Western Medicine in a Community in Ghana: A Social Change Review

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ABSTRACT

This study focuses on Western medical practices in the Atiwa District of Ghana. The people of Atiwa District accessed Western medicinal practice to prevent and cure diseases. Before the advent of Western medical practice in the Atiwa District, people were unable to access Western medicine due to the challenges with travelling or trekking from rural communities to the towns where they would find limited Western oriented health centres/hospitals. Although there were challenges, the local population continued to highly embrace practitioners and also accessed the basic Western oriented medical facilities. Western medical strategies were used to combat skin diseases, stomach aches, and malaria that was prevalent in the Atiwa District. The other diseases which afflicted the people and which required urgent attention included cerebrospinal meningitis (CSM), tuberculosis and HIV/AIDS among others. Findings from the study revealed that the introduction and success of western medical practice in the Atiwa District could not have been possible without a positive reception from the indigenous people. Importantly, this study has projected the relevance of public health in the history of the people of Atiwa and the significant roles played by governments to ensure the promotion of good health at the District.

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Introduction

Referring to Washington (2007), Adu-Gyamfi *et al.* (2018) argued among other things that Africans especially from the Sub-Saharan region did not cordially receive western medical practices because of fear and the lack of trust in the medical practitioners. Irrespective of the challenges that were largely found within the twentieth century Africa, western medical practice and the activities of practitioners, the literature on the Nineteenth Century Gold Coast and Asante in particular records that in 1817 he [Thomas Edward Bowditch] an European gave medical advice and medicine to the people of Asante on his arrival and during his stay in Kumasi (Adu-Gyamfi *et al.* 2018; Bowditch 1819, 35). Bowditch argues that every morning slaves and children were brought to him for medical advice and treatment for diseases such as dropsy, craw-craw, yaws, fever and bowel complaints.

Twumasi (1975) in his 'Medical system in Ghana,' argued that western medical services in Ghana could be dated to the colonization of the country by the British in 1844. He agrees with Addae (1996) based on records that formal medical work in Ghana started in 1878 (Twumasi 1975, 350). Twumasi (1975) argued that Western medical practice did not find its way smoothly into Ghana. Initial opposition was felt from the population because the traditional cosmology was against the scientific explanation of disease; it was rather in support of supernatural or social causation of illness. Twumasi (1975) noted that under the leadership of the British governor, Sir Gordon Guggisberg, the first health plan was enacted to give Ghana its first scientific medical institution in 1924 which was the Kole Bu hospital. In 1957, the government built the first health centres throughout the country with the exception of western and the central region with the excuse that the Kole Bu Hospital in Accra gave medical care to patients from the two regions. The government also established medical field units to control environmental diseases (Twumasi 1975, 355).

Referring to Patterson (1981), Adu-Gyamfi *et al.* (2018), argued that the preventive and curative medicines that were introduced by the British in the twentieth century had a significant impact on the health of Ghanaians.

Especially, by the 1920s, the British colonial administration showed a commitment toward improving the level of health among the indigenous population partly because of their self-interest and partly because many administrators and physicians wanted to do away with human suffering (Adu-Gyamfi *et al.* 2018, Patterson 1981, 175). The new medical policy and interest as pushed forward by the British Colonial administration within the period under review could also influence the people of Atiwa in the Eastern Region of Ghana. Closely linked to this discourse is the question that relates to the prevailing environmental conditions within the period under review. The theorizing literature emphasizes unfriendly or harsh environmental conditions at the Coastal regions of the Gold Coast prior to the 1880s (Addae 1996, 179). These narratives as presented in the literature are contrasted by the research of Maier, who referenced Dupuis that the inland towns were clean, pleasant and good to live there (Maier 1979, 64). Adu-Gyamfi *et al.* (2018) referring to Akyeampong (2006) argued that the environment of Africa, more importantly the tropical rainforests, emphasized the issue of a mass of bacteria and parasite where single-celled organism flourish (Akyeampong, 2006). Significantly, as reported by Adu-Gyamfi and Donkoh (2013), the people of Asante including those in the hinterlands suffered from different kinds of diseases including cerebrospinal meningitis (CSM), common colds, malaria, sexually transmitted diseases among others (Adu-Gyamfi and Donkoh 2013, 3). It has been argued among other things that these diseases were largely attributed to the environment and the lifestyle of the people.

The existing literature on Ghana pays attention to curative and prophylactic as well as general preventive and public health measures. Adu-Gyamfi *et al.* (2018) referring to Parry *et al.* (2004) have argued that countries used vaccines to deal with diseases found in Africa. Some of the vaccines included: Bacille Calmette-Gerin (BCG) for TB and leprosy; Oral Poliomyelitis Vaccine (OPV); Diphtheria, Pertussis and Tetanus (DPT) as a triple vaccine; Measles; Yellow Fever; Haemophilus Influenza type B (HIB); and Hepatitis B Vaccine (HBV) (Adu-Gyamfi *et al.* 2018; Parry *et al.* 2004, 9). Again, Adu-Gyamfi *et al.* (2018) referring to Patterson (1981) have argued that throughout

the twentieth century, there were larval control mechanisms. The killing of adult mosquitoes was ineffective until the introduction of *dichloro diphenyl trichloroethane* (DDT) (Adu-Gyamfi *et al.* 2018; Patterson 1981, 170). As reference in Adu-Gyamfi *et al.* (2018) and Addae (1996), the other strategies employed to prevent disease as found in the literature include quarantine, segregation, lagoon drainage, reclamations and persistent spraying of vectors (Adu-Gyamfi *et al.* 2018; Addae 1996, 165).

Significantly, the existing literature points to the fact that western medicine was introduced to the people of Ghana by the Europeans. However, the literature scarcely reports on western oriented medical therapies and practices as found in the Atiwa District in the Eastern Region of Ghana.

In this study, western medicine as defined by Opoku *et al.* (2015) and reported by Adu-Gyamfi *et al.* (2018) is 'a system of care that is based on knowledge attained from scientific process' (Adu-Gyamfi *et al.* 2018; Opoku, Addai-Mensah and Wiafe 2015, 256). Significantly, the current research which is a sequel to an earlier study seeks to re-evaluate and further analyse the extent to which social change influence the health and well-being of the people of Atiwa District in the Eastern Region of Ghana with Koforidua as its regional capital.

Theoretical Underpinnings

'Social change in a community is a process of inward response and adaptation-response to fresh stimuli emerging out of a live, dynamic and developing society, and adaptation to new ideas, both in terms of thought structure and thought processes, and to new trends in mode of life and behaviour' (Narain 1964, 1013). Changes in the society occur as a result of human interactions and relationships that transform cultural and social institutions. The idea of social change is to alter the social order of a society. Beisser (1970) indicates that these changes occur over time and often have profound and long-term consequences for society (Beisser 1970, 50). This doctrine is proclaimed by the change theory. Narain (1964) asserts that the

essence of social change lies in moulding (and sometimes even casting anew) man's ideas and mode of life in response to this process of multi-dimensional change, amounting in fact to a reoriented and perhaps even altogether new, value-pattern in society (Narain 1964, 1015). It is imperative to appreciate the collective power or effort to influence social change. That is, change does not necessarily occur from the influence of an external force but rather the decision of individuals on what they want to become. Again, Beisser (1970) argues that by rejecting the role of a change agent, people are able to make meaningful and orderly change possible-to be fully invested in their current positions (Beisser 1970, 79).

The current discourse would therefore be viewed as a case where an outsider restorative framework has been integrated into a people's culture not as a result of a coercive attempt by the outsider but the individuals' final realization of its significance to their wellbeing. The change theory places emphasis on the assumption that man finds himself in a position where rather than needing to adapt himself to an existing order, he must be able to adapt himself to a series of changing orders (Pearls 1951, 142). It is further argued by Beisser (1970) referencing the work of Pearl in the *Gestalt therapy*, that the development of the society has gone beyond the concern given to individual but rather looks at efforts that support the individual in his individuality. This assumption as explicit in the change theory becomes essential and applicable to social systems in that, orderly change within social systems is in the direction of integration; that the social change agent has his own function to play in a society in order to change consistently with the changing dynamics both within and outside the society. In this case, the preventive and curative medicines that were introduced by the British coupled with the building of health centres to cater for the health needs of the indigenous people had a significant impact on their health.

Essentially, the change theory suggest that in order for cooperation to exist between the agent and the individuals in question, it requires that there is an awareness within the system that an alienated fragment exist, and that fragment is accepted as a legitimate outgrowth of a functional need that is

then explicitly and deliberately mobilized and given power to operate as an explicit force. This, in turn, leads to communication with other subsystems and facilitates integration of the whole system (Pearls 1951, 143). Pearl's argument stresses on the fact that individuals and institutions have their respective roles they play in the development of communities. The aspect on realization of a common goal cannot be gainsaid. It is as a result of this that a study such as this, which looks at the history of western medicine in Atiwa, cannot overlook the respective roles played by the people of Atiwa and the British administration that have significantly shaped the course of development of western medicine amongst the indigenous population within.

This particular study has been categorised into four sections. The first section comprises of background to the study. The section pays attention to the theoretical underpinnings and procedures or method for the gathering of data and analysis. The third section focuses on western medical practices in Atiwa and the fourth and final section studies the prevalent diseases that infected the people of Atiwa District and the measures put in place by the western medical practitioners, the government and the local people to control those diseases from the period 1960 to 2010. Same section also captures the conclusion of the study.

Method of the study

The researchers consulted both primary and secondary sources. The primary sources included interviews with respondents; nine in number; they shared personal experiences. The responses from the severally anonymized respondents were tape-recorded with permission from the respondents. This was further recorded in a field notebook. As it was a case study, the researchers employed the purposive sampling approach to collect and analyse data from a sample of the entire population. This design enabled the researchers to explore and solicit various opinions, perceptions, and ideas of people with respect to the impact of western medicine in the study area. Etikan *et al.* (2016) indicate that by employing the purposive sampling

technique, the researcher decides what needs to be known and sets out to find people who can and are willing to provide the information by virtue of knowledge or experience (Etikan *et al.* 2016, 4). Participants who were interviewed were people who were well-informed on the subject matter. Archival sources were also consulted. The secondary sources that were used included health and medical journal articles, reports, books, and other related literature. Data analysis was generated manually to form a narrative that reflects disease combat and prevention within the Atiwa District of Ghana which has wider importance in terms of access and impact on different communities within Africa and the globalised world.

Discussions

Responses and a Discourse on Western Medical Care

Respondents have shown that by the mid twentieth century, there were no western or what is referred to as modern health facilities that focused on applying western orientated or biomedical strategies to meet the health needs of the people within the Atiwa District. Patients were not spared from the challenge of traveling long distance from the hinterlands to towns like Kyebi, Koforidua, and Nkawkaw for medical treatment (Participant 1 2017). It is important to highlight the fact that by the 1950s, the natives of Anyinam warmly received nursing sisters who gave nursing care to the sick (Participant 2 2017; Participant 3 2017; Participant 4 2016). It is important to report that, the places which were used earlier to dispense western health care were temporary locations. This notwithstanding, due to the preparedness of the western practitioners as well as the receptiveness of the natives to receive western oriented medical care due to social change, the first experimented western medicine health post within the Atiwa District, which was then part of East Akim District in the Eastern Region of Ghana became successful (Participant 3 2017).

To further highlight the zest of the western practitioners as well as the commitment of the natives of the Atiwa District; it is important to stretch the

discourse to highlight the fact that the natives of the Atiwa District were in dire need of western medical care and had also come to terms with the fact that western oriented medical care was not only going to play a complementary role. Thus far, Christianisation and western oriented philosophies was gradually going to make same to take the centre stage with respect to delivery of healthcare especially when it was duly accompanied with the right logistics and infrastructure (Participant 5 2017). It is important to emphasize that, as the number of visitors increased, the existing facility which provided western medical care was later moved to Opanin Ahya Asiedu's house. Again, highlighting the degree of Christian influence and social change in general, Opanin Ahya Asiedu was a Catholic merchant who started Catholic Church service in his house. He imported Catholicism from the Coast. His church planting agenda was supported by three people, namely; Papa Kofi Tawia, Papa Tenge, and Opanin Tawiah. Some Priests came from Koforidua and Accra to have mass with them every month. They were accompanied by a Catholic convert called Maame Awerempoa (Participant 6 2017). By far, we can infer that Catholicism and other Christian missionary activities in the area stimulated such social change which would include the natives' gradual and increasing interest for western or biomedical care. This new health post, according to our informant continuously received the support and care of Nursing Sisters and other trained practitioners from Nkawkaw and Koforidua (Participant 6 2017).

The health post was later moved from Opanin Ahya Aseidu's house to Opanin Kwadwo Badu's house. During this time, patients who had travelled long distances to seek for medical care and were referred to Nkawkaw, Koforidua or Kyebi but could not go back were given accommodation by Agya Badu (Participant 5 2017). This further epitomises the zest with which western medical practice was developed and allowed to thrive in the Atiwa District. It is also important to emphasize that housing or admission of patients into this facility also showed the general degree of care and respect that practitioners and the local people gave to those who accessed the health facility. It seems however, that, though change agents are important in

stimulating social change, the current discourse also highlights the innate desire of the people of the Atiwa District of the Eastern Region of Ghana to see change in their health status and well-being. This was seen through the imbibing of western oriented models of care which met the health needs of the local people with little or no encumbrances.

Health Centres

It is reported that the Anyinam Health Centre which is the first major medical facility found within the Atiwa District was commissioned in 1963 (Adu-Gyamfi *et al.* 2018). The leaders that ensured the successful establishment of the health centre in the district during Nkrumah's government (Kwame Nkrumah was the first president of Ghana) were the then minister of health, Immoro Igala, the District Chief Executive of East Akyem District Assembly, D.C E. Bofo, and the Chief of Anyinam, Odikro Kwaku Buabeng (Participant 3 2017). As reported by Brenya and Adu-Gyamfi (2014), the pendulum's oscillation from one end (western medical system) to the other (traditional medical system) had swung in favour of the western oriented provision of healthcare. This would be accentuated through the provision of Western medical facilities by the new independence government of Ghana, to provide healthcare for the people (Brenya and Adu-Gyamfi, 2014).

These facilities were improved upon from time to time and were also managed by health administrators and medical officers. In 1971, a Health Post was constructed at Abomosu, a community within the Atiwa District (PRAAD Koforidua and kc.13/157). Until 1979, the facility was not fully completed but had begun operations. The facility was upgraded to a health centre status in 2004. Significantly, the Anyinam Health Centre served all the towns and villages that form the current Atiwa District (Participant 7 2017). The Anyinam Health Centre under Benjamin Tabie won two awards as the best managed sub-district in 1994 and 1997 respectively (Correspondence 1993 and 1997).

Hospitals in Atiwa District

Closely linked to the efforts of both British colonial administration and the post-independence governments were the activities of Non-Governmental Organizations (NGOs). For example, the first hospital in Atiwa District started as a Non-Governmental Organization called Children Help Work for Ghana Association, domiciled at Akyem Enyiresi in 1987 (Enyiresi Government Hospital Half Year Report 2008). The focus of the NGO was to cater for the health needs of children (Enyiresi Government Hospital Half Year Report 2008). It is reported that the facility extended its health care services to the general public within its catchment areas (Participant 8 2017). The community, the Non- Governmental Organization, and the Ghana Health Service discussed at length the absorption of the facility into the mainstream health system. This led to the signing of a memorandum of understanding culminating into the final takeover of the facility on 16th January 2006. The hospital then became the referral facility for health centres, clinics, and Community-based Health Planning and Service (CHPS) compound within the Atiwa District. During the mid-year of 2008, the hospital had seventy (70) bed complement, average monthly attendance of two thousand eight hundred (2,800), an average monthly admission of about two hundred patients (200), fifty-eight (58%) percent bed occupancy, staff strength of sixty-one, doctor and patient ratio of 1: 33,219 and nurse and patient ratio 1: 2,693. Table 1 shows the profile of the Enyiresi Government Hospital in the year 2008.

The above represents the importance of hospitals in all societies, including emerging and developing societies. As reported by Smith (1999), in poor countries, distance between hospitals is not just physical. There is also functional dislocation between various types of hospitals, and between them and the primary health-care centres. Comparatively, as reported by Smith (1999), in countries like Egypt and Zimbabwe, rapid expansion of primary health care in the 1960s and 1970s in particular, brought health care nearer to a larger sector of the population, contributing to improved health outcomes (Smith, 1999). This is not totally dissimilar from the occurrences at the Atiwa

District within the period under review. It is clear that the provision of medical infrastructure (hospitals) and logistics to provide health in the Atiwa District have necessitated the increasing demand for such medical care and has also improved the health outcomes of the population within the period under review.

Table 1. *The Profile of the Enyiresi Government Hospital, 2008*

Bed Complement	70
Bed Occupancy	58%
Average Monthly Admission	200
Average Monthly Attendance	2,800
Staff Strength	61

Source: Enyiresi Government Hospital, Half Year Report 2008; Adu-Gyamfi *et al.* 2018

The advent of western medical practice in the Eastern Region where Atiwa District is located attracted high outpatient attendance and inpatient admission in the twentieth and the early part of the twenty-first century (Adu-Gyamfi *et al.* 2018, 20). In 1996, the outpatient attendance was 70,212 but had increased to 99,555 by 2007 (Ghana Health Service 2017). Inpatients admission in 1996 was 758,755 but soared to 2,186,024 by 2007 (Ghana Health Service 2017). Evidently, the data above proves that persistently high population growth affects healthcare delivery. On population growth, the above data also corroborates Egunjobi's argument that the uniqueness of African population growth is not its sheer size but the rate at which it increases (Egunjobi 1991, 60). Another contributing factor was the prevalence of non-communicable diseases during this period. The 2017 annual report by the Ghana Health Service 2017 indicates that the Eastern Region recorded the highest number of cases by 2007 as compared to the other nine regions in Ghana. For example, the total number of male populations who were affected with these diseases were noted to be 31,354 while the female populace showed 76,347. These numbers alone outstripped the overall population of both men and women recorded in other regions. Also, the increased rate of outpatient attendance and inpatient admission may be due to the increased utilisation as a result of

improved financial access resulting from implementation of the National Health Insurance scheme. The above information also indicates that the people within the region had accepted the new medical practice.

Like some parts of Africa and Ghana in particular, there were some setbacks that prevented some people from accessing the new medical practice. They included challenges such as proximity, bad roads and beliefs, but the people of Atiwa embraced the new medical practice after it was formally introduced in 1963. This was because they perceived the medical practitioners were well trained and the drugs, they prescribed were efficacious (Adu-Gyamfi *et al.* 2018, 18). One of our informants, hinted that ‘drugs given by western medical practitioners were quick and effective’ (Participant 2 2017). With the inauguration of the new health centre in the District in 1963, the people saw an improved mechanism in health service as compared to the traditional system with its inherent spiritual inclination (Participant 9 2017). Table 1 above, shows that, with a population of about 170,073 in Atiwa District in 2008, there were about an average monthly admission of 200 inpatients and an average monthly attendance of 2,800 at the District Hospital alone (Enyiresi Government Hospital Half Year Report 2008). This means that about 1.64 percent visited the District Hospital alone every month. Table 2 below shows the outpatient attendance and inpatient admission in the Eastern Region from 1996- 2007.

The table below shows an increasing number of hospital attendants (out-patient and Inpatient admissions) from 1996 to 2007. Both the outpatient and the inpatient admissions show an increasing number of people utilising the existing medical facilities in the Eastern Region of Ghana. It can be inferred that the absence of such infrastructure and biomedical facilities in particular would have increased the number of fatalities or mortality due to ill-health and the absence of medical infrastructure and health personnel. This further accentuates the broader discourses on the need for the expansion and extension of modern medical facilities to rural areas and semi-urban centres to ensure accessibility. The contrasts have been the question of financing of healthcare by the patient. This has been largely addressed by the National

Health Insurance Scheme in Ghana irrespective of its burgeoning challenges (Adu-Gyamfi, Brenya and Amoah 2015).

Table 2. *Outpatient Attendance and Inpatient Admission in Eastern Region 1996-2007.*

Year	Outpatient Attendance	Inpatient Admission
2007	99,555	2186,024
2006	91,578	1,477,204
2005	100,222	1,278,852
2004	82,859	1,186,311
2003	99,469	1,057,649
2002	90,329	984,570
2001	87,163	962,951
2000	71,106	923,226
1999	65,108	780,550
1998	58,681	741,171
1997	68,362	800,724
1996	70,212	758,755

Source: GHS-The Health Factor in Ghana: Facts and Figures 2008; Adu-Gyamfi *et al.* 2018

Infrastructure

As reported by Adu-Gyamfi *et al.* (2018), the Atiwa District had two health centres by 2006 (Adu-Gyamfi *et al.* 2018). Up to 2008, the territory still had two health centres. The only hospital which was established by a Non-Governmental Organisation operated since 2006. There was a sole private midwife operating in the district but by 2008, the number increased to six. Four Community Health-Based Planning Service (CHPS) Compounds were in existence in 2006 but had reduced to one by 2008. Table 3 shows the health facilities in the district from 2006 to 2008. This however, indicates some degree of inertia in delivery of healthcare within the period under review (Adu-Gyamfi *et al.* 2018).

Table 3. *Health Facilities in Atiwa District 2006 - 2008*

Facility	2006	2008
Hospital	1	1
Health centre	2	2
Reproductive and Child Health (RCH) centres	2	6
Community Health-Based Planning Service (CHPS)	4	1
Private midwife	4	6

Source: Atiwa District Health Administration (ADHA) Half Year Feedback & Report., July, 2006. half year reports 2008 -Atiwa District; Adu-Gyamfi *et al.* 2018.

Medical Staff and Patient Ratios

The importance of medical staff concerning the provision of medical care cannot be gainsaid. As reported by Adu-Gyamfi *et al.* (2018) in an earlier study, since the number of outpatient attendance and inpatient admission begun to soar, there was a need to increase the number of doctors and nurses to meet the increasing attendance and admission in Eastern region. In 2002, the ratio of doctors to population was increased from 90: 24,068 to 128: 18,141 by 2007 (Adu-Gyamfi *et al.* 2018; Ghana Health Service 2018). The nurses to patient population ratio also moved upward from 1: 1,148 in 2002 to 1: 1,173 in 2007 (Adu-Gyamfi *et al.* 2018; Ghana Health Service 2018).

The above notwithstanding, Adu-Gyamfi *et al.* (2018) have reported that the health workers to patients' ratio were worsening between 2006 and 2008. Whereas the number of doctors and nurses at the regional level had increased in 2007, the number of doctors in the Atiwa District remained same by the mid-year of 2006 and 2008. The doctor to patient ratio at the only hospital within the district was 1: 33,219, nurse to patient Ratio was 1: 2,693 by the mid-year of 2008 (Enyiresi Government Hospital Half Year Report 2008). There was change in number of some of the staff categories in the district. For instance, in 2006, there was only one medical officer in the district and the situation remained so with only one doctor in 2008. The number of public health nurses increased from two in 2006 to three in 2008. Midwives at the

district also increased from seven in 2006 to nine by 2008. The number of community health nurses had increased to 30 in 2006 but had decreased to 28 in 2008, likewise the number of enrolled nurses decreased from ten in 2006 to six in 2008. Disease control had increased from one in 2006 to seven in 2008. For example, in the whole of Eastern region, the number of doctors within the period 2008 was 134 and doctor population ratio was 1: 17,817. Also, in 2008, the number of nurses was 2,454 with the nurse to population ratio of 1:1,973 (Ghana Health Service Report 2015). This exemplifies the reason for such huge gap in terms of doctor, nurse population ratio at the district level. It also epitomises the pressing distribution challenge in terms of health personnel in the country. This calls for the requisite policies and tooling of existing institutions to train more physicians and generally health personnel to cater for the growing health needs of the increasing population within the districts in Ghana. Other staff categories in the district from 2006 include field technicians who were 14 in number, two medical assistance and two medical records assistance (Adu-Gyamfi *et al.* 2018; Atiwa District Health Administration (ADHA), 2006 Half Year Feedback & Report..., July, 2006. 2008 half year reports -Atiwa District.).

Table 4. *Doctor to Population Ratio and Nurse to Population Ratio in the Eastern Region of Ghana (2002-2007)*

YEAR	Number of doctors	Doctor population ratio	Number of nurses	Nurses population ratio
2007	128	18,141	1,977	1,173
2006	104	22,019	1,831	1,251
2005	86	26,260	1,878	1,203
2004	76	29,305	1,851	1,203
2003	66	33,279	1,650	1,331
2002	90	24,068	1,887	1,148

Source: GHS-The Health Factor in Ghana: Facts and Figures 2008; Adu-Gyamfi *et al.* 2018.

It is expedient to point out that, these challenges notwithstanding, the people within the Atiwa District and the government of Ghana have shown a great deal of commitment to pursue the development and expansion of the western medical forms with its personnel and infrastructure to meet the pressing health challenges of the people. It is equally important to emphasize that social change element, that is, western medical practices in itself has undergone some metamorphoses within the broader Eastern Region of Ghana and the Atiwa District in particular.

Diseases and Disease Control in Atiwa District

This section identifies some of the prevalent diseases that infected the people in the Atiwa District. Specific diseases such as malaria, schistosomiasis, and yaws found in the district were properly studied. The efforts made by governments, and western medical practitioners and local authorities (chiefs and elders) to cure and prevent disease before and after independence in the district were also examined.

Diseases

Diseases such as malaria, upper respiratory tract infections, diarrhoea and various forms of skin infections. The leading cause of death was malaria, followed by upper respiratory tract infections, diarrhoea, and skin diseases (Adu-Gyamfi *et al.* 2018; Ghana Health Service 2008). From the table below, malaria cases in 2001 was 2,647,099, but had increased to 5,270,108 in 2007 (Adu-Gyamfi *et al.* 2018; Ghana Health Service 2008). Adu-Gyamfi *et al.* has also reported that upper respiratory tract infections (UPTI) also increased from 460,995 in 2001 to 920,806 by 2007 (Adu-Gyamfi *et al.* 2018). They also reported that diarrhoea increased from 268,218 in 2001 to 539,197 in 2007. They further reported that skin disease soared from 257,042 to 539,197 in 2007 (Adu-Gyamfi *et al.* 2018).

It is significant to amplify the discourse on the extent to which diseases or infirmities can devastate and destroy the social and economic well-being of

societies. In 2004, the World Health Organization reported that about one-fifth of all global deaths were a result of infectious and parasitic diseases (WHO 2004). They further argued that diseases which were previously controlled with the use of public health measures are also increasing in frequency. These include tuberculosis, malaria, dengue fever and cholera (WHO 2004). Closely linked to this report is the fact that new diseases have also emerged within the last century, such as HIV/ AIDS, Severe Acute Respiratory Syndrome (SARS), Lyme disease and West Nile fever with developing countries having higher rates of infections (WHO 2004). It is expedient to state that the rate of death from infectious and parasitic diseases is almost fourteen times higher in low-income countries than in high-income countries (WHO 2004). The propensity with which diseases could have dealt treacherously with the natives of the Atiwa District could have been unparalleled but for the persistent desire by the people and the respective governments of Ghana to embrace the persistent social change which requires aggressive health policies and health strategies that would deal with old, re-emerging and new diseases which continue to hunt the world and Africa in particular. Table 5 shows the top four outpatient morbidity in the Eastern Region from 2001 to 2007. The table below further shows the potential cataclysm that diseases and epidemics could visit on a population. It is significant to state that, though the current study or table does not measure mortality, it is clear that ineffective and inefficient health responses by both the local population and medical officers as well as the respective governments of Ghana in the Atiwa District, the rate of infections could have dire consequence on both the local population and neighbouring communities in the country.

Table 5. *Top four causes of outpatient morbidity in the Eastern Region. 2001-2007*

Year	Malaria (1)	% of total	Upper respiratory tract infections (2)	% of total	Diareea (3)	% of total	Skin disease (4)	% of total
2007	5,270,108	41.6	920,806	7.3	539,197	4.3	539,197	4.3
2006	3,861,348	37.83	632,755	6.20	345,454	3.8	341,044	3.34
2005	3,799,158	44.76	581,323	6.85	352,384	4.15	352,295	4.15
2004	3,379,527	44.1	549,398	7.2	331,998	4.3	314,436	4.1
2003	3,359,191	43.9	519,652	6.8	322,404	4.2	325,262	4.3
2002	3,140,980	43.7	532,531	7.4	287,816	4.0	308,848	4.3
2001	2,647,099	43.3	460,995	7.5	268,218	4.4	257,042	4.2

Source: GHS-The Health Factor in Ghana: Facts and Figures (2008); Adu-Gyamfi *et al.* 2018

Again, as reported by Adu-Gyamfi *et al.* (2018), the Atiwa District from time immemorial had naturally faced certain diseases. The common ones among them were malaria, skin diseases, and stomach pains (Adu-Gyamfi *et al.* 2018). They further argue that some diseases that were later introduced into the District were Cerebro Spinal Meningitis, Tuberculosis, Gonorrhoea, and HIV/ AIDS were new to the district. More so, they hinted that, in 1997, the Atiwa District recorded the first case of Cerebro Spinal Meningitis (CSM) when two mourners who attended a funeral at Nkonya-Ahenkro at the middle section of the Volta Region at their return brought the disease into the district and was diagnosed at the Anyinam Health Centre (Adu-Gyamfi *et al.* 2018). They further reported that, between 2006 and 2008 the disease or cases that made the people to frequently visit the district hospital were Malaria, Hypertension, Arthritis, Upper Respiratory Tract Infection (URTI), Diabetes, Miletus, Skin Disease, and Ulcers, Diarrhoea Disease, Pregnancy Related Complications, Anaemia, and Road Traffic Accident (Adu-Gyamfi *et al.* 2018).

Table 6. *Common Disease in Atiwa District, 2006*

Diseases	Number
Malaria	4,265
Acute Respiratory Infection (ARI)	753
Home Accident	596
Diarrhoea	443
Rheumatism	345
Hypertension	180
Renal Tubular Acidosis (RTA)	168
Typhoid Fever	143
Anaemia	70

Source: Atiwa District Health Administration (ADHA), 2006 Half Year Report.

Malaria

The European administrators in the Gold Coast resorted to the use of preventive and curative strategies to deal with the malaria question in the Gold Coast and the Atiwa District in particular. In the first instance, they used segregation policy to avoid the spread of malaria from the rural population to the Europeans by the establishment of cantonments and settling also in higher areas like Aburi where the weather conditions was good for them and also they believed that the malaria vector could not thrive in these areas (Addae 1996). Adu-Gyamfi *et al.* have reported that to cure malaria, the Europeans used the bark of cinchona as an antidote in the seventeenth century but it had a mixed reaction. Adu-Gyamfi (2010) has reported that quinine was used in the nineteenth century as antidote to malaria (Adu-Gyamfi, 2010). During the twentieth century, the high incidence of malaria cases in Kumasi, Sekondi, Cape Coast and Koforidua indicate that there were high increases of malaria but there was no obvious solution for it (Patterson 1981, 180). Quinine was distributed as a preventive drug in early 1910 but the general distribution began in August 1935. Four grains of Quinine tablets in tubes of sixteen were sold at 270 post offices (Patterson 1981, 173). In an earlier study, Adu-Gyamfi *et al.* reported that 'Tablets were sold at the post office. It was called the 'post office quinine.' It was powerful but tastes bitter. It was used to cure malaria

(Adu-Gyamfi *et al.* 2018). Patterson (1981) has also touched on emphasis on larval control. He reports that holes, puddles, borrow pits, and ponds were filled and oiled, or treated with arsenicals like Paris Green. He further reports that dichlorodiphenyltrichloroethane (DDT) was also used as insecticide spray (Patterson 1981, 177).

In an earlier study, Adu-Gyamfi *et al.* reported that malaria has been the leading disease with reported cases in the Atiwa district before independence and after independence. An interview with Participant 3 (82 years) and Participant 9 (59 years) indicates that before the advent of the health centre in 1963, the people were fraught with malaria as the common disease (Participant 3 2017). Adu-Gyamfi *et al.* have argued that out of the top ten diseases reported that by April 2006, malaria topped with 4,265 cases (Adu-Gyamfi *et al.* 2018; Atiwa District Health Administration (ADHA) Half Year Report 2006). It was the leading case in 2009 and 2010 respectively (Atiwa District Health Administration (ADHA) Half Year Report 2011). At the Enyirsi hospital, in 2006 Malaria was leading with 783 cases which is 27.3% in 2007 it was still leading with 3,315 cases representing 28.0% and in 2008 it led with 5,620 cases which represented 35.0% (ADHA) Half Year Report 2006). The statistics indicated that malaria had been on the increase in the district annually. Table 7 shows the top ten causes of OPD attendance at Enyres hospital from 2006 to 2008.

Table 7. *Top ten causes of OPD attendance at Enyirsi Hospital 2006-2008*

Diseases	2006	%	2007	%	2008	%
Malaria	783	27.3	3,315	28.0	5,620	35.0
Hypertension	119	4.1	725	6.1	1,543	9.5
Arthritis	143	5.0	1,351	11.4	1,268	8.0
URTI	108	3.8	1,344	11.3	787	5.0
Diabetes Miletus	0	0	156	1.3	630	4.0
Skin Disease and Ulcers	96	3.3	471	4.0	435	4.0
Pregnancy Related Complications	72	2.5	258	2.2	266	1.0
Diarrhoea Disease	43	1.5	431	4.0	242	1.5
Anaemia	68	2.4	326	3.0	207	1.3
Road Traffic Accident	74	2.6	54	4.5	189	1.2
All Other Disease	1,365	47.5	3,417	29.0	4,923	30.5
Total	2,872	100	11,794	100	16,110	100

Source: Enyiresi Government Hospital 2008 Half Year Report; Adu-Gyamfi *et al.* 2018.

It is significant to further report that between the periods 2006 to 2008, there was an increment in terms of numbers and percentages of those who reported for treatment at the Enyirisi Hospital in the Atiwa District. Malaria has been reported on in the earlier paragraph. However, it is important to state that hypertension, upper respiratory tract infection (URTI), diabetes mellitus, skin diseases and ulcers, pregnancy related complications, diarrhoea disease, anaemia, road traffic accidents reported injuries and complication and all other diseases as shown in the above table attest to an increasing reported case since 2006. This could be attributable to increasing population in the area and also prevailing environmental conditions and life style related issues. However, of greater consequence to this discourse is the fact that there is a readily available facility with its sometimes corresponding and limited staff that strives to meet the health needs and challenges of the natives and generally the inhabitants of the Atiwa District. This, we argue has come about due to social change derived from both internal and external agencies.

Schistosomiasis (Bilharzia) and Yaws (Frambosia)

Adu-Gyamfi *et al.* have reported that there was high incidence of bilharzia in the twentieth century in the Atiwa District. For instance, in 1996 Adasawase recorded high incidence of bilharzia due to the bad nature of the source of water for domestic use; River Tini, now 'Tini Falls' (Adu-Gyamfi *et al.* 2018). In an earlier field study conducted by Adu-Gyamfi and his counterparts, participant 4 hinted that in 1975, those who swim in River Brim at Akyem-Anyinam were infected with schistosomiasis. It was further indicated that her son suffered from the disease and was sent to Nkawkaw Holy Family Hospital for treatment (Participant 4 2016). The case of bilharzia reported at the mid-year of 2007 was 69. It rose to 81 in mid-year of 2008 but reduced to 71 in mid-year of 2009 (Atiwa District Health Administration (ADHA) Mid-Year Report 2009).

In an earlier study, Ashitey reported that yaws were one of the endemic diseases in Ghana that afflicted rural communities (Ashitey 1994, 23). In 1930,

about one in four of all patients in Ghana suffered from yaws (Addae 1996, 179). From the 1956 to 1961, a mass campaign was sponsored by WHO and UNICEF. In 1966, yaws cases were reduced to about 5,000 by the use of penicillin. However, more than 56,000 yaws cases were reported in 1976. Another mass campaign was mounted in 1980 together with yellow fever immunisation (Ashitey 1994, 23). This helped to reduce the incidence in the country. Citing from the Atiwa District Annual Health Report, Adu-Gyamfi *et al.* (2018) reported that yaws in Atiwa District were very low with eight cases in 2007. It was reduced to one in 2008 but increased again to 11 in 2009. By the end of 2009 it had increased to 403 and six hundred and 603 by the end of 2010 (Adu-Gyamfi *et al.* 2018; Atiwa District Health Administration Annual Health Report 2011).

Disease Control in Atiwa District

According to sound community health principle, 'disease 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 (Ashitey 1994, 23). Several measures were put in place to check the increasing rate of infections and diseases across the country including the Atiwa District.

The Efforts of Governments

Adu-Gyamfi *et al.* (2017) have argued that poor sanitation was seen as a major factor among the causes of disease in the Gold Coast. In the 1920s, Guggisberg took remedial steps to ensure good sanitation. They further argued that Guggisberg facilitated health instruction by introducing Health Week and Health Days from 1925 (Adu-Gyamfi *et al.* 2017). Hygiene and environmental health were taught in classrooms and sanitary inspectors communicated same to adult Ghanaians in their respective homes. Sanitary schools were first established at Accra in 1922. The Maude Commission in the 1950s encouraged

house to house inspection for preventing fly and mosquitoes breeding and accumulating filth (Addae 1996). In the 1950s, the government through its medical and sanitary officers exercised a general control and supervision over the many sanitary operations. Adu-Gyamfi *et al.* have also reported that in the rural communities, sanitary administration came under the native authorities, who were responsible for sanitary conditions of villages. Rural sanitary officials supervised the labourers who removed 'night soil' (toilet) and refuse, collection of conservancy fees, inspection of houses and issuing of summons for sanitary offences such as accumulation of water, rubbish and another nuisance (Adu-Gyamfi *et al.* 2018). These officials were empowered by the town council ordinance of 1943. In their field interview, Adu-Gyamfi *et al.* opined that that the government employed sanitary inspectors who were known among the people as '*tankas*' [town councillors] (Adu-Gyamfi *et al.* 2018).

Several of the respondents in this earlier study indicated that a sanitary inspector could use ladle to stir your water tank. He looked for worms and larvae. Pestles and mortar for the pounding of *fufu* were also checked. This was aimed at disease prevention. If worms, larvae or other vermin was found in the receptacle, the individual was put before a court (Participant 2 2017 as cited in Adu-Gyamfi *et al.* 2018). Again, they reported that between 1951 and 1960, the Nkrumah government embarked on rural health education through mobile and static cinema and developing broadcasting. Instruction was given on village hygiene, infant care, and improved nutrition. Same report indicated that whenever report on a disease outbreak was sent to the Regional Health Administration and to National for recognition, the government took action through the ministry of health. Vaccination was used as a useful tool by the government for disease prevention. Participant 3 hinted that vaccination was done in a form of cuttings/incisions. It was later that injection was introduced (Participant 3 2017 as cited in Adu-Gyamfi *et al.* 2018).

Efforts of Western Medical Practitioners

In order to promote health, the local people who had become very receptive to western medical practices due to social change were reached through midwives, itinerant health officers, and through the establishment of village health centres. Essentially, whenever there were outbreaks of diseases, personnel from the existing health facilities visited homes and checked river banks to ascertain if there were open-air defecations. They reported their findings to the chief and elders of the town and to the Regional Health Administration at Koforidua. From here, an action was taken to curb any occurrences.

There was also an influx of quack physicians within the realm. Official government health personnel were weary of them and cautioned the indigenous population against these charlatans. They embarked on immunization of people against disease outbreak. For instance, in 2009, some people in Atiwa District were immunised on BCG, OPV3 Penta 3, measles, Yellow fever, and TT2+ by the district health personnel (Atiwa District Health Administration (ADHA) Mid-Year Report 2009). These among other things were useful efforts by western medical practitioners to improve the health status of the local people.

Local Responses

Though the current study emphasizes the question of social change and health, the interviewees hinted that the efforts of the local authorities in responding to ill-health or outbreak of diseases were mostly an allusion to the spiritual. This was mostly referred to by the European and British colonial administrators, Christian priests and converts as mundane. Mostly, oracles were consulted and sacrifices were made to propitiate the gods of the land. Participant 9 has reported that, in the olden days, in Kwabeng, river deities were propitiated (Participant 9, 2017). Due to the Christianization of the masses of people in the Akyem Abuakwa area since the nineteenth century onwards, the Christianized disengaged from such traditional activities.

Participant 4 reported that, an attempt by a local chief to demand payments of money to buy cow to propitiate a deity to curb child mortality in Akyem Anyinam failed because of Christian influence and westernisation (Participant 4 2016).

Conclusion

Findings from the research have shown that due to social change, the people of Atiwa District placed premium on the relevance of western medical practices. As a result of western education and new forms of socialization, they imbibed the new belief that western medical practitioners were well trained and the drugs they prescribed were efficacious. Also, the study highlights the efforts of respective governments during the post-independence era who ensured that the devolved powers to the districts and the assemblies in particular hastened public education on good hygiene, as well as the hiring of sanitary inspectors to facilitate this process. The western medical practitioners also embarked on immunization and vaccination of people against outbreaks of diseases. These efforts were not stifled because the indigenous people of the Atiwa District also heeded to the instruction given them to ensure good health. The study does not highlight much practical or scientific interventions made by the local authorities. However, the responses thus far have shown some practical and well-intended efforts by chiefs, elders and the local people to respond to health challenges which confronted them within the period under review. By embracing western medical practices and remedies, which include public health practices and curative care, it could be inferred that the issues concerning western or European oriented public health practices in Atiwa amplifies or accentuates the positive discourse on the need for modern health facilities that would aid medical care to facilitate the delivery of healthcare for the people of Atiwa. To this end, we further infer that a study like this, which focuses on a people's receptiveness to change for new medical forms could have broader implications for future research.

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