialogue by *all* the faculties of *all* our institutions of higher education by virtue of their leadership role, must orchestrate the sub-regional groups and liaise with the appropriate regional bodies to achieve a strong and vibrant impact. This is our mandate from Alma-Ata and we owe it to our people to whom alone we are committed by the obligations, implicit and explicit, of the Hippocratic Oath.

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