



DISEASE CONTROL IN GHANA

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G.A. ASHITEY

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AN EPIDEMIOLOGY OF DISEASE CONTROL
IN GHANA 1901–1990

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ABBREVIATIONS

1. Apollos 568 568 Civil and Public Servants who were sacked by the Progress Party Government in 1969
2. CIDA Canadian International Development Agency
3. FAO Food and Drugs Administration
4. ODA Overseas Development Agency (Britain)
5. SIDA Swedish International Development Agency
6. UGMS University of Ghana Medical School
7. UNDP United Nations Development Programme
8. UNFPA United Nations Population Fund
9. UNICEF United Nations Children's Emergency Fund
10. USAID United States Agency for International Development
11. VRA Volta River Authority

INTRODUCTION

It is my honour and privilege to appear before you this evening to deliver my inaugural lecture in accordance with the noble traditions of this great University.

The custom of having new Professors give inaugural lectures is useful in that it enables them to introduce themselves and their interests to the public. The public can thus get some insight into the character and background of the newcomer with the least possible mutual embarrassment. I joined this University some 20 years ago and during this period, as a Community Health Physician, I think I have had more than my fair share of opportunities to publicize my opinions. I do not, therefore, consider myself a newcomer in this milieu.

Another reason for an inaugural lecture is the opportunity to announce new policies and directions which come with the succession to a chair. Again in my case, my ideas of how a Department of Community Health should be organized and led have been enormously influenced by the two Professors before me: Professor Fredrick Togbor Sai and Professor Samuel Ofose-Amaah. They have set standards of scholarship, creativity, commitment and civility which have made our small Department one of the best of its kind in Africa. I stand on their shoulders and I shall try and follow their examples as closely as I can, and build on the strong foundations that they have laid.

I must also mention the contributions to our Department, of Dr. S. N. Otoo and the late Dr. J. Amorin who acted as Heads of our Department for various periods during the formative stage of my career in the Medical School. I remain indebted to them also.

The Department of *Community Health* is the only department in the University of Ghana Medical School that

has been permitted to change its name over the years. Professor Sai was a Professor of Preventive and Social Medicine. This makes Professor Ofori-Amaah really the first Professor of Community Health in Ghana. Elsewhere, sister Departments parade various names like Sanitary Science; Public Health; Hygiene and Tropical Medicine; Epidemiology and Biostatistics and International Health. But “a rose by any other name will smell as sweet”; and if present trends continue, I can predict within 90 per cent confidence limits with a probability of less than 0.05 that I shall be the last Professor of Community Health in the University of Ghana Medical School. My successor to the chair may come with a different label – either as Professor of Public Health, or Professor of Primary Health Care.

Community Health is concerned with problems of health and diseases in the whole community and is thus distinct from clinical medicine which deals almost exclusively with the sick individual. Community Health embraces many disciplines and subjects, including Epidemiology, Demography, Biostatistics, Behavioral Sciences, Environmental Health, Public Health Legislation etc. but its basic subject is Epidemiology.

One definition of epidemiology is “the study of the distribution and determinants of diseases in human populations”.¹ During the last 50 years, epidemiology has broadened in scope to encompass the study of other health and social problems. It has, therefore, found applications in all branches of Medicine and the Social Sciences. However, the traditional use of epidemiology is the control of diseases in human populations. For this reason, I have chosen as the topic for this lecture: *An Epidemiology of Disease Control in Ghana, 1901–1990*.

In this lecture, I propose to use epidemiological methods to give a short account of the control of some 18 diseases in Ghana over the period under review. This is, therefore, an

epidemiology of disease control and not the epidemiology of individual diseases.

This gives me an opportunity as an Epidemiologist to salute some of the men and women who have waged wars against diseases in Ghana. By their actions Ghana is a healthier place to live in today.

They have laboured and we share the glory,
Ours to do exploits and to their gain,
Those who come after will take up our story.²

As we shall use epidemiological methods for the exercise, only three variables — *time, place, person*, will be featured and that emphasis will also be on the *doctors* and not *cases*.

I should emphasize at this stage that since documentation and statistics have never featured among the strong points of most of us Ghanaians, the picture I shall paint may not be as accurate and complete as some of you **might like** to have it. Much of my account will be like seeing “through a glass darkly”; but even so, I believe we can at least discern from these short glimpses, where we started from, where we are today and my opinion about the future.

Another caveat is that in classical descriptive epidemiology, time, place and person should coincide to produce a disease. In simple language — the right person at the right place at the right time catches the bug. In historical epidemiology, however, each variable can make an independent contribution; so in this account I have done some selection of the dates, the places and the persons. This is certainly not a random selection and so admit that my picture may be biased but if on an occasion like this I am not permitted to be selective then there is no art in this country.

Lastly, I must stress that the few people I shall mention this evening are just representatives of the many persons who have made significant contributions to the improvement of the health status of Ghanaians.

THE CONTROL OF SOME DISEASES IN GHANA

1. SMALLPOX

Year: 1901, 1970; *Place:* Axim, Dzagbalekope (see Fig.1 which shows these places and others mentioned in the text);
Persons: Garland, P. J., Grant, F. C.

(Fig. 1)

It is proper and fitting to begin this account with smallpox, for two reasons:

1. It typifies the state of the art and the attitude of our people to diseases, at the beginning of this century.
2. The eradication of smallpox is one of the major achievement of this country.

The Medical Report of 1901 records:

The Health of the natives was very bad for the year owing to a severe outbreak of smallpox, which raged with great violence at Accra and Axim, and in many villages throughout the colony. At Accra the type of the disease was rarely severe, and fortunately deaths were not common. At Axim the type of this disease was unusually severe, the confluent and haemorrhagic varieties being common and many deaths occurring; everything was done to check the spread of the epidemic and towards the end of the year the outbreak had diminished all along the coast. The natives displayed their usual indifference to precautions against contagion, and consequently the epidemic spread from place to place, scarcely a village escaping infection.

Vaccination was carried out as energetically as possible at Accra, but the ignorance and superstition of the natives at most other places proved an obstacle to any really efficient results. I am pleased to say that not a single case of septic trouble originated from vaccination of some thousands of natives. No infection of Europeans occurred.



Fig. 1 Map of Ghana showing the places mentioned in the text

This was the report of the Principal Medical Officer called Dr. P. J. Garland.³

Smallpox vaccination was made compulsory in this country in 1920. From 1967 as part of the global smallpox eradication campaign, USAID assisted the West African countries to rid this part of the world of this dreadful disease. Our hero Dr. Frank C. Grant was the Chief Epidemiologist of the Ministry of Health who led the final assault on smallpox in Ghana. The last case of smallpox in Ghana was Kojo Teku from Dagbalekope in the Volta Region. He was seen in January 1970 and fortunately survived the disease.⁴ If Mr. Kojo Teku is still alive, he should contact us, so as to have his picture taken for the archives. Dr. Grant was the first Ghanaian to head the Medical Field Unit of the Ministry of Health as a specialist Epidemiologist. He rose to be a Deputy Director of Medical Services and later served WHO in Brazzaville. Although he has retired from WHO he is still very active and significantly, he is at present engaged in another disease eradication exercise. He is a Consultant to Global 2000's Guinea worm disease eradication effort.

Personally, I am very grateful to Dr. Grant for another reason. It was by his kind introduction that I joined VRA's Lake Research and Development Project at Akosombo where I spent almost 10 happy years doing research into schistosomiasis and other water-related diseases. I also helped my friend, Dr. Kwamena Derban to strengthen the health services at Akosombo to be used as a teaching area for our Medical School.⁵

2. PLAGUE

Year: 1908; *Place:* Accra; *Person:* Simpson, W. J.

It was an epidemic of plague in Accra in 1908 that led the Colonial Office to send Professor William J. Simpson from

the London School of Hygiene and Tropical Medicine to the Gold Coast. Our hero Professor Simpson can be described as the Doyen of Medical Research in Ghana. He is best remembered by the small laboratory that he set up in a classroom at the government school at James Town, Accra to investigate and control the plague epidemic. It was this Plague Laboratory which later became the Accra Laboratory when it was moved to Victoriaborg.⁶ It was renamed Medical Research Institute in 1920, and was housed on the Korle Bu Compound in 1924, and until its incorporation into the National Institute for Health and Medical Research in 1960, this Institute had international acclaim for its researchers into tropical pathology and parasitology.

3. *YELLOW FEVER*

Year: 1926; *Place:* Kpeve; *Person:* Asibi

If Ghana should claim copyright for any disease, then it should be Yellow Fever. In 1926, the Yellow Fever Commission of the Rockefeller Foundation extended its research work into West Africa and established a base at Yaba, Nigeria. It was the collaboration between the Medical Research Institute in Accra and the Yaba Centre which led to the isolation of the Yellow Fever virus from a Gold Coaster in 1927.⁷

The hero here was a 27-year old labourer from Kpeve in the Volta Region called Asibi, and the *Asibi strain* of the virus isolated from his blood was to become the only virus for the production of Yellow Fever vaccine for over 2 decades and is still probably the best viral vaccine that the world has.

In the course of these researches, two expatriate scientists died in Accra in 1928. One was the Japanese Hideo Noguchi, who has been immortalized by his native Japan for service to humanity. The Noguchi Memorial Institute for

Medical Research is a lasting monument. The role played by our own Professor Emeritus Charles O. Easmon, in getting the Institute established, is I hope, being documented elsewhere.

The other scientist was Dr. William Young, an English Pathologist, who was the Director of the Institute at the time of Noguchi's death and who did the autopsy on him. He is still unsung. I appeal to Her Majesty's government not to forget Dr. William Young.

In spite of the availability of this safe and very effective vaccine, Yellow Fever epidemics are still common. A decade ago, Ghana had its greatest epidemic; between 1977–1980 more cases of Yellow Fever were recorded in Ghana than for the period 1901–1975.⁸ Outbreaks have also been reported in parts of Nigeria in recent years.⁹ The disease retains its high fatality, thus it is still a major public health problem.

4. *YAWS*

Year: 1927; *Place:* Akwapim District; *Person:* Reindorf, C. E.

Yaws is one of the common afflictions of rural communities and has been endemic in Ghana for generations. It was among the first diseases for which Western treatment was available in the Gold Coast. In the 1920s, *Salvarsan* (potassium iodide) was used to treat yaws. My interest in yaws, however, stems from it being the first disease to be researched on by a Gold Coast doctor.

In 1927, Dr. Charles Elias Reindorf, then Medical Officer of Health in the Akwapim District of the Eastern Region, presented a thesis on yaws to Durham University in the UK to obtain a Doctorate degree in medicine.¹⁰ Dr. Reindorf qualified as a doctor in England in 1910 and returned to the Gold Coast to work as a General Practitioner for 10 years followed by 6 years as Medical Officer of Health for Akwa-

pim District of the Eastern Region. During the 6 years as DMOH, he saw and personally treated 7,982 cases of yaws. I do not know if any of our doctors will beat this record, but I am happy to note that Dr. Reindorf wrote a thesis on this and thus became the first Gold Coaster to obtain a higher qualification in Medicine.

From 1956 to 1966, a mass yaws campaign sponsored by WHO and UNICEF using long acting penicillin (PAM) was able to reduce the incidence of yaws to about 5,000 cases in 1966. Unfortunately, 10 years later in 1976 more than 56,000 yaws cases were reported.¹¹ Another mass campaign had to be mounted in 1980, this time in combination with Yellow Fever Immunization. Again, the incidence dropped. During the latter part of last year my students visited Deگو in Akwapim South District where they reported an almost 100 per cent infection rate among the children. My friend Dr. Chartey Marbell and his colleagues have also monitored the increasing incidence of yaws in the Suhum Kraboa Coaltar District during the last five years.

The lesson here is to be found in a sound community health principle which states that "Diseases whose origin, maintenance and spread in the community are essentially due to defects in the social, economic and cultural structures of that community cannot be eradicated or controlled unless the social, economic and cultural defects are themselves corrected."¹²

5. *KWASHIOKOR*

Year: 1931; *Place:* Accra; *Person:* Williams, C.

The English name for this nutritional disorder is Protein Calorie Malnutrition (PCM). The disorder is very prevalent in Ghana. Prevalence rates of up to 50 per cent are quoted for children under 5 years in some parts of Ashanti, Brong

Ahafo, Upper East and Upper West Regions; and although both the spelling and the pronunciation are tending to discourage the use of its original name, nobody can dispute the fact that this syndrome was first described in Accra among the people who gave the name *Kwashiorkor* to the medical vocabulary.

This was the work of Dr. Cecily Williams who worked in the Gold Coast in the 1930s.¹³ In the 1960s, the work of Dr. Fred Sai and others got the policy makers to give nutrition the priority it deserves by the creation of the National Food and Nutrition Board. Unfortunately, this Board had only a short history and after many metamorphoses is now the Nutrition Division of the Ministry of Health. Nutrition, however, continues to be one of our challenging health problems. It is a very complex problem with roots in education, culture and agriculture. Its solution must, therefore, be multi-disciplinary and intersectoral.

6. *TRYPANOSOMIASIS*

Year: 1937; **Place:** Kintampo; **Persons:** Saunders, G. T., Akwei, E.

In the year 1937 when epidemics of trypanosomiasis (sleeping sickness) were sweeping across Africa, from East to West, the Medical Department of the Gold Coast set up an adhoc medical team, called the Tsetse Unit, to control the disease and its vector – the tsetsefly. This Unit was originally based at Gambaga in the then Northern Territories and headed by an expatriate Dr. G. T. Saunders, who later became the first Specialist Epidemiologist of this country.

His team moved from village to village looking for cases and treating them. They also set up treatment camps. The treatment campaign was so successful in bringing the disease under control that the activities of the organization were

extended to cover yaws and tsetse control was dropped. Fortunately, the Ministry of Agriculture quickly picked up the tsetse control, because the disease attacks cattle too.

The Trypanosomiasis/Yaws campaign later became the Medical Field Unit (MFU) of the Ministry of Health in 1947 when its headquarters was moved to Kintampo in the Brong Ahafo Region and more diseases added to its work. It was the MFU which reduced the disease burden of many of our rural communities. It reached out, treating common ailments and vaccinated people against smallpox, yellow fever and measles. It also started mapping the endemic diseases of Ghana. From 1950 to 1965, the MFU was the pride of the Ministry of Health. In 1968, as part of a regionalization exercise, the headquarters was moved from Kintampo to Accra, and this formed the nucleus of the present Epidemiology Division of Ministry of Health.

The first Gold Coast doctor to work with Dr. Saunders was the late Dr. Eustace Akwei who later became the first Ghanaian to be appointed Chief Medical Officer of the Ministry of Health. Dr. Akwei was removed from this post by Dr. Kwame Nkrumah in 1959, and he joined WHO in Brazzaville. After Nkrumah's overthrow, the government of the NLC restored him to the same post and he was subsequently made Minister for Health, but the Apollo 568 attacked him, and he retired into general practice. He died a few years ago. All who knew Dr. Akwei can testify to his quiet disposition, intellectual ability, organisational skills and strict adherence to principles. In fact, Dr. Akwei's only offence was that he was too principled for the politicians.

7. *LEPROSY*

Year: 1952; *Place:* Ankaful; *Person:* Konuah, K. G.

The inclusion of leprosy in this list was based on the fact that our account of disease control in Ghana cannot be complete

without the name of Dr. K. G. Konuah for reasons which will be obvious to you if you are a little patient. My problem, however, was how to find a disease to represent his contribution to disease control in Ghana. Fortunately, one of our weeklies, recently drew my attention to his association with the lepers of Jomo, now in Weija. To be associated with lepers is humane, and to found Accra Academy is visionary. I did not go to that School, but many of our top doctors did, so did many of my good friends. Dr. K. G. Konuah is, however, not a "care of", he is mentioned here on his own merit.

In 1952, a Commission of Enquiry into the Health Needs of the Gold Coast was set up with Sir John Maude as Chairman. There were three other members including one African, Mr. K. G. Konuah. Among the many recommendations of this commission, four stand out:

- (1) The building of health centres and health posts in the rural areas.
- (2) The expansion of the activities of the Medical Field Unit (MFU) of the Ministry of Health (which I have discussed already).
- (3) Government assistance to be given to the Missions to enable them to provide more health care, especially in the rural areas.
- (4) That the Medical Research Institute should also provide a library of reference books and periodicals on scientific subjects which would meet the needs of not only researchers, but of medical officers generally, offering a lending service to officers outside Accra.¹⁴

These revolutionary and far reaching recommendations could only have been made by statesmen and to me Dr. K. G.

Konuah fulfils Churchill's definition of great statesmen. According to Churchill "All great statesmen are rounded individual with more skills than one". Dr. Kofi George Konuah is an honorary graduate of this University. He was awarded L.L.D. (Honoris Causa) in 1963.

Today, the Headquarters of the Leprosy Service is at Ankaful near Cape Coast, a facility built in 1957 through the generosity of the Commonwealth Trust.

8. *DIABETES*

Year: 1958; *Place:* Accra; *Person:* Dodu, S. R. A.

According to Professor S. K. Owusu who is a leading authority on diabetes in Ghana, the first attempt at a study of the incidence of the disease in West Africa was made by Professor Silas R. A. Dodu, in 1958 when he did a diabetic detection survey among 4,000 casual out-patients attending the Korle Bu Hospital in Accra.¹⁵ He detected 35 cases of sugar in the urine among his study population.

About 20 years later (1976), Owusu¹⁶ was to report an annual incidence rate of 0.3 per cent at the Korle Bu Teaching Hospital (KTH). Assuming a 10-year duration for diabetes, this represents a prevalence rate of 30/1000 compared to Dodu's 9/1000. One can thus infer that diabetes among the people of Accra is increasing.

Professor Silas R. Dodu is the first Ghanaian Physician Specialist, and the first Professor of Medicine and Therapeutics in the University of Ghana Medical School. He was Dean from 1972 to 1976. Apart from his contributions in the early studies of both diabetes and hypertension in Ghana, I salute him as a medical educationist and the founding editor of the *Ghana Medical Journal*.

9. *MALARIA*

Year: 1961; *Place:* Ho; *Person:* Beusoleil, E. G.

As you all know, malaria is the most important disease in Ghana. It is the leading cause of morbidity among all age groups, and a major cause of mortality in the under 5's.

Malaria control in Ghana has had a very chequered history. In the early colonial days, the Europeans were segregated from the "natives" in Ridges and Cantonments and were advised to sleep in mosquito nets and to take quinine tablets which were also sold at Post Offices to the natives. In the 1950s, a trial of chloroquinized salt was made in one of the districts of the North. Chloroquinized salt produced in Accra was sold cheaper in that district to encourage its wider consumption. Unfortunately, the local entrepreneurs quickly saw the economic threat in this exercise and sabotaged the programme by alleging that "cheap salt" caused impotence.¹⁷ Probably, it was good for this programme to be sabotaged but the reason given was false. We now know that too much chloroquine can lead to blindness and also that the chloroquine pressure is a factor in the development of resistant strains of the parasite.

Around the same time, WHO Experts started a Malaria Eradication Pilot Project based at Ho. By mid 1961, when all the necessary mapping and training had been completed and a large consignment of DDT with spray pumps and vehicles had been assembled, the project had to be abruptly discontinued, when it was realized that Togo, our next door neighbour, had not reached the same level of preparation. Such operations need not only inter-regional collaboration, but also the commitment of funds to sustain the programme for many years, and these prerequisites were not available.

Dr. E. G. Beusoleil, the first Ghanaian Malariologist worked with entomologists like Professor W. Z. Coker on this

Project at Ho. Professor Coker gave a ringside view of this in his inaugural lecture some three years ago.¹⁸ Dr. Beausoleil later became Director of Medical Services. He was also retired prematurely; like his predecessors, joined WHO in Brazzaville, from where he retired recently. I personally remember him for the support he gave to the idea of training our medical students in the districts. He was instrumental in the building of a hostel for our students to use at Akosombo, way back in 1975. He showed an unusual foresight by this act.

To date, we are yet to detail a national malaria control strategy. Meanwhile, both the parasites and the vectors are known to have developed resistance to the commonly used drugs and insecticides.

10. HIGH FERTILITY

Year: 1969; *Place:* Amanokrom; *Person:* Omaboe, E. N.

Although Family Planning services in Ghana were started by the Christian Churches and the Planned Parenthood Association of Ghana in the early 1960s, it was not until 1969 that the government produced what was hailed as one of the most comprehensive population policies in the third world.¹⁹

In the preface to the policy paper which was entitled *Population Planning for National Progress and Prosperity*, the then NLC Commissioner for Economic Affairs, Mr. E. N. Omaboe, better known as Nana Wereko Ampem II, stated:

The publication of this policy paper on population marks an important milestone in Government's efforts to improve the quality of our human resources and assure a decent and modern standard of living for Ghanaian families. This is the first time in the history of this country that the government has defined its policies on population and has taken a definite stand in the matter of population growth.

Many of you may not know that before assuming his royal duties, Nana, who incidentally belongs to the royal families of Amanokrom and Osu Kinkawe, was the Chief Government Statistician in the early 1960s. Under his able leadership, Ghana was to build one of most efficient and competent Central Bureaux of Statistics in black Africa. He was also one of the brains behind the epoch-making 1960 census.

Nana's input in helping the government of the day to recognize and take a definite stand in the matter of population growth, and his role in building the Central Bureaux of Statistics were significant contributions to disease control in Ghana. Today, we accept immunization as an effective means to protect our infants from the six childhood killer diseases. This technology, however, is useless, unless we can mobilize our resources, both human and material, to ensure that all babies are immunized within a matter of only 9 months.

This underscores the point that we should at all times have a proper account of our population and the number of babies that are born or die in each locality each year. I am happy to note that the CDRs have added the keeping of Community Registers to their roles. I hope they will endeavour to educate our people to understand the reasons behind the registration of these vital events.

11. TYPHOID FEVER

Year: 1969; ***Place:*** Berekum; ***Person:*** Archampong, E. Q.

Typhoid fever (or Enteric fever) is a disease which is associated with poor personal hygiene and poor disposal of excreta. Its incidence is, therefore, a good indicator of personal and public hygiene. It is only when improvement in personal hygiene and sewage disposal have been achieved that the incidence of the disease declines.

My interest in sanitary reforms was jolted in 1969 when I read an article by Professor E. Q. Archampong.²⁰ The 17.9 per cent incidence of perforation and the 29.8 per cent mortality rates in Ghana that he wrote about were very alarming.

Through good research into the surgical management of typhoid fever, Professor Archampong and his colleagues have been able to reduce this high fatality rate to a more comfortable level at Korle Bu.

Professor E. Q. Archampong is the current Dean of University of Ghana Medical School. To me he belongs to the orthodox sect of British Medical Practice. He is a senior professional brother of good repute and a fine scientist. This makes him a very good reference person to turn to on controversial medical matters. In my opinion, the School is very fortunate in having him as Dean during this period of new reforms in medical education. He is capable of blending the new and old.

The significant contribution which Professor Archampong and his colleagues at Korle Bu have made in reducing the fatality rate of typhoid has, however, not been matched by our efforts to prevent the disease. Thus, typhoid is still an important disease in our district hospitals; for example, in Berekum Hospital its position among the top 10 diseases has not changed over two decades.

12. CHOLERA

Year: 1970; *Place:* Akplabanya; *Persons:* Pobee, J. O. M., Grant, F. C., Salles, C. A.

Cholera is the disease which provokes the greatest emotion in me. So I should be forgiven if I gave it more attention than it deserves in the Ghanaian context.

Before I left Ghana in 1959 to study medicine, I had

observed that although personal cleanliness was a valued asset in our culture, our cities and big towns were quickly developing sanitation problems, which unfortunately did not seem to worry anybody. At that time, the disease cholera was unknown in Ghana, and indeed West Africa.

Therefore, when as a student I heard, how in the early 19th century, cholera was able to invoke the fear of God in English men and women, at a time when their standard of environmental sanitation was similar to ours in Ghana. I began to pay attention to this disease, and to the Sanitary Movement, led by Edwin Chadwick in England during the mid nineteenth century.²¹ Incidentally, Edwin Chadwick was a lawyer and not a doctor.

The more I thought about this matter, the more I became convinced that nothing short of a cholera epidemic will awaken our civic and health authorities out of their slumber. My fantasy with the idea that Ghana needed to be shocked to take sanitation more seriously, led me to toy with the idea of smuggling *Cholera Vibrio* into Ghana from India where it was endemic.

It was at this point that I applied to join the Medical School, and the School made arrangements for me to go to the Centres of Disease Control, Atlanta Georgia, USA to have experience in what Professor Sai described as “diseases of high frequency”.

At Atlanta, I was attached to the Diarrhoea Diseases Unit. The work here consisted of field and laboratory investigations of diarrhoea diseases, and surveillance of cholera world-wide. In August 1970, I was manning the cholera desk when news filtered through that cholera had reached West Africa, Guinea to be precise. Later on, we had confirmation of this from several sources, but the Government of Guinea denied that there were cases of cholera within her borders.

After much debate it was recommended to WHO that it should go ahead and announce that Guinea had cases of

cholera. This was in clear contravention of the International Quarantine Regulations, which require WHO to report cases of diseases only after they have been reported to it by member states. This violation established for the first time the principle that the health of the world's people is more important than the sovereignty of member countries. I was on my way back to Ghana when Pobee, Grant and Salles documented the first case of cholera in Ghana in September.²² A Togolese national in transit at the Kotoka International Airport from Conakry, Guinea collapsed and was found to have cholera. Although this was an imported case, it was a warning to future events. I arrived in Ghana on 13th November, 1970 and reported for duty on 1st December, 1970. My first assignment was Cholera Control. I could not believe it! A full blown epidemic of cholera was sweeping through many of our coastal villages. Two of the worst hit areas were Akplabanya in the Ada District and Nyanyano in the Winneba District.

As the Chief Epidemiologist of the Ministry of Health (MOH) was away on another assignment, the then Director of Medical Services, Professor Sai asked a small group in the Medical School – Dr. Wurapa, Dr. Derban, Dr. Ofosu-Amaah and myself to organize the cholera control programme, and we set to work immediately. It did not take long for us to discover to my surprise that in fact the epidemic at Akplabanya was caused by “smuggled *Cholera vibrios*”. At the time, some Ghanaians were fishing in the waters of Togo, Liberia and Guinea. One of the fishermen in Togo died and although by then a sanitary cordon had been placed on our borders, his relatives managed to smuggle the corpse into his home town Akplabanya, near Ada and the usual burial rites were performed. It was after this burial that the disease started spreading along our eastern shore. A similar incident from Guinea produced a focus west around Nyanyano.

At first, the disease was only along the coast, so we

worked hard to investigate reported outbreaks, set up treatment camps, vaccinated people against cholera and treated contacts with tetracyclines. The population was also educated on measures to prevent the spread of the disease, but the disease kept on spreading and by July 1971, Ashanti Region began to report cases, indicating that cholera was spreading across the country. Therefore, our attempts to prevent cholera from taking root in Ghana failed, and the disease persisted and it is now endemic, with occasional epidemics. Currently, the city of Accra is experiencing an epidemic which started in the middle of last year. It is obvious that our dreams for sanitary reforms in Ghana are yet to be fulfilled.

13. SICKLE CELL DISEASE

Year: 1971; *Place:* Accra; *Person:* Konotey-Ahulu, F. I. D.

“A comprehensive statement of the natural history of sickle cell disease as it presents in Accra, based upon more than 1,550 (one thousand five hundred and fifty) consecutive patients personally observed and followed up by the author for more than five years” was the subject of a thesis presented for the degree of Doctor of Medicine in the University of London in 1971 by Dr. F. I. D. Konotey-Ahulu.

In his thesis, Dr. Konotey-Ahulu^{2,3} documented and publicised the fact that Sickle Cell disease is a public health problem in Ghana requiring both national and international attention. This led to the establishment of the Centre for Clinical Genetics, of which he was the first Director in 1975. Last year, the centre treated 4,753 adults and 3,466 children. Dr. Konotey-Ahulu also emphasized the role that genetic counselling should play in the control of this disease. I hope it will be an examination subject for the SSS (Senior Secondary schools).

Dr. Felix Konotey-Ahulu was a Senior Lecturer in the Department of Medicine, when I joined the Medical School. He was a good clinician and researcher, and a prolific writer. He was for many years the Editor of the *Ghana Medical Journal*. To some of us he was a shining example and an inspiration at Korle Bu in the 1970s.

14. ONCHOCERCIASIS

Year: 1974; *Place:* Bolgatanga; *Person:* Noamesi, G. K.

Today we read about Onchocerciasis (river blindness) free zones in Northern and Upper Ghana, but the picture was very different 50 years ago. At the time, the whole Volta River basin was infested with the small black flies whose bites and the blindness that followed made many people to abandon these fertile lands. The first person to draw the attention of the government to the hitherto unknown and even disbelieved high prevalence of blindness in the North was Dr. B. B. Waddy who headed the MFU after Saunders. His report in 1947 led Sir John Wilson to coin the term "river blindness". Dr. Waddy was one of the expatriate doctors whose love and concern for the health and well-being of the people of northern Ghana should not be forgotten.

But my hero is Dr. G. K. Noamesi. He is an entomologist and it was he who first demonstrated the long flight range of the simulium fly, and also demonstrated the effectiveness of controlling these flies by spraying with chemicals.^{24, 25} He did this from Bolgatanga Headquarters in the 1950s. This forms the basis of the present strategy of onchocerciasis control. In 1974, the West African Onchocerciasis Programme funded by WHO, UNDP, FAO and World Bank was set up to eradicate onchocerciasis from eight (8) West African countries by 1993. Much progress has been recorded hence the onchocerciasis free areas we read about now. Dr.

Noamesi who also left Ghana to work abroad for many years is back to his Hohoe home where he is now promoting herbal medicine.

15. POLIOMYELITIS

Year: 1977; *Place:* Danfa; *Persons:* Ofosu-Amaah, S., Kratzer, J. H., Nicholas, D.

The risk of permanent paralysis is the predominant feature of poliomyelitis, and the dread of disability has profoundly affected society's attitude to the disease. Unlike other dangerous diseases, the victims of polio live on, many of them permanently disabled.

In Europe and America, epidemics were recorded between 1940 and 1960. With the introduction of vaccination, the incidence declined rapidly and it was thought that polio was no longer a public health problem because it was the teaching at the time that poliomyelitis was not common in the developing world where the generally poor hygiene and sanitation led to early acquisition of immunity to this disease. In 1977, however, Ofosu-Amaah and his colleagues were able to explode this myth. By just counting lame limbs of school children in the Danfa area and then nation wide, they were able to compute that the annual incidence of polio in Ghana was 2–3/1000.²⁶ This was higher than the highest incidence Europe ever saw. Similar studies in other developing countries were to confirm this finding. Even if this did not win a Nobel Prize because of its simplicity, and low budget, it brought polio back on the international agenda, and today polio features prominently among the six immunizable diseases of childhood, and it has been billed as one of the diseases to be eradicated by the year 2000.

16. SCHISTOSOMIASIS

Year: 1979; *Place:* Wa; *Person:* Scott, D.

Next to malaria, schistosomiasis (bilharziasis) is the most prevalent disease in Ghana. Both the bladder and intestinal forms of this disease exist, but the former predominates.

Although recent studies have documented its explosion along the Volta lake,²⁷ this is not a new disease in Ghana. It was mentioned in the early Annual Health Reports of the Gold Coast. Every level of prevalence up to 100 per cent can be found in children, in various localities in Ghana. In fact, it is doubtful whether there are districts in Ghana where surface water is fairly accessible to a good-sized population without this disease.

Research into this disease started in the mid 1950s at Wa in the Upper West Region. In 1970, the Ministry of Health in collaboration with WHO and UNDP set up a Schistosomiasis Research Project to study the methodology of the control of schistosomiasis in man-made lakes.²⁸ This project which ended in 1979, was directed by Dr. David Scott a Cambridge graduate who came to Ghana in 1947. He rose to become a Specialist Epidemiologist and was in charge of the MFU from 1955 to 1962. He left Ghana in 1966 to teach in Liverpool School of Tropical Medicine and Hygiene before joining WHO and returned to Ghana in 1970. After retirement from WHO in 1979 he also joined our Department. Dr. Scott loved Ghana, and was very active in our attempts to institutionalize local post graduate training in Community Health. He died in 1982 while in the service of our medical school and was buried at the Osu cemetery. Dr. Scott was a very modest and kind man and a very good teacher. His classic *Epidemic Diseases in Ghana 1901-1960*,⁷ should provide inspiration and guide to any of our young doctors who will choose Epidemiology as his vocation.

Unfortunately, in spite of the good research work done, schistosomiasis is on the increase and what is now worrying is the spread of the intestinal form of the disease especially in the Ada district.

17. AIDS

Year: 1986; *Place:* Somanya; *Persons:* Neequaye, A. R. *et al.*

In the wake of the pandemic of AIDS (Acquired Immune Deficiency Syndrome) the Ministry of Health set up in September 1985 a technical committee to monitor AIDS in Ghana. The National Technical Committee on AIDS was composed of experts in the field of Clinical Medicine, Hematology, Epidemiology and Virology. The Chairman of this Committee was Dr. Alfred Neequaye who is a Physician Specialist and a Senior Lecturer in the Department of Medicine of UGMS. Facilities for the diagnosis of AIDS were established in Accra in November, 1985 but it was not until March 1986 that Neequaye and his colleagues documented the first case of AIDS in Ghana.²⁹ From then on increasing numbers of both cases and HIV sero-positives have been reported. As of December 1990 the provisional figures were 2,237 cases and 4,153 HIV sero-positives.

The pattern of AIDS in this country is very interesting. In the beginning most of the cases were reported from the Eastern Region, particularly around Somanya in Kroboland, and the majority of the cases were females aged 20–50 who had returned from Cote d'Ivoire.

Few of you may, however, know the historical link between AIDS in Ghana and the Akosombo dam. In 1975, I was fortunate to be awarded a WHO fellowship to visit man-made lakes in Africa. One such lake is at Kossou in Cote d'Ivoire. The dam at Kossou was built immediately after our

Akosombo dam by the same contractors, and I remember that I found a Ghanaian settlement near the hotel at Kossou. Many of the women there came from villages like Manyakpo-wuonor, Noaso, Agomanya, Asite, Trom, Odumasi, all around Somanya. Apparently, some of the women who serviced the dam builders at Akosombo had followed them to Kossou and they were having very lucrative business in prostitution and this made it fashionable for the girls in Kroboland to go to the Cote d'Ivoire for wealth. This was how the seeds were sown and one of the spoils of the enterprising drive of Krobo womanhood was the importation of AIDS into Ghana from our neighbouring country.

Whether there is too much talk about AIDS in Ghana is to me, rather academic. From the epidemiological standpoint, we have a fatal disease for which we have no cure and no vaccines. The claims of our herbalists are yet to be confirmed. Except for those who are unfortunate to get the disease from their mothers at birth or through blood transfusion, the main channel of spread is by sexual intercourse.

So we should all *talk* about AIDS, reminding ourselves everyday that if we can't be good, we should be careful, and when in doubt to use *condoms*.

18. DRACUNCULIASIS

Year: 1988; *Place:* Momo; *Persons:* Sasakawa, R., Former US President Carter, J.

In March 1988 the second regional workshop on Dracunculiasis (Guinea Worm Disease) in Africa was held here in Accra. Former President Carter of the USA came over to announce that Global 2000 will add the eradication of guinea worm to its activities in Ghana, and the eradication year was to be 1995. This very good news was followed by another visit in

1989. This time, the former President came with Mr. Ryoichi Sasakawa, the 92 year old Japanese founder of Global 2000³⁰

Guinea worm disease is a very disabling parasitic infection which is spread through drinking dirty water, and so its solution is the availability of potable water.

In Ghana, 6,515 endemic villages and 179,483 cases had been identified by the end of 1990. No region is free from this disease, but the village of Momo in the Grushie/Karaga district of the Northern Region demonstrates how bad the problem can be: 133 of 206 (65 per cent) inhabitants had guinea worm disease at the last count.³¹

Former President Jimmy Carter is so well known that he needs no introduction to an audience like this, and his friend Mr. Ryoichi Sasakawa, has a citation written by the Republic of Ghana, when he was awarded the Grand Medal two years ago.

All that I like to do is to thank God for the lives and examples of these two great men because of their concern about the plight of our rural communities. The immediate success of Global 2000's agricultural initiative in Ghana is already evident, but its long-term benefit in terms of improved nutrition when combined with the effects of Guinea worm eradication will surely change the lot of Ghanaians especially the rural dwellers.

THE FUTURE

In case any of you might find my retrospective or backward-looking approach unsatisfactory for such an occasion, let me remind you of Karl Marx's statement³² that "we know only

a single science, the science of history” and add Goethe’s observation that “the best thing we derive from history is the enthusiasm it raises in us” before proceeding to assure you that the Department of Community Health, our little department, is very progressive and hard working.

We have many ideas for Ghana and we are confident about its future. As we begin the last decade of the 20th century, we are happy to note that Ghana is a healthier place to live in than the Gold Coast was 90 years ago. The infant mortality rate is now about 90—/1000 live births, it was 360 in 1915. Life expectancy at birth was 31 in 1905. It is now 58 years. Smallpox has been eradicated, and this has given us the confidence to dream about the eradication of other diseases like polio, guinea worm, and neonatal tetanus.

In partnership with the international community, we have accepted the social goal of Health For All by the year 2000 through PHC. Members of my Department were very active in conceptualizing a Primary Health Care Strategy for Ghana, years before Alma Ata.³³ It is the Primary Health Care Strategy on which I place my hopes for the future of our country. It is almost 10 years ago when I preached the virtues of PHC from this very podium. I stated then that, it was technically sound and socially just; but cautioned that the prerequisites for its rapid implementation in this country were then not available. We have now come a long way. The administrative structures have started to improve with the coming into being of the District Assemblies and decentralization policy. Our economy is showing some signs of recovery, even if we should have PAMSCAD (Programme of Action to Mitigate the Social Costs of Adjustment).

Through our local postgraduate training programmes we have some of our own students and former associates in the field. We can acknowledge the contributions being made by doctors like:

Dr. Kofi Ahmed, Chief Epidemiologist, Ministry of

Health

Dr. Sam Adjei, Director of Operations, Greater Accra Region

Dr. Charlotte Gardiner, Head of the MCH Division of the Ministry of Health.

Dr. Phyllis Antwi, Programmes Manager, AIDS Programme

Dr. Samuel Akor, Head of the Rural Training School at Kintampo

Dr. Victor Okoh, Chief Medical Officer, Volta River Authority (VRA)

Dr. Nana Enyimayew and Dr. Emmanuel Mensah are Regional Medical Officers of Health. Dr. Nora Bonsu-Bruce is working for the Prison's Services and Dr. E. O. Laryea is a private medical practitioner and Chairman of Ghana Organization of Voluntary Associations. We note with much satisfaction the diversity of the careers of these products of ours. We note the increasing number of young products of the school who without further training are heading District Health Management Teams.

We also have a number of international and bilateral organizations like WHO, UNICEF, UNFPA, USAID, ODA, CIDA, SIDA, our Churches, World Vision and other non-governmental as well as private organizations that have all demonstrated their concern for and willingness to assist us to raise the standard of living of our people.

Above all, community participation has rapidly gained ground and has become an important part of Primary Health Care. The only problem that I see in my travels round the country is the competition, duplication and lack of co-ordination or collaboration among all these organizations/agencies and the resultant confusion they produce among the very communities they seek to help.

We seem to have detailed a good national PHC strategy

but have not yet put in place a national body to co-ordinate and direct the constituent programmes. I consider this as the unfinished business of our generation and would like to use this platform to advocate for the setting up of a national body to harmonize and co-ordinate all disease control activities in Ghana. Such a body will have research, training and service functions. Some of these are now being carried out within some organizations like the Medical Schools, Noguchi Memorial Institute for Medical Research, the Ministry of Health, the Council for Scientific and Industrial Research. But without proper co-ordination and direction, our limited resources cannot be judiciously and optimally used to benefit the majority of our population.

I believe the Ministry of Health is taking the initiative in this matter. My only plea is that there should be proper consultation with all concerned so that the body set up does not later suffer the fate of the erstwhile National Institutes of Health and Medical Research.

One other problem that needs mentioning here is the changing pattern of diseases in Ghana. Although we still have a preponderance of infectious and parasitic diseases, other diseases like hypertension, diabetes, cancers, and arthritis are also increasing and we need to institute measures for their prevention and control. Problems of drug abuse, environmental degradation and teenage pregnancies deserve equal attention.

Undoubtedly, the 1980s were the glorious years of our Department. It was the time that we produced locally, a crop of Community Health Specialists. I am sad to note that our fortunes are gradually dwindling. We need to replenish our staff and our logistic support, if our good programmes should continue. I will, therefore, appeal particularly to the Ministry of Health and our past students to come to our aid, so that the School will continue to produce doctors who are well grounded in Community Health.

CONCLUSION

In conclusion, I like to state that, the main weapons of disease control in this country during the last 90 years have been:

- (1) Vaccines
- (2) Drugs
- (3) Insecticides

There is now evidence, exemplified by the AIDS pandemic and the increase in non-infectious disease, that these weapons are no longer sufficient and that certain programmes are also required. Five of these are:

- (1) Environmental Protection
- (2) Functional Literacy
- (3) Family Planning
- (4) Income-Generation Activities
- (5) Health Education

Fortunately for us in Ghana, we already have blueprints of all five which should now be brought together under one umbrella – COMMUNITY HEALTH AND DEVELOPMENT. I do not therefore share the view that HFA/ 2000 is a dream. It is a possibility so we should all have faith and confidence in our country and its future.

In his Christmas message to the country in 1957, the year of our independence, Dr. Kwame Nkrumah our first Prime Minister stated *inter alia*.

My first objective is to abolish from Ghana poverty, ignorance and disease. We shall measure our progress by the improvement in the health of our people; by the number of children in school and the quality of their education; by the availability of water and electricity in our towns and villages and by the

happiness which our people take in being able to manage their own affairs. The welfare of our people is our chief pride and it is by this that my Government will ask to be judged.

If we have not achieved this objective, we have also not abandoned it. Let us, therefore, brace ourselves to our duties, so that should some of us be lucky to live well into the 21st century, our children and grandchildren will say that the 1990s was our finest decade.

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