

## THE EVOLUTION OF HEALTH CARE IN GHANA: THE CASE OF TEMA, 1945-2008

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### ABSTRACT

I set out to do this work because from my research there seems to be no comprehensive historical writing on healthcare in Tema. Tema started as a small farming village where the people engaged in the cultivation of gourds used in making calabashes, water bottle and preservation of items. The name Tema is an adulterated version of the Gã name “TORMAN” which literally means “town of gourds.” Overtime a section of the population in Tema embarked on small-scale fishing in the *Kpeshie* and the *Chemu* lagoons. As the economy of Tema grew, both the colonial government and private individuals established businesses in the community, and thus the farming activities diminished. By 1957, Tema had shown itself to be a potential industrial enclave and a beacon for Ghana’s social and economic development due to the springing up of different businesses both private and state owned. In the era of social and economic growth the colonial government established healthcare facilities that offered western medical care to the people. Prior to the introduction of western medicine, the people of Tema relied on herbal medicine. However, the outbreak of strange diseases rendered herbal medicine ineffective and therefore the need for western medicine. This paper has established that healthcare was among factors such as the harbour, education, trade and industry that contributed to the development and the transformation of Tema from a small farming community to a metropolis in 2008.

**Keywords:** gold coast; health; herbal medicine; Tema; western medicine.

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## INTRODUCTION

The urbanisation of Tema could partly be attributed to the introduction of western medicine in the early part of the twentieth century. During the early part of the twentieth century, western medicine was introduced into Tema when the colonial government established health care facilities which were managed by European medical professionals. The western health care facilities contributed immensely to improve the health of the people in Tema. This chapter therefore argues that the emergence of western medicine, trained medical doctors, veterinary doctors and veterinary officers, the health department contributed to the development of social and economic activities including the establishment of health care centres, residential facilities for health workers, improvement of the lives of humans and animals, construction of roads to health care centres and residential areas and improvement in agriculture.

In 1924, Gordon Guggisberg attempted to establish a medical school in the Gold Coast to train doctors and other medical professionals.<sup>2</sup> Guggisberg was the first Governor to conceive the idea of a medical school for the Gold Coast. But Guggisberg's plan did not come to fruition because he did not get the support of the British Government.<sup>3</sup> Prior to the introduction of western medicine, the people of Tema relied on various forms of healthcare, including herbal medicine which was administered by traditional priests and herbalists.<sup>4</sup> The traditional priests and herbalists also offered advice to the people on how to practice hygiene to prevent the contamination and spread of diseases.<sup>5</sup> Subsequently, the traditional priests and herbalists attributed the cause of some discernible diseases, illnesses and deaths to the anger of the deities over the infringement of norms and values.<sup>6</sup> They used divination to determine the cause(s) of disease, illness and death, and suggested curative measures to appease the deities.<sup>7</sup> Through divination they determined that some diseases were as a result of people's disobedience to the spirit powers and, therefore, the consequences were punishment.<sup>8</sup> According to the traditional priests and herbalists the deities were largely responsible for the outbreak of some major diseases as a means to register their displeasure towards the violation of norms and values.<sup>9</sup>

<sup>1</sup> Patrick Twumasi. *Health Care in Ghana*, (Cambridge: Cambridge University Press, 1975), p. 7.

<sup>2</sup> *Ibid.*, pp. 202-204.

<sup>3</sup> PRAAD Accra, CSO 9/1/31, File 21/907/30, Annual Report by the Royal College of Medical Studies of England. p. 2.

<sup>4</sup> *Ibid*

<sup>5</sup> Oliver Kofi Tasin, "Change and Continuity in Konkomba Medical Culture: A Historical Perspective of an Indigenous People in Northern Ghana". *Abibisem Journal of African Culture and Civilisation*. Volume, 7. pp. 216-227.

<sup>6</sup> *Ibid*

<sup>7</sup> Interview with Mrs. Dora Narh, Former Staff Ministry of Health, 67 years of age, at her residence, on 16th March, 2019.

<sup>8</sup> Interview with Mr. Jojo Alatatse, Former member of the Tema Traditional Council, 77 years of age, at the Tema Development Corporation, on 15th March, 2018.

<sup>9</sup> *Ibid*

Among the curative measures the traditional priests and the herbalists recommended for amelioration of conditions were various types of sacrifices to appease the spirit powers before they prescribed the use of herbs.<sup>10</sup> During the curative process the traditional priests and herbalists quarantined the sick for days and, sometimes, months.<sup>11</sup> The reasons they assigned for the quarantine and sacrifices were that the gods paraded around the community in anger during the curative period and until they went back to rest, the sick and their relatives could not engage in any social and economic activities.<sup>12</sup> This method of health care sometimes put fear into the people such that they felt scared to go about their social and economic activities and this impacted negatively on the community.<sup>13</sup> The attribution of illnesses, diseases and deaths to the spirit powers meant that diseases such as malaria, yaws, yellow fever, leprosy and cold that could have been prevented through hygienic practices were left to spread and cause deaths.<sup>14</sup> Frequent deaths, as a result of preventable diseases, gradually became a concern to the colonial government because it affected some European workers in the Gold Coast. The people in the Tema community also became alarmed during the 1930s, and thus called on the government to find solution to the frequent deaths.<sup>15</sup> The colonial government responded to the request of the people by introducing western medicine and health care facilities in Tema.

In the 1930s, the colonial government established a Health Department in Tema that offered western medical care to patients.<sup>16</sup> Western Medicine came as a relief to the people because frequent deaths as a result of diseases including malaria, yellow fever, flu and typhoid reduced.<sup>17</sup> The Medical Department included laboratories, clinics, sanitation and public health sections that managed different aspects of health care.<sup>18</sup> For example, the laboratory had microscopic, anti-rinderpest and entomological units that were respectively managed by Mr. S. Agyen-Frempong, Mr. M. K Olympio and Mr. Issaka Abdulai.<sup>19</sup> The laboratories were responsible for sectioning, staining and preliminary microscopic examinations of all pathological materials and blood samples.<sup>20</sup> Under the supervision of the Director of the Health Department the microscopies unit carried out clinical work on

<sup>10</sup> Patrick Twumasi. "The Rise of Literate Healers in Ghana". <https://doi.org/10.1017/S0021853715000742>, Accessed on 3rd February, 2020.

<sup>11</sup> Ibid.

<sup>12</sup> Ibid

<sup>13</sup> Interview with Mr. Alfred Agyirifa, Former Staff: the Tema General Hospital, 72 years of age, at his residence, on 29 September, 2019.

<sup>14</sup> Interview with Mr. Alfred Agyirifa, Former Staff: the Tema General Hospital, 72 years of age, at his residence, on 29 September, 2019.

<sup>15</sup> Ibid

<sup>16</sup> Ibid

<sup>17</sup> Ibid

<sup>18</sup> PRAAD Accra, CSO 9/1/92, File 1324, Colonial Government Contributions to Health Care. p. 4.

<sup>19</sup> Ibid

<sup>20</sup> Ibid

animals belonging to the Department and some members of staff.<sup>21</sup> This enabled the Department to test new drugs produced for human and animal health.<sup>22</sup> The anti-rinderpest unit carried out the production of serum for infections in both humans and animals.<sup>23</sup> The serum was produced from a combination of chemicals produced by the Department and insulin collected from animals including rabbits and mice.<sup>24</sup> The entomological unit also carried out research into a specimen from tsetse fly that caused trypanosomiasis.<sup>25</sup> To improve the efficiency of the Health Department, the colonial government sent European medical professionals from England to assist in the management of the Department.<sup>26</sup> Furthermore, the colonial government supplied anti-malaria drugs including quinine, which were distributed by the Health Department free of charge to people in the Tema community.<sup>27</sup>

In 1931, the University of Edinburgh financed the training of veterinary doctors from Britain's African colonies including the Gold Coast for a three-year course, from 1931 to 1934.<sup>28</sup> The training focused on tropical diseases including yellow fever, malaria, bird flu, pig flu and rinderpest.<sup>29</sup> Training of more veterinary doctors was of prime importance because the veterinary doctors were few and the workload was overwhelming.<sup>30</sup> The colonies' trainee veterinarians were from Uganda, Tanganyika, Gold Coast and Nigeria.<sup>31</sup> The colonies made an annual contribution of £1,000 into the Colonial Development Fund to support the efforts of the University of Edinburgh to enable the students complete their training.<sup>32</sup> Examination fees, matriculation fees and tuition fees were defrayed by the colonial government.<sup>33</sup> The course content comprised entomology, parasitology, bacteriology, animal feeding in the tropics, food production, zoology, animal breeding and personal hygiene.<sup>34</sup> In 1934, the Governor of the Gold Coast Shenton Thomas signed a new agreement with the University of Edinburgh for the training of more veterinary doctors for another four years of which three were

<sup>21</sup> PRAAD Accra, 1540/51/1911, File 378/36, Health Department Annual Report. p. 4.

<sup>22</sup> Ibid., p 4

<sup>23</sup> Ibid p 5

<sup>24</sup> PRAAD Accra, 1540/51/1911, File 378/36, Health Department Annual Report. p. 4.

<sup>25</sup> PRAAD Accra, 1547/51/1911, File 378/36, Improvement in Vaccines and Serum. p. 2.

<sup>26</sup> Ibid

<sup>27</sup> Ibid, p 3

<sup>28</sup> PRAAD Accra, CSO 9/1/42, File 843/33, Report on Training of Veterinary and Medical Doctors by the Edinburgh University. p. 5.

<sup>29</sup> Ibid

<sup>30</sup> Ibid

<sup>31</sup> PRAAD Accra, CSO 76/3/34, File 19/3, Contributions by Colonies towards the Training of Medical Doctors at Edinburgh University. p. 21.

<sup>32</sup> Ibid., p. 22.

<sup>33</sup> PRAAD Accra, CSO 9/1/53, File 74/34, Annual Report on the Activities of Veterinary Department. p. 2.

<sup>34</sup> Ibid

from Tema.<sup>35</sup> After the training all the three doctors returned to the Gold Coast and were employed by the Veterinary Department of Tema.<sup>36</sup>

In 1934, the colonial government passed the Criminal Code Amendment Ordinance to protect animals and to punish owners of animals who refused to immunise their animals which were suffering from diseases such as flu, rinderpest and ring worm.<sup>37</sup> The Ordinance was passed because some livestock owners did not take good care of their animals.<sup>38</sup> Some animals were left to stray and sometimes infested other animals in the Tema community.<sup>39</sup> Stray animals got injured or were killed by people or vehicles when crossing the streets.<sup>40</sup> Stray animals contributed to the spread of contagious diseases including foot and mouth sore, rinderpest, and animal flu.<sup>41</sup> Some of those diseases sometimes attacked humans which, unfortunately, resulted in deaths.<sup>42</sup> For example, pneumonia was so deadly that it attacked the lungs of patient(s) and caused chronic and acute inflammation of the lungs and destroyed it.<sup>43</sup> The disease was so strange at the time that medical doctors found it difficult to diagnose.<sup>44</sup> The Criminal Code Amendment Ordinance stipulated that a person, whether the animal owner or not, who cruelly beat, kicked, ill-treated, killed, drove over, over-loaded, tortured, infuriated or terrified animal(s) or allowed animal(s) to stray would be punished.<sup>45</sup> Those who violated the law were to be punished by a fine of £25 or three months imprisonment.<sup>46</sup> Any owner(s) of animal(s) who failed to protect the animal(s) from harm was considered irresponsible and was punished by a fine, imprisoned or forfeited the animal.<sup>47</sup> The law permitted animal(s) to be killed only for food or trade and that was approved by veterinary officers who guaranteed the health condition of the animal(s).<sup>48</sup>

But no prosecution was instituted against any duly registered medical practitioner, veterinary surgeon or any person who acted under the instructions of a medical professional or veterinary surgeon who committed any of the same offences through surgery, experiment, test performed on any animal for the

<sup>35</sup> PRAAD Accra, CSO 9/1/53, File 74/34, Annual Report on the Activities of Veterinary Department. p. 3.

<sup>36</sup> Ibid.

<sup>37</sup> Ibid, p. 4

<sup>38</sup> Ibid

<sup>39</sup> PRAAD Accra, CSO 9/1/59, File 79/34, Cruelty to Animals Amendment Ordinance. p. 64.

<sup>40</sup> Ibid

<sup>41</sup> Ibid, p 65

<sup>42</sup> Ibid

<sup>43</sup> PRAAD Accra, CSO 9/1/65, File 1/A, Control of Animals in the Tema Metropolis. p. 15.

<sup>44</sup> Ibid

<sup>45</sup> Ibid, p. 16

<sup>46</sup> Ibid

<sup>47</sup> PRAAD Accra, CSO 1330/37/11, File 620/34. Control of Contagious Diseases in Tema. p. 13.

<sup>48</sup> Ibid

purposes of scientific research, medical or veterinary treatment.<sup>49</sup> Under the Disease of Animals Ordinance of 1933, those in the health profession were only prosecuted by instructions from the Attorney General of the Gold Coast.<sup>50</sup> The Criminal Code Amendment Ordinance was published in the Gold Coast Gazette No. 15 on 23rd February, 1935.<sup>51</sup> The protection of animals resulted in the breeding of healthy livestock in animal farms in the Tema community.<sup>52</sup> Traders in livestock and animal meat made profits and as a result contributed to the growth of social and economic activities such as road construction, transport services, residential facilities, extension of water and electricity and expansion of markets<sup>53</sup>. Some traders established schools, recreational and health care centres.<sup>54</sup> In 1935, the Health Organisation provided technical and financial assistance to the people of Tema to help control the spread of animal diseases and, to a large extent, eliminate diseases.<sup>55</sup> The Organisation also offered public education to the people on how to improve their health conditions.<sup>56</sup> The Animal Health Department and the Agricultural Department collaborated with the Health Organisation in its efforts to control the spread of diseases in the Tema community.<sup>57</sup>

The emergence of western medicine and its efficiency overshadowed the work of the traditional priests and the herbalists.<sup>58</sup> As a result of the introduction of western medicine and its effect in preventing the spread of diseases and sometimes eradicating some diseases, many people in Tema no longer turned to medical care from the traditional priests and the herbalists and rather to the medical centres.<sup>59</sup> The low patronage of the work of traditional priests and the herbalists resulted in conflicts between the providers of western medicine and the traditional healers because the latter saw western medicine as a threat to their work.<sup>60</sup> All the same, the traditional priests and the herbalists continued to administer healthcare to people who patronised their services, particularly, those who lived on the outskirts of the Tema Township who could not easily travel to the western health care facilities at the city centre.<sup>61</sup> Therefore, the Health

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<sup>49</sup> Ibid, p. 14.

<sup>50</sup> Ibid

<sup>51</sup> PRAAD Accra, CSO 9/1/77, File 27/9, Annual Report on the Operations of the Animal Health Department. p. 18.

<sup>52</sup> Ibid

<sup>53</sup> Ibid., p. 19.

<sup>54</sup> Ibid

<sup>55</sup> PRAAD Accra, 1547/51/1911, File 378/36, Improvement in Vaccines and Serum. p. 2.

<sup>56</sup> Ibid

<sup>57</sup> PRAAD Accra, 1547/51/1911, File 378/36, Improvement in Vaccines and Serum. p. 3.

<sup>58</sup> Ibid

<sup>59</sup> Ibid, p. 4

<sup>60</sup> Ibid

<sup>61</sup> Zindy Gracia. "Traditional Herbal Medicine in Ghana: History and Current State". [www.scielo.br/scielo/herbalmedicineinghana](http://www.scielo.br/scielo/herbalmedicineinghana). Date accessed, 10/02/2020.

Department periodically deployed health workers to the outskirts of Tema to provide health care to the people.<sup>62</sup> By the close of 1935, the colonial government had spent over £4,719 in controlling diseases (in) both humans and animals in Tema.<sup>63</sup>

To minimise the conflict between western medicine practitioners, herbalists and the traditional priests, the colonial government encouraged all traditional priests and herbalists in the Gold Coast to form a professional association.<sup>64</sup> According to the government, as an organised body their activities could be regulated by the government and their concerns could be heard. The association was formed in 1937, and was named the Traditional Healers Association of the Gold Coast (THAGC).<sup>65</sup> The government encouraged members of the T.H.A.G.C in Tema to collaborate with practitioners of western medicine to provide efficient health care to the people in the community.<sup>66</sup> Through this collaboration, members of the T.H.A.G.C were able to produce herbal medicine to assist with the treatment of malaria, typhoid and yellow fever.<sup>67</sup> Different branches of the health sector including the Animal Health Department helped in Tema's development as explained subsequently.

### **The Contributions of the Animal Health Department to Health Care**

In the 1940s, the Department of Animal Health (DAH) played a major role in the control and spread of diseases in Tema. In the early 1940s, unfamiliar diseases including trypanosomiasis, pneumonia and rinderpest attacked animals, including cattle, sheep and goats in the Tema community which caused the death of many animals.<sup>68</sup> The outbreak of the disease(s) caused panic among the people, especially, consumers and traders of animal meat.<sup>69</sup> As a result of the diseases, the Department of Animal Health introduced new technologies that contributed to protecting humans and healthy animals from contracting the deadly animal diseases.<sup>70</sup> Periodically, veterinary doctors were sent from England by the colonial government to take care of livestock in Tema, particularly, the sick ones.<sup>71</sup>

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<sup>62</sup> Ibid

<sup>63</sup> Ibid

<sup>64</sup> David Abrokwa. "Improvement in Herbal Medicine in Africa". [www.sydneyperreira.com](http://www.sydneyperreira.com). Date accessed, 10/02/2020.

<sup>65</sup> David Abrokwa. "Improvement in Herbal Medicine in Africa". [www.sydneyperreira.com](http://www.sydneyperreira.com). Date accessed, 10/02/2020.

<sup>66</sup> Ibid.

<sup>67</sup> Ibid

<sup>68</sup> . PRAAD Accra, CSO 1604/40. F /1925. S. F.1, File 1324, Artificial Insemination of Cattle. p. 1.

<sup>69</sup> Ibid

<sup>70</sup> Ibid, p. 2

<sup>71</sup> Ibid.

By the time trypanosomiasis, pneumonia and rinderpest were brought under control many animals, especially cattle, sheep and goats were dead leaving many animal farms depleted.<sup>72</sup> The depletion of animal farms caused shortage of meat on the market and thus affected trade in meat.<sup>73</sup> To salvage the situation, the colonial government instructed the Department of Animal Health to develop methods to increase the breeding of animals, particularly, cattle, sheep and goats.<sup>74</sup> In response to the government's request, the Department introduced artificial insemination to increase the incidence of pregnancy among female animals.<sup>75</sup> Artificial insemination consisted of collection of semen from a healthy male by means of a glass container held against the male's genital organ and the semen dropped into it.<sup>76</sup> The collection of the semen was done a veterinary doctor. The semen in the glass container was mixed with an egg cell collected from the female.<sup>77</sup> The semen was then sent to a laboratory in the Health Department by the veterinary doctor who did the collection for examination to find out its potency to impregnate a female.<sup>78</sup>

After the laboratory examination the potent semen was diluted with anti-bacterial chemical by the veterinary doctor and subsequently discharged into the female by means of a special instrument.<sup>79</sup> The artificial insemination was done during the period when the female animal was on heat and ready to be impregnated by a male.<sup>80</sup> The leftover semen preserved by the Animal Health Department for a number of days for insemination into other females when they were also ready for conception.<sup>81</sup> After the insemination the impregnated animals were protected by the A. H. D throughout the gestation period. The animals were injected with drips that contained protein and chemicals by veterinary doctors to protect the mother and also to facilitate the development of the baby.<sup>82</sup> The artificial insemination contributed to increase in animal production and expansion of animal farms. Many people engaged in agriculture particularly animal rearing.<sup>83</sup> Improvement in agriculture created employment for many people in Tema, and, also it attracted

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<sup>72</sup> Ibid

<sup>73</sup> Ibid, p. 3.

<sup>74</sup> PRAAD Accra, CSO 9/1/122, File 3699/1, Veterinary Drugs Imported for Artificial Insemination. p. 3.

<sup>75</sup> Ibid, p. 4.

<sup>76</sup> Ibid., p. 19.

<sup>77</sup> Ibid

<sup>78</sup> Interview with Mr. Lantei Quartey Papafo, Former Farmer in Tema, 75 years of age, at his residence, on 30th November, 2019.

<sup>79</sup> Ibid

<sup>80</sup> Ibid

<sup>81</sup> Ibid

<sup>82</sup> PRAAD Accra, CSO 838/175/1929, File 3832/5, Report on Activities of the Veterinary Department. p. 5.

<sup>83</sup> Ibid



people from other communities to move to Tema either to do business or to live there.<sup>84</sup> The government as well as private individuals built residential areas to accommodate the people. Roads, electricity, water and recreational facilities were extended to the farms as well as the residential areas.<sup>85</sup>

In 1942, the Department of Scientific and Industrial Research of the Council for Scientific and Industrial Research was contracted by the Department of Animal Health to produce food and nutrients for the protection of the calves and their mothers.<sup>86</sup> After delivery, animals were immunised against diseases such as rinderpest, trypanosomiasis and foot and mouth disease, mostly caused by a bite from an insect and, pneumonia, caused by bad weather conditions.<sup>87</sup> Even though some of the animals died in spite of immunisation, the Health Department was not discouraged in its determination to eradicate diseases and protect lives and property.<sup>88</sup> The veterinary section of the Health Department was also given tools and financial resources by the colonial government to monitor the operations of livestock farms to offer assistance to the farmers.<sup>89</sup> The colonial government also established a Cattle Development Scheme in the 1940s which offered technical assistance to farmers to improve their farms.<sup>90</sup> The government taxed the farmers to raise funds to maintain the scheme.<sup>91</sup>

The chiefs and the Tema traditional council supported the colonial government's efforts to prevent the outbreak of diseases and to minimise the spread of existing ones.<sup>92</sup> The chiefs allocated plots of land for the government to construct quarantine centres for sick animals.<sup>93</sup> The chiefs periodically contributed financially from the Native Administrative Fund (NAF) for the upkeep of the quarantine centres.<sup>94</sup> The chiefs further compelled owners of livestock, including cattle, sheep and goats to send them to the veterinary officers for examination and immunisation.<sup>95</sup> The chiefs periodically instructed elders in the palace to visit livestock farms in Tema to assist the government check the health conditions of animals on the farms.<sup>96</sup> The elders further recruited young men in

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<sup>84</sup> Ibid, p. 6.

<sup>85</sup> Ibid

<sup>86</sup> PRAAD Accra, CSO 692/175/1929, Co-operation between Native Administration and the Veterinary Department. p. 6.

<sup>87</sup> Ibid.

<sup>88</sup> Ibid.

<sup>89</sup> Ibid, p. 7.

<sup>90</sup> Ibid

<sup>91</sup> Ibid

<sup>92</sup> PRAAD Accra, CSO 692/175/1929, Control of Pandemics. p. 6.

<sup>93</sup> Ibid

<sup>94</sup> IPRAAD Accra, CSO 2086/2263/35, File 240/1, Report on Native Administration Contributions to Agriculture in Tema. p. 10.

<sup>95</sup> Ibid

<sup>96</sup> Ibid, p. 11.

the Tema community who were in turn trained by the veterinary doctors on how to examine the health conditions of livestock.<sup>97</sup> On behalf of the elders, the young men regularly visited farms to check how the animals were responding to the care given by the veterinary doctors. The young men received wages from the chiefs through the Native Administrative Fund (NAF).<sup>98</sup> Farmers who refused to have their animals examined and immunised were punished by the chiefs by making them pay a fine, and those who refused were prevented from keeping animals in the community.<sup>99</sup> The colonial government subsequently trained the young men appointed by the elders on veterinary practices and after the training enrolled them into the Veterinary Services as Veterinary Assistants and their salaries were paid by the government.<sup>100</sup> The Agriculture Department also provided the veterinary officers with a handbook on how to keep animals in good health and how to maximise profit in animal farming. The book was sold to the veterinary officers at 1 shilling per copy.<sup>101</sup> To reduce the cost of rearing animals in Tema, the Department of Animal Health (DAH) in collaboration with the farm owners and the Agriculture Department (AGD), amalgamated the smaller livestock farms and placed them under the care of a few farm managers. The new managers of the farms received £400 annually as compared to £720 annually which was paid to the previous managers.<sup>102</sup>

In 1944, another health hazard in the form of an outbreak of strange flies that bit both humans and animals occurred in Tema.<sup>103</sup> The flies emerged during the wet season between June and August.<sup>104</sup> They were mainly found on the livestock farms where there were concentration of weeds, sheep, cattle and goats.<sup>105</sup> When humans were bitten by the flies they became very weak and ended up with vomiting, headache, cough, nose bleeding and, sometimes, death.<sup>106</sup> Animals also suffered similar reactions and bleeding from nostrils sometimes led to death.<sup>107</sup> To resolve this emergency situation the government instructed the Health Department to fumigate all the farms and also homes in the Tema

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<sup>97</sup> Ibid

<sup>98</sup> PRAAD Accra, CSO 394/139/1926, File 1545, Arrangements for Quarantine. p. 15. The N.A.F was established by the Tema Traditional Council in the 1940s to generate funds to assist individuals and organisations that promoted growth of social and economic activities in the Tema community

<sup>99</sup> Ibid., p. 16.

<sup>100</sup> PRAAD Accra, CSO 394/139/1926, File 1545, Arrangements for Quarantine. p. 15.

<sup>101</sup> PRAAD Accra, CSO 394/139/1926, File 1545, Arrangements for Quarantine. p. 17.

<sup>102</sup> Samuel Adu-Gyamfi, Edward Brenya, and Peter Nana Egyir. Public Health in Colonial and Post-Colonial Ghana: Lesson Drawing for the Twenty-First Century. <http://creativecommons.org/licenses/by-nc-nd/4.0/>, Date accessed, 10/02/2020.

<sup>103</sup> Ibid

<sup>104</sup> Ibid

<sup>105</sup> Interview Mr. Kpakpo Allotey, Former Owner of Cattle Ranch in Tema, 67 years of age, at his residence, on 20th December, 2018.

<sup>106</sup> Ibid

<sup>107</sup> Ibid

community.<sup>108</sup> Humans who had been bitten by the flies were rushed to the health care centres for medical care.<sup>109</sup>

To avoid the spread of the disease patients were quarantined for some time even after treatment and dead animals were sprayed with chemicals and subsequently buried.<sup>110</sup> Imported animals into Tema that had contracted the disease were killed immediately on arrival.<sup>111</sup> In support of the colonial government the chiefs and elders of the Tema community ordered that all bushes around farms and in homes in Tema be cleared and subsequently burnt since they constituted the hide out and breeding grounds of the flies.<sup>112</sup> Three supervisors and sixty labourers were hired by the colonial government to weed the farms and homes for two months and were paid £368.18shillings. These labourers were provided with 50 machetes, axes and shovels at a cost £10.<sup>113</sup>

In 1945, the Department of Animal Health in the Gold Coast began manufacturing vaccines to protect animals such as goats, cattle, sheep and poultry from diseases. The local manufacture of vaccines was to mitigate the high cost of imported vaccines.<sup>114</sup> As a result of that the Health Department set up a mini-manufacturing plant in Tamale and the manufactured vaccines were distributed to veterinary service centres throughout the Gold Coast. A branch of the manufacturing plant was established in Tema in the 1950s when factories and industries sprang up.<sup>115</sup> The vaccines manufactured in Tema included anti-rinderpest and prophylactics used in curing animal diseases such as trypanosomiasis, pneumonia and rinderpest. The locally manufactured drugs helped eradicate frequent fowl diseases including bird flu.<sup>116</sup>

In 1946 about five hundred livestock including sheep, goats and cattle were treated with the locally-manufactured vaccines and the animals recovered quickly from the diseases.<sup>117</sup> The vaccines were manufactured in 1946 at the cost of £12, under the supervision of Sylvester Olympio, a Veterinary Assistant at the Veterinary Department of the Gold Coast.<sup>118</sup> By the end of 1946, the incidence of animal diseases such as trypanosomiasis, anthrax, blue tongue, epizootic lymphangitis, rinderpest, haemorrhage, rabies and pneumonia that caused frequent

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<sup>108</sup> Ibid

<sup>109</sup> Ibid

<sup>110</sup> PRAAD Accra, CSO 692/175/1929, Co-operation between Native Administration and the Veterinary Department. p. 6.

<sup>111</sup> PRAAD Accra, CSO D/d/25/II/44, File 49, Annual Report on Veterinary Activities. p. 32.

<sup>112</sup> PRAAD Accra, CSO D/d/25/II/44, File 49, Annual Report on Veterinary Activities. p. 32.

<sup>113</sup> Ibid, p. 33.

<sup>114</sup> Ibid, p. 34.

<sup>115</sup> Ibid, p. 35.

<sup>116</sup> Ibid

<sup>117</sup> Ibid

<sup>118</sup> Ibid, p. 36

deaths of both humans and animals in Tema had been reduced due to vaccination carried out by the Health Department and the Veterinary Department.<sup>119</sup> The spread of the diseases was brought under control because over two-thousand and five hundred animals including cattle, sheep and goats were vaccinated by the middle of 1946. The effectiveness of the vaccination reduced the incidence of disease in animal and limited the threat to human life posed by eating animal meat.<sup>120</sup>

The colonial government was determined to prevent the frequent re-occurrence of the deadly animal diseases. Accordingly, the government trained more veterinary doctors and officers, expanded the existing health care facilities including offices for staff, consulting and treatment rooms and provided funds for research.<sup>121</sup> The existing quarantine buildings were fumigated and new ones were built by the government to house the vaccinated animals until they fully recovered before they were mixed with the healthy ones. Vaccinated animals were given special identification marks by punching the ears to distinguish them from the healthy ones.<sup>122</sup>

### Measures to Control Diseases

During the second half of 1946, the Veterinary Doctors Association of West Africa (VDAWA) invited veterinary doctors and officers in Africa for a conference that was held in Paris. Veterinary doctors and officers from Nigeria, the Gold Coast, Senegal, Sierra Leone, Gambia, Equatorial Guinea, Congo Brazzaville and Cameroon attended the conference.<sup>123</sup> The conference was facilitated by veterinary doctors in Europe.<sup>124</sup> Thirteen veterinary doctors and officers including Mr. J.L. Stewart, Mr. A. Fulton and W.C.L. Orr from the Gold Coast attended the conference. The colonial government financed all the expenses incurred by the thirteen veterinary doctors and officers from the Gold Coast.<sup>125</sup> Three of the thirteen veterinary officers who attended the conference were from Tema. They were to educate veterinary doctors in Africa on animal health, animal husbandry and vaccination.<sup>126</sup> The conference defined the importance of collaboration in the veterinary profession and to enhance the professionalism of the veterinary doctors and veterinary officers.<sup>127</sup>

<sup>119</sup> PRAAD Accra, CSO D/d/25/II/44, File 49, Annual Report on Veterinary Activities. p. 38.

<sup>120</sup> PRAAD Accra, ADM 25041/1/46, File 1946, Plans to Eradicate Diseases. p. 42.

<sup>121</sup> *Ibid.*

<sup>122</sup> *Ibid*

<sup>123</sup> *Ibid*, p. 43.

<sup>124</sup> PRAAD Accra, ADM 25041/1/46, File 1946, Plans to Eradicate Diseases. p. 43.

<sup>125</sup> *Ibid*, p. 44.

<sup>126</sup> PRAAD Accra, ADM 423/230/1935, File 1545, Report on Veterinary Services. p. 81.

<sup>127</sup> *Ibid*

After the conference, West African veterinary doctors, including those in the Gold Coast, collaborated and planned strategies to eliminate rinderpest, pneumonia and trypanosomiasis which were common deadly diseases that frequently killed animals in the sub-region.<sup>128</sup> One strategy, for example was that farmers in West Africa were encouraged to cultivate fodder to feed animals instead of relying on leftover foods from restaurants.<sup>129</sup> Therefore to increase animal feed farmers practiced shifting cultivation and that enabled them to grow more fodder to feed cattle, sheep and goats.<sup>130</sup> All farms both animals and crops were fumigated by the Health Department to prevent an outbreak and spread of diseases.<sup>131</sup> Animal farmers were encouraged by the Veterinary Department to vaccinate their animals regularly, at least, every three months.<sup>132</sup> Free vaccination drugs were sent by the Health Department to all farms for easy accessibility by farmers.<sup>133</sup> Dams were built by farmers to store clean water for the animals to drink. The V.D.A.W.A recommended that all defective animals to be killed and buried instantly by the Health Department.<sup>134</sup>

As a result of the recommendations made by the Veterinary Doctors Association of West Africa the colonial for government-built slaughterhouses in Tema and other parts of the Gold Coast to facilitate supervision of slaughtering of animals by Veterinary officers. All meat sent to the market was thoroughly examined by veterinary doctors to ensure that they were wholesome and the unsold meat was kept in refrigerators to prevent contamination.<sup>135</sup> By the end of 1946, the number of livestock in Tema particularly, cattle, sheep and goats had increased from 4,533 to 5,725 due to effective and efficient collaboration between the Health Department, Veterinary Department and the farmers.<sup>136</sup>

In 1946, the colonial government placed a ban on the importation of livestock from other countries or communities into the Gold Coast. The government passed a Law which banned all traders from importing livestock into the Gold Coast without prior approval from the Health Department. Animals in transit to the Gold Coast were returned to their country of origin.<sup>137</sup> Offenders of the Law were sent to the Accra High Court by the Health Department and those found guilty

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<sup>128</sup> Ibid, p 82.

<sup>129</sup> Ibid.

<sup>130</sup> Ibid.

<sup>131</sup> Ibid, p 83.

<sup>132</sup> Ibid.

<sup>133</sup> PRAAD Accra, ADM GB/1545/68, File 177, Supervision of Veterinary Laboratory Services. p. 111.

<sup>134</sup> Ibid, p. 112

<sup>135</sup> PRAAD Accra, ADM GB/1545/68, File 177, Supervision of Veterinary Laboratory Services. p. 112.

<sup>136</sup> Ibid, p 113

<sup>137</sup> Ibid

were either fined or imprisoned.<sup>138</sup> The ban was enforced by the Veterinary and Health Departments to ensure effective monitoring and mitigate the spread of diseases. Owners of cattle, sheep and goats were encouraged by the Veterinary Department to give their animals improved feed to enhance fertility. Due to the vulnerability of young animals breeding houses were constructed by farmers to keep pregnant animals and nursing mothers under protection.<sup>139</sup> Mini laboratories were established in the breeding houses by the Veterinary Department that enabled veterinary officers to carry out frequent and quick examinations on the health status of the animals.<sup>140</sup> The protection and expansion of animal farms and the control of the spread of diseases created jobs in Tema as over 300 people were employed during the 1940s to work on the farms, the Veterinary Department, the Health Department, the Research Centres and the Laboratories.<sup>141</sup>

Periodically, veterinary doctors from other West African countries were invited by the Health Department to work hand-in-hand with the Gold Coast veterinary doctors to share ideas on farm management and disease control.<sup>142</sup> Following a successful implementation of the ban on importation of animals into the Gold Coast in 1946, the Gambia, Sierra Leone, Senegal and Nigeria also introduced similar bans on importation of livestock into their countries.<sup>143</sup> The West African countries mentioned above established Veterinary Training Schools (VTS) that served as training and research centres for veterinary doctors and veterinary officers during the 1950s.<sup>144</sup>

The veterinary schools in the Gold Coast collaborated with the British and the French Veterinary Schools for exchange programmes.<sup>145</sup> Periodically syllabi and examination papers were exchanged between the Gold Coast Veterinary School and the England Veterinary School for vetting by academic boards in the various schools.<sup>146</sup> The exchange of the academic materials was to ensure similar training and practice among all veterinary doctors and officers in both Europe and Africa before certificates were issued to graduates.<sup>147</sup> Tutors in the veterinary schools, both in the Gold Coast and England went on exchange programmes to refresh their memories on new skills in their profession.<sup>148</sup> In 1951, a second attempt was made by the colonial government to establish a medical school, this

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<sup>138</sup> Ibid, p 114

<sup>139</sup> Ibid

<sup>140</sup> Ibid, p 115

<sup>141</sup> Ibid, p 116

<sup>142</sup> PRAAD Accra, ADM 540/35, File 144/A, Professional Training for Veterinary Doctors. p. 1.

<sup>143</sup> Ibid

<sup>144</sup> PRAAD Accra, CSO 09/1/69, File 250/37, Report on the Activities of Animal Health Care. p. 3.

<sup>145</sup> Ibid

<sup>146</sup> Ibid, p 4

<sup>147</sup> Ibid

<sup>148</sup> Ibid, p 3

time, at the University College of the Gold Coast, but that attempt also failed due to lack of funds.<sup>149</sup> In spite of the failure, the colonial government did not relent in its efforts to establish a medical school in the Gold Coast. In 1951, some veterinary officers from the Tema Veterinary Department were sent to Sierra Leone by the colonial government for training in animal health care.<sup>150</sup> Sierra Leone at the time had made significant improvements in animal husbandry to the extent that they could have zero deaths of animals within a period of five years. The Gold Coast doctors returned with much experience and, in the 1950s assisted to eradicate common diseases among animals in Tema that threatened human life.<sup>151</sup>

As part of the measures to eradicate diseases from Tema, the Veterinary Department collaborated with the Tema Health Department and fumigated the Tema community every four months to check the invasion of insects including flies, cockroaches, ants and mice that easily spread diseases.<sup>152</sup> The efforts by the Veterinary Department and the Tema Health Department to make Tema disease free gave the people comfort of mind to go about their businesses and that contributed immensely to the development of social and economic activities in Tema and the Gold Coast as a whole.<sup>153</sup> Livestock farming in Tema improved and farmers could either export live animals or meat to other parts of the Gold Coast and even beyond the borders of the Gold Coast. A kilogram of meat sold at £1.6 shillings, £2 and £3.6 shillings depending on the location and quality of the meat.<sup>154</sup> Veterinary doctors and the veterinary officers enforced sanitation laws and treated sick animals. They went from house to house to educate the people on the importance of sanitation.<sup>155</sup> Subsequently, the colonial government constructed ten drainage systems in Tema and extended water and electricity to livestock farms.<sup>156</sup> The provision of drainage systems and the extension of water and electricity to livestock farms helped to reduce the outbreak and the spread of infectious diseases including flu, fowl pox, fowl typhoid and anthrax.<sup>157</sup>

Despite the successes and active work of the veterinary doctors, a serious dispute emerged between them and the colonial government over disparity in salary and other service conditions between the veterinary doctors and the medical doctors during the 1950s.<sup>158</sup> The veterinary doctors claimed that there was a close connection between medicine and veterinary science and, therefore,

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<sup>149</sup> Ibid.

<sup>150</sup> PRAAD Accra, CSO 540/35, File 9/E, Annual Report by Veterinary Department. p. 6.

<sup>151</sup> Ibid, p 7.

<sup>152</sup> Ibid, p 8

<sup>153</sup> Ibid, p 8

<sup>154</sup> PRAAD Accra, CSO 09/1/69, File 378/36, Control of Diseases. p. 17.

<sup>155</sup> Ibid

<sup>156</sup> Ibid, p 18.

<sup>157</sup> Ibid

<sup>158</sup> PRAAD Accra, CSO A/21/47, File 378/36, Scholarship for Trainee Doctors. p. 5.

salaries and other service conditions between the two types of doctors had to be the same.<sup>159</sup> The veterinary doctors further stated that both they and the medical doctors were under the same code of professional conduct and, therefore, there was no need for any discrimination in social and economic benefits to the two groups of professional. The colonial government, in solving the problem went into several negotiations with the veterinary doctors. The initial negotiations failed and led to a series of strikes by the veterinary doctors.<sup>160</sup> These strikes hampered veterinary services during the latter part of the 1940s. The government, however, found an amicable solution to the impasse by meeting some of the demands of the veterinary doctors including salary increment and the latter resumed their duties.<sup>161</sup>

During the 1950s, the colonial government offered a five-year scholarship programme to veterinary doctors to further their studies in advanced veterinary courses at the Royal College of Veterinary Surgeons in England.<sup>162</sup> Among those selected for the professional training was William Albert Godfrey Richter, a second division veterinary assistant of the Tema veterinary office.<sup>163</sup> The doctors received their full salaries each month throughout the five years they were in England because the training was considered part of their working conditions.<sup>164</sup> In England the trainee doctors were supervised by Captain Stewart, the Director of Colonial Students in England. Captain Stewart periodically furnished the Governor of the Gold Coast with progress reports on the doctors.<sup>165</sup> The colonial government paid all their expenses including the cost of books, tuition fees and hospital bills during the five-year training. The expenses incurred by the government on each trainee for the five years excluding salary were £343.<sup>166</sup> After completing the training they served as government veterinary surgeons for five years before they had the privilege to practise as private veterinary surgeons.<sup>167</sup> After the five years of service a number of doctors were promoted to various higher positions in Tema including Director of Veterinary Services.<sup>168</sup>

As part of the motivation for health workers in the Gold Coast, the colonial government wrote a letter to the Tema Veterinary Department in 1952 to express its appreciation for the good work of veterinary doctors and officers in keeping

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<sup>159</sup> *Ibid*

<sup>160</sup> PRAAD Accra, ADM 665/29, File 61/A Stalemate in Veterinary Services. p. 123.

<sup>161</sup> *Ibid*

<sup>162</sup> *Ibid*, p. 123

<sup>163</sup> PRAAD Accra, ADM 540/35/149, File 540/35, Report by the Animal Health Department. p. 2.

<sup>164</sup> *Ibid*

<sup>165</sup> PRAAD Accra, CSO A/21/47, File 378/36, Government Scholarship for Veterinary Doctors. p. 5.

<sup>166</sup> *Ibid*

<sup>167</sup> *Ibid*

<sup>168</sup> PRAAD Accra, ADM 540/35/139, File 144, Promotion of Veterinary Doctors by Government. p. 13.



the city of Tema clean and improving health care.<sup>169</sup> The letter further reiterated the hard work of the veterinary doctors and officers that had prevented the outbreak and spread of diseases including pneumonia, rinderpest, trypanosomiasis, fowl pox, fowl typhoid, diarrhea, yellow fever and flu in 1952.<sup>170</sup> The government was particularly happy with the house-to-house campaign by the Veterinary Department to sensitise people on the importance of sanitation and cleanliness.<sup>171</sup> In support of the veterinary doctors, the Veterinary Department of the Gold Coast collaborated with its counterparts in other West African countries on disease control, animal husbandry, breeding of livestock, eradication of diseases and trade. This was done to improve the health conditions of both animals and humans and reduce the incidences of diseases.<sup>172</sup>

Veterinary Doctors who doubled as Veterinary Directors performed administrative duties as well as medical care and to facilitate their work the colonial government employed administrative assistants who handled the administrative duties in support of the Veterinary Doctors.<sup>173</sup> The administrative assistants coordinated the activities of the Veterinary Department as well as liaised between the public and the Veterinary Department and educated the public on the duties and responsibilities of the Veterinary Department. The administrative assistants further served as secretaries to the Veterinary Department during meetings.<sup>174</sup> The work of the administrative assistants enabled the doctors to concentrate more on their medical duties and effectively discharged their duties without distractions.<sup>175</sup> In addition to the administrative assistants, retired veterinary officers were also employed by the colonial government to serve as special advisors to the Veterinary Department.<sup>176</sup> The veterinary advisors visited farms and furnished the Department with information that guided the veterinary officers to plan ahead to improve animal health and avert outbreak of diseases. Their work covered about seventy-five percent of the field work done by the Veterinary Department and therefore that reduced the workload of the veterinary officers in Tema.<sup>177</sup>

In 1952, the colonial government financed a health campaign by the veterinary advisors to sensitise the people of Tema on the importance of keeping the community clean to prevent outbreaks of new diseases and also on

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<sup>169</sup> Ibid, p 14

<sup>170</sup> PRAAD Accra, ADM 96/125/665, File 540/35, Report on Veterinary Conference. p. 129.

<sup>171</sup> Ibid, p 7.

<sup>172</sup> PRAAD Accra, ADM 96/125/665, File 540/35, Report on Veterinary Conference. p. 130.

<sup>173</sup> Ibid

<sup>174</sup> PRAAD Accra, ADM 19/11/68, File 11/7A, Control Rinderpest Disease. p. 100.

<sup>175</sup> Ibid

<sup>176</sup> Ibid, p 101.

<sup>177</sup> Ibid, p 102.

how to control the existing ones.<sup>178</sup> The campaign was carried out in schools, market places, lorry parks, factories and in residential houses.<sup>179</sup> The veterinary assistants further educated food vendors on how to prepare wholesome food and how to maintain a hygienic environment.<sup>180</sup> The Veterinary Department advised livestock owners to collaborate with senior veterinary officers who visited farms and provided information about farm management.<sup>181</sup> All these measures were put in place to mitigate the incidence of new diseases and fight existing ones. Periodically the Governor of the Gold Coast visited livestock farms and the Veterinary Department to observe how they went about their work in Tema.<sup>182</sup>

In 1952, a report prepared by the Health Department indicated that there was a reduction in hospital attendance by humans particularly with diseases such as cholera and food poisoning partly due to the health campaign organised by the Veterinary Department.<sup>183</sup> During the 1950s food vendors were immunised by the Health Department every quarter of the year simultaneously with the immunisation of school children.<sup>184</sup> Disinfectants were distributed by the Health Department to all schools and these were placed in washrooms and food vending points in the schools.<sup>185</sup> The Health Department encouraged animal feed producing factories to include dewormers in animal feed to prevent worm infestation.<sup>186</sup> Workers and the management of various animals feed factories were trained by the Veterinary Department on how to administer vaccines and disinfectants onto livestock farms during outbreaks of disease(s).<sup>187</sup> The clean community helped to improve the health of the people, and they as well went about their social and economic activities including trade, transportation, construction and farming and these contributed to the development of Tema during the 1950s. As a result of Tema's urbanisation the colonial government saw the need to build additional health care centres such as the Tema General Hospital.<sup>188</sup>

<sup>178</sup> PRAAD Accra, CSO 378/36/54, File A/21/47, Collaboration between Animal Farmers and the Veterinary Department. p. 54.

<sup>179</sup> *Ibid*

<sup>180</sup> *Ibid*, p 55.

<sup>181</sup> *Ibid*

<sup>182</sup> *Ibid*, p 56.

<sup>183</sup> *Ibid*

<sup>184</sup> PRAAD Accra, CSO 296/2/D, File 43/12, Immunisation and Disease Control. p. 53.

<sup>185</sup> *Ibid*, p 54.

<sup>186</sup> *Ibid*

<sup>187</sup> *Ibid*

<sup>188</sup> *Ibid*, p 55.

**Figure 1: The Tema General Hospital**

Source: <https://www.allianzworldwidecare.com>

### Training of Medical Doctors

In 1955, the colonial government awarded scholarships to some Gold Coast students including some from Tema, namely, Christian Owusu Appiagyei and Maxwell Allotey who excelled in science subjects during the Sixth Form Examinations to study medicine in the United Kingdom. This was because there was the need for more medical and veterinary doctors to help curb the spread of diseases including malaria, yellow fever, flu and trypanosomiasis.<sup>189</sup> The selection of qualified students for further studies in medicine was undertaken by a Board of Selection constituted by the Governor on behalf of the colonial government. The Board's selection was subjected to approval by the Governor whose decision was final and names of invited students and selected of qualified students were published in the Government Gazette.<sup>190</sup>

For a student to qualify for the selection, he or she had to be unmarried, and both or one of the parents had to be an indigene of the Gold Coast colony. The student had to be not less than seventeen years and not more than twenty years of age at the time of submitting the application.<sup>191</sup> The birth date of the applicants was to be supported with a Certified Extracts from the Registrar of Births and Deaths.<sup>192</sup> The applicants had to be physically fit and of morally good standing attested by witnesses who knew the applicant(s). The candidate had to support his or her physical fitness claim with a report from Government Medical Officer.<sup>193</sup> All the same, applicants above the age of twenty who did

<sup>189</sup> PRAAD Accra, CSO 296/2/D, File 43/12, Immunisation and Disease Control. p. 56.

<sup>190</sup> PRAAD Accra, CSO 839/15/22 SF1, File 378/36, Government Scholarship for Medical Students. p. 20.

<sup>191</sup> Ibid, p 21.

<sup>192</sup> Ibid

<sup>193</sup> PRAAD Accra, CSO 839/15/22 SF1, File 378/36, Government Scholarship for Medical Students. p. 22.

exceptionally well in the Sixth Form Examinations, but had financial difficulties were also selected for the scholarship award.<sup>194</sup> The value of the scholarship was £300 per student per annum for five years and covered accommodation, examination fees, admission fees and personal expenses of the students.<sup>195</sup> In addition to the scholarship amount, the students were given free first class round-trip airplane tickets to England and back to the Gold Coast. On the student's arrival in England the colonial government paid all the travelling expenses of the students from the airport to the various universities, colleges and schools.<sup>196</sup> The Director of Colonial Scholars in London supervised all activities of the students during the five years they spent in London.<sup>197</sup> The Dean of the Medical School in London reported to the Director of Colonial Scholars every academic year on the progress of the students and the Director of Colonial Scholars subsequently sent the report to the Governor in the Gold Coast.<sup>198</sup>

To ensure that students were physically and mentally fit while undergoing the five years training, the Consultant Physician to the Colonial Office in London annually examined each student.<sup>199</sup> Students who could not withstand the weather conditions and as result got sick frequently were withdrawn from the course and brought back to the Gold Coast to seek further medical care and the colonial government paid part of the medical bills and the parents or guardian of the student paid the rest.<sup>200</sup> In the event that a student was unable to complete the course within the five years period due to illness or any genuine unforeseen occurrences the scholarship duration was extended for a period approved by the colonial government to enable the student complete the course and obtain a medical degree.<sup>201</sup>

After a successful completion of the course and obtaining a certification as medical doctors, the colonial government congratulated the doctors and gave each of them a £50 allowance.<sup>202</sup> When the trained doctors returned to the Gold Coast they signed a bond to work only in government health care facilities for five years after which they could work in the private health care sector.<sup>203</sup> Some

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<sup>194</sup> *Ibid*

<sup>195</sup> *Ibid*, p 23.

<sup>196</sup> Interview with Mr. Ebenezer Ansu, Former Staff of Tema General Hospital, 72 years of age, at his residence, on September, 2017.

<sup>197</sup> *Ibid*

<sup>198</sup> *Ibid*

<sup>199</sup> *Ibid*

<sup>200</sup> Interview with Mr. Ebenezer Ansu, Former Staff of Tema General Hospital, 72 years of age, at his residence, on September, 2017.

<sup>201</sup> Interview with Enoch Yeboah, Former Staff of 37 Military Hospital, 72 years of age, at his residence, on 27 January, 2017.

<sup>202</sup> *Ibid*

<sup>203</sup> *Ibid*

of the doctors accepted full time engagement in the government health care centres, but also worked part time in private health care centres during their free periods.<sup>204</sup>

Student(s) who committed offences, failed to pass any examination, became involved in examination malpractices, did not meet academic standards, or were guilty of any grievous offence(s) such as breach of discipline, misconduct, persistent idleness, or accepted any appointment without prior approval from the academic board had either the full scholarship or part of it forfeited by the colonial government based upon a report of the Dean of Students.<sup>205</sup> Those who pursued any other courses outside the medical school and those who married while in England before completion of the courses were expelled from the medical school.<sup>206</sup> Those who had either part or the full scholarships forfeited were given between three to six months to prepare to finance their education personally or to leave the medical school. Those who were expelled from the medical school were given a free third class return ticket to the Gold Coast. And those who refused to return to the Gold Coast were denied both the opportunity to stay in England and the return ticket.<sup>207</sup>

Student(s) who conducted themselves well and distinguished themselves academically applied to the colonial government for a short stay in England after the medical training to pursue additional course(s) that enhanced their medical skills.<sup>208</sup> The application(s) was approved by the colonial government which granted the successful candidate a maximum of three years stay, although at his or her own expense. But on their return to the Gold Coast the colonial government provided them with a first-class airplane ticket.<sup>209</sup>

On their return from England, five trained doctors made innovations into the medical profession in Tema. Those who worked in health care centres in Tema contributed to the improvement in the health care sector. They helped to control the spread of diseases such as rinderpest, bird flu, pig flu, foot rot, yellow fever, malaria, cough and pneumonia.<sup>210</sup> The doctors worked hand-in-hand with pharmacists in Tema to improve the quality of vaccines and serums production and thus increased the immunity vaccines and serums had on humans and animals who suffered from rinderpest, bird flu, foot rot, yellow fever, malaria,

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<sup>204</sup> Ibid

<sup>205</sup> PRAAD Accra, CSO 378/36/19, File 378/36, Annual Report on the Activities of Medical Doctors in the Gold Coast. p. 11.

<sup>206</sup> Ibid

<sup>207</sup> Ibid

<sup>208</sup> Ibid, p 13.

<sup>209</sup> Ibid

<sup>210</sup> Ibid

fowl cholera, pig flu, cough and pneumonia.<sup>211</sup> The doctors further conducted field researches in the Tema community to find out bionomics of the new emerging forms of the tsetse flies that caused pig flu.<sup>212</sup> In addition to vaccines for the pig flu the pharmacists developed vaccines for rabies and fowl cholera.<sup>213</sup> The doctors further advised the Health Department to introduce quarantine systems to keep sick animals away from the healthy ones and also urged livestock owners to keep away from their sick animals to avoid contaminating disease(s).<sup>214</sup>

Research by the doctors revealed that part of the reasons why humans and animals got sick frequently in Tema was lack of nutritious food and livestock feed.<sup>215</sup> As a result, the doctors in collaboration with the Health Department established a research centre in Tema, the “Welcome Research Institute,” headed by Dr. William Hoare, to undertake extensive research into the causes of human and animal diseases and the cure or antidote to such disease(s). The chiefs of Tema agreed with the Health Department to establish the research institute and consequently allocated land for the construction of the research centre.<sup>216</sup> The doctors recommended protein and nutrients that needed to be used by food and animals feed producers.<sup>217</sup> The colonial government allocated funds to purchase laboratory equipment for the centre. The institute undertook several research activities into causes of diseases and the medications needed to cure such diseases, together with how to improve food production, animal feed and nutrition. During the early part of the 1960s, most of the research findings and campaigns by the Institute were published in the news including *The Evening Newspaper*, published by the Graphic Corporation and *The Reuters* in London.<sup>218</sup> To improve animal feed the doctors recommended to factories producing animal feed to include straw, dried cassava fruit and locally grown cereal such as millet and maize mixed with smoked sardine in the preparation of nutritious animal feed.<sup>219</sup> During the 1960s, the doctors organised a series of campaigns to educate traders and consumers on how to maintain good hygiene, preserve food, particularly, perishable items such as fish, tomatoes, cassava, pepper and other vegetables.<sup>220</sup>

In 1957, the CPP Government made health care a priority and executed

<sup>211</sup> I. PRAAD Accra, CSO 386/37/3, File 386/37, Privileges of Medical Doctors in the Gold Coast. p. 2.

<sup>212</sup> *Ibid*, p 4.

<sup>213</sup> *Ibid*, p 5.

<sup>214</sup> *Ibid*

<sup>215</sup> I. PRAAD Accra, 2915/88/21SF1, File 250/3, Improvement on Animal Farms in Tema. p. 32.

<sup>216</sup> *Ibid*, p 33.

<sup>217</sup> *Ibid*, p 34.

<sup>218</sup> Interview with Mr. Ekow Ntsie, Former Staff of the Graphic Corporation, 68 years of age, at his residence, on June 3rd, 2018.

<sup>219</sup> PRAAD Accra, CSO 9/1/70, File 378/36, Disease Control. p. 3.

<sup>220</sup> *Ibid*

policies that aimed at extending western health care to everyone in Ghana. The government expanded health care facilities in Ghana. For example, expansion and renovation works were carried out by the government at the Tema General Hospital. More hospital buildings and additional laboratory were constructed.<sup>221</sup> In addition the government provided medication and laboratory equipment to the Tema hospital. More health workers were also trained by the government to assist in health care delivery and these programmes were funded by the government through taxation and revenue generated from trade and industry.<sup>222</sup>

Another innovation the CPP Government made in health care delivery was the training of medical doctors and other health professionals in Ghana.<sup>223</sup> Dr. Kwame Nkrumah's belief that the "black man was capable of managing his own affairs" motivated him and the CPP Government to support the education of the people of the Gold Coast to the university level.<sup>224</sup> Dr. Kwame Nkrumah's vision was that university education, as the apex of academic pursuit, should be the vehicle for training professionals and, thus, made university education one of his government's priorities. In 1955, as the Prime Minister of the Gold Coast, Nkrumah petitioned the Council of the Royal College of Medical Studies of England to permit the University College of the Gold Coast (University of Ghana) to establish its own Medical School.<sup>225</sup> Thus, upon the request made by Dr. Kwame Nkrumah to the Council of the Royal College of Medical Studies of England, the colonial government contributed financially for the establishment of a medical school in Ghana which was started in 1962 and commissioned in 1964.<sup>226</sup>

The CPP Government's commitment to improve university education with particular attention on the training of doctors and the improvement of health care in Ghana was seen in its financial contributions to the universities. For example, for the 1959–60, academic year the University College of the Gold Coast (University of Ghana) received a grant of £850,000 from the CPP Government.<sup>227</sup> In the following academic year, 1960–1961, the grant was increased to £865,000.<sup>228</sup> From 1964, the Ghana Medical School trained a number of medical professionals. Among the medical professionals trained by the medical school were veterinary,

<sup>221</sup> Interview with Mrs. Victoria Ansah, Former Staff: Ministry of Health, 82 years of Age, at her residence, on 20th February, 2017.

<sup>222</sup> Ibid

<sup>223</sup> PRAAD Accra, CSO 9/1/93, File 261, Expansion in Health Care Facilities. p. 12.

<sup>224</sup> Ibid

<sup>225</sup> . Francis Agbodeka, *A History of University of Ghana: Half A Century of Higher Education 1948-1998*, (Accra: Woeli Publishing Services, 1998), pp. 199–201.

<sup>226</sup> Ibid

<sup>227</sup> Peter Boakye and Kwame Osei Kwarteng, *Education for Nation Building: The Vision of Osagyefo Dr. Kwame Nkrumah for University Education in the Early Stages of Self-Government and Independence in Ghana*, (Cape Coast: Department of History, University of Cape Coast, 2018), p. 6.

<sup>228</sup> Ibid.

some of whom worked at the Tema Veterinary Hospital.<sup>229</sup>

In the 1960s, veterinary doctors trained by the Ghana Medical School periodically engaged in exchange programmes with the Royal College of Veterinary Surgeons in England to share experiences and to learn from their colleagues as well. Each exchange programme lasted for one year and as part of that programme, participants undertook a special one-year course.<sup>230</sup> At the end of the course, each veterinary doctor from Africa including Ghana was given a diploma certificate which qualified the person to be an Associate Member of the Royal College of Veterinary Surgeons in England. The certification enabled Ghanaian African Veterinary Doctors to visit the Royal College of Veterinary Surgeons for refresher course(s).<sup>231</sup>

After the CPP Government was overthrown in 1966, some of the health care policies of the CPP Government were discontinued or changed by successive governments.<sup>232</sup> For example, in 1969, the National Liberation Council (NLC) Government passed the Hospital Fees Decree which compelled people who sought health care at government hospitals and clinics to pay a fee.<sup>233</sup> Subsequently, in 1970, the Progress Party (PP) Government under the leadership of Dr. Kofi Abrefa Busia passed the Hospital Fees Act which aimed to recover expenses incurred by the government on hospitals and clinics. The Hospital Fees Act became necessary because of economic instability in Ghana during the 1970s.<sup>234</sup> In all the policies adopted by the N.L.C and the P.P, the government subsidised the cost of health care for patients.<sup>235</sup> Even at this time, health care in Tema faced some challenges, including, periodic shortage of drugs, insufficient health care personnel, lack of accommodation and beds to admit patients, delay in staff salaries and upsurge of certain diseases.<sup>236</sup> There were five successive coups d'état in Ghana between 1966 and 1980 that disrupted social and economic developments in Ghana and no significant changes were made in health care delivery in Ghana because of the political instability of the period.<sup>237</sup>

By 1980, many social services including healthcare, were inadequate and efficient care in the area of drugs and doctors had gone down. Most of the

<sup>229</sup> PRAA Accra, CSO 229/37/1930, File 1110/31, Report on Veterinary Activities in Ghana. p. 7.

<sup>230</sup> Ibid, p. 8.

<sup>231</sup> PRAAD Accra, CSO 9/1/122, File 266, Reforms in Health Care in the Gold Coast. p. 11.

<sup>232</sup> Ibid

<sup>233</sup> PRAAD Accra, CSO 9/1/122, File 266, Reforms in Health Care in the Gold Coast. p. 12.

<sup>234</sup> PRAAD Accra, CSO 24/12/42, File 3699/1, Report on Health Care in Ghana. p. 22.

<sup>235</sup> Ibid

<sup>236</sup> Ibid, p 23.

<sup>237</sup> PRAAD Accra, ADM 1094/175/41A, File 1110/31, Annual Report by Ghana Medical Service. p. 5.



military governments were in office for a short period of time and did not make any significant contributions to health care.<sup>238</sup> Ruling through decree they partially halted development and, to some extent reversed economic and social policies of previous governments.<sup>239</sup>

In 1983, health care in Tema suffered another setback when the World Bank pressured the Provisional National Defense Council (PNDC) Government to cut back on public spending through the Structural Adjustment Programme (SAP).<sup>240</sup> The SAP was an economic recovery programme prescribed by the World Bank as a panacea for Ghana's economic woes during the 1980s.<sup>241</sup> The cut back on public spending affected health care delivery and the government could not afford to train new doctors and nurses, supply drugs to health care facilities and expand infrastructure.<sup>242</sup> In 1985, the government passed the Hospital Fees Regulations Act with the aim to raising money to purchase drugs and acquire resources needed to improve healthcare in Ghana. The cut in government spending negatively affected healthcare delivery in Ghana.<sup>243</sup> The hospital fee paying policy introduced by the P.N.D.C Government replaced the free medical care enjoyed by Ghanaians under previous governments.<sup>244</sup> The system came to be known as the "cash-and-carry system". And it required that Ghanaians had to pay for all services they received at the hospitals and clinics without exemptions.<sup>245</sup>

In spite of the fee paying by patients, health care in Ghana still suffered a setback including lack of expansion in hospital and clinic facilities and shortage of health care personnel because many of the health care personnel migrated to other countries in search of better conditions of work. In addition, they were also discouraged from working in Ghana by the lack of resources to deal with disease such as malaria, yellow fever, typhoid and jaundice that could be easily treated when the necessary resources are available.<sup>246</sup> Many people particularly, those who had low incomes found it difficult to access western medical care because they could not afford to pay for the cost. The difficulty in accessing western medical care by many people in Ghana was one of the biggest challenges the P.N.D.C Government faced during the latter part of the 1980s.<sup>247</sup>

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<sup>238</sup> Ibid, p. 6.

<sup>239</sup> Ibid, p. 7.

<sup>240</sup> Interview with Warrant Officer Class II Kwabena Appiah, Former Staff of the Ghana Armed Forces, 73 years of age, at his residence, on 20th July, 2017.

<sup>241</sup> Ibid

<sup>242</sup> Ibid

<sup>243</sup> Ibid

<sup>244</sup> Ibid

<sup>245</sup> Ibid

<sup>246</sup> PRAAD Accra, CSO 2013/131/34, File 1545, Financing Health Care in Ghana. p. 14.

<sup>247</sup> Ibid

The deplorable conditions in the health sector improved when Ghana returned to democratic rule in 1993. There were some improvements in service delivery, training of health professionals, public education and health care. For example, in 1997, the P.N.D.C government established a Health Fund to mobilise money to support the poor and the vulnerable who sought medical care at government hospitals and clinics but could not afford to pay for those services.<sup>248</sup> In Tema, for example, the government used part of the internally generated fund to expand healthcare facilities, to construct blocks, and purchase, drugs and procure transport for medical staff.<sup>249</sup> Elderly people over the age of seventy and those on pension were exempted from paying hospital fees.<sup>250</sup>

In 2003, the New Patriotic Party (NPP) Government under the leadership of John Agyekum Kufour established the National Health Insurance Scheme (NHIS) under the National Health Insurance Act 2003.<sup>251</sup> Until the National Health Insurance Scheme was established many people had died because they could not pay for hospital bills. Even in cases where patients were brought to hospitals under emergency situation money was demanded before doctors attended to them.<sup>252</sup> Thus the National Health Insurance Scheme came as a relief to many people in Tema, particularly, the poor and the vulnerable.<sup>253</sup> Contributors to the scheme enjoyed free health care for certain types of ailments including malaria, typhoid, maternal and child health care. Pregnant women enjoyed free maternal care and that saved the lives of many women and children.<sup>254</sup>

In 2005, the Government of Ghana contributed Gh¢ 66 million to health care delivery.<sup>255</sup> This amount contributed by the government complemented contributions made by members of N.H.I.S.<sup>256</sup> The National Health Insurance Scheme helped to improve health care in Ghana. For example, in Tema the health care centres used Growth Monitoring and Promotion (GMP) programmes that focused on sensitising breastfeeding mothers on how to practise good child care, infant feeding and medication.<sup>257</sup> Health workers in Tema, particularly, those from the Child Welfare Clinic (CWC) frequently interacted with mothers concerning the

<sup>248</sup> PRAAD Accra, CSO 2013/131/34, File 1545, Financing Health Care in Ghana. p. 14.

<sup>249</sup> *Ibid*, p 15

<sup>250</sup> *Ibid*

<sup>251</sup> Giovanni Carbone. "Democratic Demands and Social Policies: The Politics of Health Reforms in Ghana," *The Journal of Modern African Studies*, 49 (2011): pp. 381–385.

<sup>252</sup> *Ibid*, pp. 386–390.

<sup>253</sup> *Ibid*

<sup>254</sup> *Ibid*

<sup>255</sup> *Ibid*, p 391

<sup>256</sup> *Ibid*

<sup>257</sup> Giovanni Carbone. "Democratic Demands and Social Policies: The Politics of Health Reforms in Ghana," *The Journal of Modern African Studies*, 49 (2011): pp. 381–385.

health and well-being of their children.<sup>258</sup> Hospitals and clinics in Tema undertook a number of intervention programmes which included immunisation, nutrition supplementation and growth monitoring, especially, children less than five years. The health workers also educated mothers on how to take good care of their children.<sup>259</sup> As part of expansion in health care new hospitals were built such as the Regional Maritime Hospital.

**Figure 2: The Regional Maritime Hospital in Tema**



Source: <https://www.allianzworldwidecare.com>

In 2005, the World Health Organisation and the United Nations Children Fund provided money and other items including drugs, hospital beds, baby foods, technical and professional assistance to health care centres in Tema because the health care facilities lacked those amenities.<sup>260</sup> Laboratories and pharmacies in the health care facilities were equipped with items needed to facilitate their work such as sterilisers, boiling pots, trays, cabinets to store drugs and refrigerators for preserving drugs.<sup>261</sup> In 1990, maternal mortality rate was 549, however, the

<sup>258</sup> Ibid, pp 394– 396.

<sup>259</sup> PRAAD Accra, CSO 9/1/42/, File 843/17, Annual Report on the Operations of the National Health Insurance Scheme. p. 4.

<sup>260</sup> Ibid

<sup>261</sup> Ibid, p 5

figure dropped to 409 in 2008, partly due to the National Health Insurance Scheme.<sup>262</sup> Those insured by N.H.I.S had more privileges in accessing health care than the non-insured.<sup>263</sup> The insured, together with their children below eighteen years of age, enjoyed free laboratory services, OPD dispensary, some surgical care and consultation services at the health care centers. Pregnant women who enrolled in the scheme received free prenatal care and, gave birth at health care centres in the presence of trained birth attendants.<sup>264</sup> People below the age of eighteen, those above seventy years, the unemployed and pregnant women were made to pay registration fees but exempted from paying annually the insurance premium of Gh¢10. But expensive treatments such as cancer, organ transplanting, dialysis, cosmetic surgery and H.I.V antiretroviral drugs were exempted from the National Health Insurance Scheme because the amount involved in treating those sicknesses was huge.<sup>265</sup>

By 2008, close to 50% of the population in Tema were registered members of the National Health Insurance Scheme. The non-insured paid for all services they received from the health care centres.<sup>266</sup> But one of the setbacks of the National Health Insurance was that the non-insured who had the money to pay for services were sometimes attended to while the insured had to wait a little longer to be served. When the matter was brought to the attention of the Ghana Government measures were taken to eliminate discrimination and favouritisms in the health sector.<sup>267</sup> The government further expanded the number of drugs and conditions covered in the National Health Insurance Scheme.<sup>268</sup> The Ghana government's policy that expanded drugs and conditions covered by the NHIS encouraged many people to register for the health insurance scheme.<sup>269</sup> As the health sector expanded, the Government of Ghana employed many more health professionals including nurses, doctors, midwives and laboratory technicians who had been unemployed for a number of years after their training.<sup>270</sup> New students were also admitted into various health training institutions such as the Ghana Medical School and its allies and the Nursing Training Colleges.<sup>271</sup> After training,

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<sup>262</sup> Ibid, p 5.

<sup>263</sup> Ibid

<sup>264</sup> Osei Akoto, Effects of Ghana National Health Scheme. <http://jpag.macrothink.org>. Date accessed, 14th April, 2020.

<sup>265</sup> Ibid

<sup>266</sup> Robert Teye Plahar et al., Experiences of the Insured and Non-Insured of the National Health Insurance Scheme in Accessing Health Care in Tema, Ghana. <http://doi:10.5296/jpag.v10i.16130>. Date access, 14th April, 2020.

<sup>267</sup> Ibid

<sup>269</sup> Ibid

<sup>270</sup> Samuel Agyei-Mensah and de-Graft Ama Aikins. "Epidemiological Transition and the Double Burden of Disease in Accra, Ghana", *Journal of Urban Health*, 87 (2010): pp. 879-881.

<sup>271</sup> Ibid, pp 882-888

some of those health professionals were employed at the health care facilities in Tema.<sup>272</sup> Table eight explains number of registered and non-registered people under the National Health Insurance Scheme in 2005.

**Table 1: Number of People Registered and Non-registered under the National Health Insurance Scheme in Tema in 2005**

	<b>Gender</b>	<b>Frequency</b>	<b>Percentage</b>
Insured	Males	50	29.4
	Females	65	38.2
Non-Insured	Males	30	17.6
	Females	25	14.7
<b>Total</b>		<b>170</b>	<b>100</b>
	<b>Age</b>		
Insured	18-30	20	11.8
	30-45	95	55.9
Non-Insured	18-30	45	26.5
	30-45	10	5.9
<b>Total</b>		<b>170</b>	<b>100</b>
	<b>Marital Status</b>		
Insured	Single	35	20.6
	Married	80	47.1
Non-Insured	Single	40	23.5
	Married	15	8.8
<b>Total</b>		<b>170</b>	<b>100</b>

Source: Robert Teye Plahar et al., *Experiences of the Insured and Non-Insured of the National Health Insurance Scheme in Accessing Health Care in Tema, Ghana*. [www.researchgate.net/](http://www.researchgate.net/). Date accessed 14th April, 2020.

<sup>272</sup> Ibid, pp 889– 897.

## CONCLUSION

The colonial government in the early part of the twentieth century established western healthcare facilities in Tema which were managed by European medical professionals. The western healthcare facilities complemented traditional medicine to improve healthcare in Tema. Prior to the introduction of western medicine, the people of Tema relied on various forms of healthcare including herbal medicine which was administered by traditional priests and herbalists. They attributed causes of diseases, illnesses and deaths to the anger of the deities and used divination to determine the causes of the ailments. Through divination they revealed to the people the causes of diseases, illnesses and deaths due to disobedience to the deities and the consequent punishment for such disobedience. According to the priests and herbalists the deities of the land were responsible for the outbreak of diseases as a way of displaying their displeasure towards disobedience by the people. The priests and the herbalists prescribed curative measures for sicknesses, illnesses and also how to appease the deities to avert deaths.

In the 1930s, the colonial government established a Health Department in Tema that offered western medical care to patients. Western Medicine came as a relief to the people because the spread of diseases and the frequent deaths began to decline. The Health Department in Tema had laboratory, clinics, sanitation and public health sections that managed different aspects of the health care of the people. In 1935, the Health Organisation of the League of Nations provided medicine, technical and financial assistance to the people of Tema to help them control the spread of diseases and even to eliminate them.

In 1955, the colonial government awarded scholarships to some Gold Coast students including some from Tema, who excelled in science subjects during the Sixth Form Examinations, to study medicine in the United Kingdom. The government offered the scholarships because there was the need for more medical and veterinary doctors to help curb the spread of diseases such as malaria, yellow fever, flu and trypanosomiasis on the Gold Coast. After Ghana's independence in 1957 the C.P.P Government improved healthcare in Tema and Ghana generally. The government expanded medical facilities such as wards, surgical theaters, laboratories, and also trained health workers including doctors and nurses. Although successive governments—both civilian and military continued with many of the colonial and the C.P.P Governments, healthcare policies, they also introduced several innovations. For example, in 2003, the New Patriotic Party (NPP) Government under the leadership of John Agyekum Kufour launched the National Health Insurance Scheme (NHIS) under the National Health Insurance Act 2003. Until the National Health Insurance Scheme was introduced many sick people had difficulty paying their hospital bills. Even in cases where patients were brought to hospitals under emergency situation, payment was demanded

before doctors and nurses attended to them. Thus, the National Health Insurance Scheme came as a relief to many people in Tema, particularly, the poor and the vulnerable. Contributors to the scheme enjoyed free healthcare for certain types of ailments including malaria, typhoid, maternal and child healthcare. Pregnant women enjoyed free maternal care and that saved the lives of many women and children.

In 2005, healthcare centres in Tema implemented a Growth Monitoring and Promotion (GMP) programme that focused on sensitising breastfeeding mothers on how to practise good child care and infant feeding. Health workers in Tema, particularly, those from the Child Welfare Clinic (CWC) frequently interacted with mothers concerning the health and well-being of their children. Hospitals and clinics in Tema undertook a number of intervention programmes including immunisation, nutrient supplementation and growth monitoring, especially, of children below the age of five. The health workers also educated mothers on the benefits of regular medical checkup. Again in 2005, the World Health Organisation and the United Nations Children Fund provided financial support and other items including drugs, hospital beds, baby food, as well as technical and professional assistance to healthcare centres in Tema. Laboratories and pharmacies in healthcare facilities were equipped by the Government of Ghana with items such as sterilisers, boiling pots, trays, cabinets to store drugs and refrigerators needed to facilitate their work.

Research conducted by the Ministry of Health in 2008 indicated that in 1990, maternal mortality rate in Tema was 549. However, the figure dropped to 409 in 2008, partly due to several health care intervention programmes the Government of Ghana introduced including the National Health Insurance Scheme. People insured by the N.H.I.S had more privileges accessing healthcare than the non-insured. The insured together with their children below eighteen years of age enjoyed free laboratory, Out Patient Department dispensary, and some surgical care and consultation services at the health care centres. Pregnant women who enrolled in the scheme received free prenatal care and trained birth attendants attended to them during delivery. Although people below the age of eighteen, those above seventy years, the unemployed, and pregnant women were made to pay registration fees, they were exempted from paying the annual insurance premium of Gh¢10 in 2005. Expensive treatments for diseases such as cancer, organ transplanting, dialysis, and cosmetic surgery and H.I.V antiretroviral drugs were, however, exempted from the National Health Insurance Scheme. By 2008, healthcare in Tema had improved to the extent that communicable diseases and preventable deaths had significantly reduced.

By 2008, close to 50% of the population in Tema were registered members of the National Health Insurance Scheme. The non-insured paid for all services



they received from the health care centres. One of the setbacks of the National Health Insurance was that the non-insured who had the money to pay for services were sometimes attended to while the insured had to wait for a little longer time to be served. When the matter was brought to the attention of the Kufour's Government measures were taken to eliminate discrimination and favouritisms in the health sector. The government further expanded the number of drugs and conditions covered in the National Health Insurance Scheme. The government's policy that expanded drugs and conditions covered by the N. H. I. S encouraged many people to register for the health insurance. As the health sector expanded, the Government of Ghana employed many health professionals including nurses, doctors, midwives and laboratory technicians who had been unemployed for a number of years after their training. New students were also admitted into various health training institutions such as the Ghana Medical School and its allied institutions and the Nursing Training Colleges. After training, some of those health professionals were employed in health care facilities in Tema. By the close of 2008, when Tema became a metropolitan community health care, education and trade and industry had improved and thus people could access these social and economic facilities with less stress than ever before.

This research has shown that Tema had gone through social and economic transformation before the construction of the harbour in 1952. Therefore, the perception that only the emergence of the harbour fostered the development of Tema is not entirely correct. However, the emergence of the Tema harbour contributed to the expansion of social and economic activities. Factors that aided the development of Tema prior to the construction of the harbour included trade and industry, western education and western healthcare. For example, health workers in Tema educated the people on the importance of healthy lifestyle by keeping a clean environment, eating healthy food and maintaining regular medical checkups. Health care in Tema helped to reduce the outbreak of diseases and as well contributed to increase of lifespan of the people. The healthy people contributed to the growth of social and economic activities and, these as a result, led to the urbanisation of Tema during the twentieth century. Furthermore, this thesis offers readers the opportunity to understand the difference between factors that fostered the urbanisation of Tema, and those of other urban communities in Ghana. However, the research faced some challenges including lack of information from institutions and individuals, which I thought, could provide additional information on the subject under discussion. In addition to that, some of the people interviewed presented conflicting information, while some also gave wrong information. As a result of that, one had to travel long distances to cross check the authenticity of the information.



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