

**TRIBUTE TO THE LEGEND MR. VETERINARY PUBLIC HEALTH,
PROFESSOR JAMES STEELE (1913- 2013): A LATE PIONEER OF ONE
HEALTH IN NIGERIA**

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Abstract

Between 2013 and 2014, the One Health World witnessed the demise of three pioneers of One Health in Nigeria- Professor Gabriel Oluwole Esuruoso, the Father of Veterinary Public Health in Nigeria, who died on 26th January 2013 aged 80; Prof James Steele, often referred to as the "father of veterinary public health", died Nov. 10 2013, aged 100 years old; and Prof David Goldsmith Montefiore who passed away on June 10 2014, aged 85. Nigeria was opportuned to have the One Health input of Prof James Steele known as "Mr. Veterinary Public Health" and acclaimed 'Father of Veterinary Public Health', "Father of One Medicine" and 'founder and advocate of One World, One Health, One Medicine, who was invited in 1978 as Visiting Professor and External Examiner to the Department of Veterinary Public Health and Preventive Medicine by the Founding Head of Department, Prof G.O. Esuruoso, one of the earliest pioneers of One Health in Nigeria. The author was also destined during his Sabbatical Leave to have an interactive interview session with Prof James Steele after attending the 20th Annual James Steele lecture/ 99th birthday Dinner of Professor James Steele 4th and 6th April 2012 at the Texas School of Public Health, Houston, Texas, USA. The interview session was facilitated by a long time American veterinary epidemiology colleague and professional friend, Dr. Peter Cowen, a University of Ibadan 1978 DVM graduate. This article is a tribute to the memory of the late Prof James Steele for his contribution to the history of One Health in Nigeria, and shares his (and others') perspectives on challenges and factors to hasten One Health in Nigeria.

Introduction

This article was conceived during the author's Sabbatical Leave as a Veterinary Academic Consultant under the African Field Epidemiology Network AFENET/ Atlanta US Centers for Disease Prevention and Control CDC Animal: Human Interface AHI Project, Nigeria from September 2011 to May 2012, with a primary responsibility of developing a

One Health Curriculum for the African Field Epidemiology (and Laboratory Training Program) Network AFENET. The last six (6) weeks (March 15 to April 25 2012) of the sabbatical leave was on an Educational trip to CDC- Atlanta's Center for Global Health, to learn CDC Field Epidemiology Training Program FETP educational development and training methods. This

was after making a presentation on the implementing the One Health through the Nigerian Field Epidemiology Laboratory Training Program NFELTP at the International Conference on Emerging Infectious Diseases 2012 (ICEID 2012), on March 12, 2012 at Atlanta, Georgia, USA (Babalobi, 2012a).

During the period he was in Atlanta, the author was informed and invited by a long time American senior veterinary epidemiology colleague and professional friend, Dr. Peter Cowen, a University of Ibadan 1978 DVM graduate, of the 20th Annual James Steele lecture/ 99th birthday Dinner of Professor James Steele (the acclaimed '*Father of Veterinary Public Health*' scheduled for 4th to 6th April 2012 at the Texas School of Public Health, Houston, Texas, USA. My Sabbatical Leave Principal, Dr Lora Davis, the Veterinary Medical Officer of the Nigeria Field Epidemiology Laboratory Training Program NFELTP, who was in charge of the CDC Animal: Human Interface AHI Project, Nigeria, graciously approved my trip to from Atlanta to Houston for the event and also to have a One Health and One Health Curriculum interview with Professor James Steele.

Dr Peter Cowen had been in Nigeria a number of times on One Health related activities:

- i. In August 2008, came with Carol Rubin of the CDC in connection with the take-off of the Nigeria Field Epidemiology Laboratory

Training Program NFELTP which for the first time veterinarians were involved; and developed a Veterinary Curriculum with the inputs of Veterinary Epidemiologists or Epizootiologists (including the author) from the Department of Veterinary Public Health and Preventive Medicine of the two institutions- Ahmadu Bello University Zaria and University of Ibadan- involved in providing the academic components of NFELTP.

- ii. Dr Peter Cowen made a presentation titled 'The Imperative of Change: Opportunity Knocks for the Veterinary Profession' as a Keynote Speaker during the 2008 NVMA 45th Annual National Congress, Owerri, Imo State, Nigeria (Cowen, 2008).
- iii. And in 2009 he gave a presentation on 'Origins and the Importance of Realization of One Medicine' at the Second Nigerian NFELTP Lectures, 2 Nov 2009 (Cowen 2009).

In the last two visits above, Peter Cowen highlighted in a slide presentation titled "The Evolution of One Medicine in Nigeria":

- i. The Early Work in Public Health of Prof. Oyewale Tomori
- ii. Innovations in Teaching Programs of Prof. G. O. Esuruoso

He also listed the following 'Structural obstacles to realizing a One Medicine Approach to Public Health':

- i. Veterinarians don't always know and fully appreciate our history
- ii. Internecine and inter-sectorial war in the (veterinary) profession
- iii. Changing culture of two disciplines (medicine and veterinary medicine) that have operated separately for decades
- iv. Expanding the limited and narrow view of what activities comprise veterinary medicine
- v. Overcoming a tendency for veterinarians and physicians to communicate solely within their professions rather than to communicate across disciplines
- vi. Hesitation to provide leadership on controversial issues; and
- vii. Understanding how to operate strategically and politically (Cowen 2009).

Prof James Steele had been in Nigeria as a Guest Lecturer and External Examiner to the Department of Veterinary Public Health and Preventive Medicine, University of Ibadan, in 1978. As the "*Father of Veterinary Public Health*," Steele dedicated his life to investigating diseases transmitted from animals to humans—Zoonoses. The results of his efforts, including the development of a rabies vaccine and the founding of the veterinary division of the Centers for Disease Control in 1947, have helped save countless lives. His

work introduced the principles of veterinary public health to the world.

Also known as "*Mr. Veterinary Public Health*".

In 2009, Prof Steele's official biography was published (Carter and Hoobler 2009). In the biography, Prof Steele was variously referred to as the "*Father of One Medicine*" and "*founder and advocate of One World, One Health, One Medicine*". Prof Steele is credited with introducing the principles of One Health to the world. Steele's obituary reads, "*Throughout the years, he has been a brilliant veterinary leader and supporter of the philosophy of One Health, aspiring to improve quality of life for people and animals around the world. His social philosophy to thousands of students and colleagues from all over the world was 'I believe firmly throughout my career that I should share my knowledge and expertise with my fellow man. Those of us who are fortunate to be endowed with intellectual advantages have an even greater responsibility to share. Carry on!'*"

The American Veterinary Medical Association has described Prof Steele with the epithet *LEGENDS: The Father of Veterinary Public Health*", stating that by promoting the One-Health concept, James Harlan Steele has enhanced the lives of animals and humans (Michael Smith 2003). The One Health Initiative in its 'In Memoriam, James H. Steele, DVM, MPH: Dr. Steele, a One Health leader, died November 10, 2013' listed Steele's public health achievements to

include his contributions to the One Health movement, recalling that in 2007, at the age of 94, he was a co-author of "Confronting Zoonoses through closer collaboration between medicine and veterinary medicine (as 'One Medicine')" in the *Veterinaria Italiana* journal.

Materials and Methods

This publication arose from an interview the author conducted during his 2011-2012 sabbatical leave as a Veterinary Academic Consultant with the African Field Epidemiology Network (AFENET)/ US Centers for Disease Prevention and Control (CDC) Animal: Human Interface (AHI) Project, Nigeria; with Prof James Steele after his 99th birthday anniversary/20th Annual James Steele lecture at the Texas School of Public Health, at his residence and his nursing home respectively in Houston on 6th and 7th April 2012 (Babalobi, 2012a); as well as review of related literature.

Present and contributing on these occasions were Dr Peter Cowen and Prof Ade Ojeniyi MD, PHD, DVM, Cert. Internat. Health, a graduate of Veterinary Medicine and of Human Medicine, educated at the FAO Veterinary Faculty and at the Faculty of Medicine in Copenhagen, Denmark while his double research PhD work was carried out partly in Nigeria and partly in Denmark, Britain and USA. At the time of the interview, he a Visiting Professor at the University of Texas, School of Public Health in Houston,

Texas. The author was opportune to meet him in Houston in 2012 at the residence of late Prof James Steele when the author went to carry out a One Health in Nigeria interview after the 20th Annual James Steele lecture/ 99th birthday Dinner of Professor James Steele and he was physically present at the interviews. He participated in the interview, making useful comments and contributions. Prof Ojeniyi had earlier worked not only as Consultant in the Institute of Public Health at the College of Medicine in UCH, but was also Consultant Lecturer in the Faculty of Veterinary Medicine, attached primarily to Veterinary Public Health and Veterinary Microbiology at the University of Ibadan, in the sixties pioneering fusion of Human Medicine and Veterinary Medicine emphasizing the intricate link of both sides of what he termed the same coin, (viz. ONE HEALTH), as all living things from the smallest micro-organism to plants and animals (including humans) share a common environment to which they owe their lives, and therefore there is absolutely no dividing line between animal health and human health: we are all animals anyway! When he was appointed as a WHO and FAO Expert Committee Member, he made his long-standing views abundantly clear in Rome and Geneva how inseparable Human Medicine and Veterinary Medicine really were then, are now and forever will remain without a dividing line.

Interesting enough, Prof Ojeniyi spent a great deal of time in Eruwa, Igbo-

Ora, Ayete, Idere and Lanlate lecturing Clinical Students in Rural Settings with emphasis on the inseparability of Human Medicine and Veterinary Medicine. Similarly his clinical and field research studies were also staged in Ibarapa District where even today, he still has contact with some of the families in the localities who assisted him in those days (Ojeniyi, 2015b, Personal Communication).

Results and Discussion

James Steele's first comment at the interactive One Health in Nigeria interview was addressed to Peter Cowen: *'We planted a seed before you left (Ibadan)? I thought we had pretty well thought out before we left that the*

two –veterinary and medical schools– will be in cooperation'.

Peter Cowen concurred that they started quite well under a Committee headed by the Englishman called Montefiore who was in the University of Ibadan UI Medical School/University College Hospital. Prof Steele described Montefiore as *'the one that was so enthused about fusing veterinary and human medicine'*, which Prof Ojeniyi confirmed. That was before Cowen's time as a veterinary student (1975-79). Montefiore was also credited with encouraging Prof Esuruoso to have a PhD (1967-1970) at the University of Ibadan Medical School.

His next comment was directed to the author who he addressed as *'you are a new comer!'* After the author informed

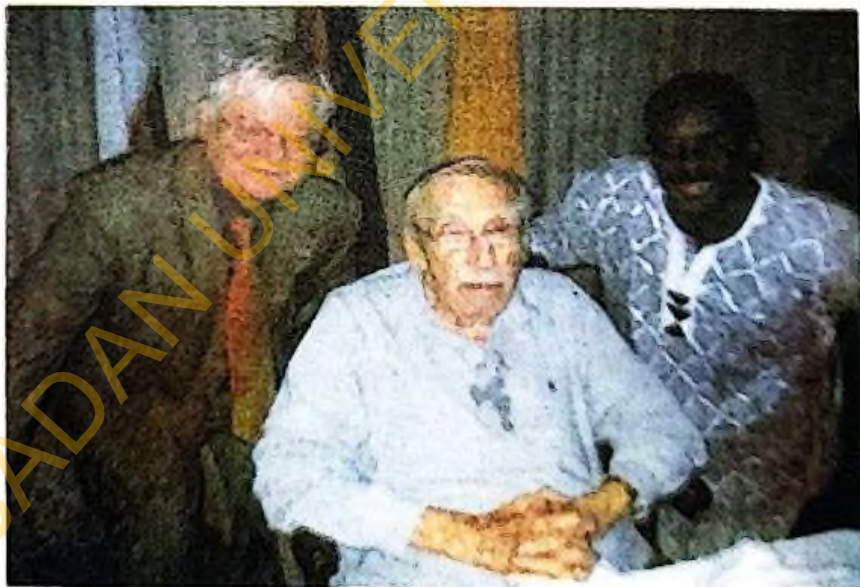


Fig. . From left: Peter Cowen (facilitator), James Steele (center) and the author at 99th birthday anniversary/20th Annual James Steele lecture, Texas, Houston, US. April 04, 2012.

him that he is in the 1979- 1985 generation of veterinarians (produced by the University of Ibadan), Prof Steele challenged the author on *'So what progress have you made to maintain that? (i.e. cooperation between UI Medical and Veterinary Schools), asking " Does the Medical School offer any courses that the DVMS can take in Nigeria... and is there something you can offer the Medics in Nigeria?'*

The author used the opportunity to inform Prof Steele about the CDC two year MPH program- Field Epidemiology and Laboratory Training Program FELTP, which used to train medical and laboratory public health personnel, but for the first time in Nigeria the veterinarians were included in that program in 2008, after the Avian Influenza outbreak, to which James Steele replied *"That I have heard already"*.

Prof Steele was glad to hear more of the progress of the NFELTP from the author (Babalobi, 2012a). The Avian Influenza outbreak in 2006 actually caused Veterinarians and Medical people *'forced'* to work together: and it was a good experience because before that time, everybody was keeping to his own side. Of course there was wrangling and disagreements but over time, for the first time the professions began to appreciate one another. Again, this particular program, Nigerian Field Epidemiology and Laboratory Training Programme NFELTP brought together professionals

from the three sides for the first time to work together. Even the National Coordinator, National Stop Transmission of Polio is a veterinarian (<https://ng.linkedin.com/in/ndadilnasiya-endie-waziri-3762b886>). So the NFELTP program has been a very effective one in promoting interactions among related professions. To which Prof Steele said *"That is very good... I thought (Ibadan) is the show case of University system"*.

In developing a One Health Curriculum for the Nigerian FELTP Steele advised courses be designed on diseases that both humans and medical have as common sources (zoonosis) However, Prof Steele declined further comments, inputs, views etc. from his experience stating: *"I do not think I have any new views. I am retired...I am going...at 50 of work, a new generation has taken over. Prof Steele gave a challenge to the present new generation saying 'Look at South America. 50 years of work. Where will you be 50 years from now?'*

Specifically for Nigeria, Prof Steele shared about the factors that will hasten (One Health) cooperation and collaboration as follows:

- i. Nigerian Veterinary Medicine should have a *One Health Leader, a spokesman, somebody at a very high level, preferably a top politician* (Peter Cowen identified Prof Oyewale Tomori as the most senior promoter of One Health in Nigeria, who Prof Steele knew among other achievements to have *'established laboratories at UCH'*.

He stressed that *people at the very top level should have some very successful experience(s) (to share).*

- ii. He identified need to involve '*Also people at the low level*' particularly '*spreading the word (One Health) to the (veterinary) students to know their medical colleagues where ever they are. That is the basis of One Medicine*'.
- iii. Also, *there has to be a constant flow of new articles in both (veterinary and medical) journals, talking of common problems*

In the last two years, NVMA NEC has initiated contact with the NMA including plan for a NMA/NVMA joint journal. Learning from the One Health experience of the American Medical Association AMA/American Veterinary Medical Association AVMA, NVMA have been trying to promote such in Nigeria at the professional level; to which Prof Ojeniyi stated: *This was what I was fighting for when I was at the UCH in the 70's)*

- iv. Veterinarians should also be at the high level in the Federal Ministry of Health (practicing One Health)
- v. Prof Steele also asked about the kind of health program the oil companies have in Nigeria, including recognized environmental problems, the kind of diseases keeping their staff at home; all as an avenue of entry. '*I*

will tell other Nigerians, go to the oil companies for funding. I said that ten years ago'. He also postulated that it is '*Good idea. Explore it*' to contact the World Bank with a well packaged One Health (training) proposal, warning World Bank will not support students projects

- vi. He recommended that every veterinarian get a copy of Handbook on Communicable Disease Control 2015 edition. *It reduces it (communicable diseases) to "One Medicine"*.
- vii. Prof Steele finally emphasized the importance of communication in One Health. *Keep people informed at every time so they are not left out. Inform people at every level of the progress of the program. It is critical. It will not be good for them to hear from outside.*

Conclusion

In the course of the interactive interview with Prof James Steele (who described (University of) Ibadan as "*the show case of University system*" (Babalobi, 2012b), three names cropped up from Prof Steele as being pioneers of One Health in Nigeria:

- i. Prof (David Goldsmith) Montefiore, a retired Professor of Medical Microbiology who James Steele referred to as "*the Englishman... one that was so enthused about fusing veterinary and human medicine*" (Babalobi, 2012b). Prof Montefiore had a lifelong career at the University of Ibadan

between 1960 and 1989, established the Arbovirus Unit in the University College Hospital before the establishment of the Department of Virology, College of Medicine, University of Ibadan; and is credited to be have pioneered One Health practice in Nigeria through the Arbovirus unit (Babalobi, 2012c).

ii. Prof Gabriel Esuruoso, known as the Father of Veterinary Public Health in Nigeria. Prof James Steele had been in Nigeria in the 1978 invited as a Visiting Professor and External Examiner to the Department of Veterinary Public Health and Preventive Medicine by Prof G.O. Esuruoso, who was the Head of Department (The Glorious Exit of an ICON (2013).

iii. Professor Oyewale Tomori, who actually personify what One Health is- a veterinary doctor, a virologist who was working among physicians at the Arbovirus unit as a Consultant to the University College Hospital and later served, not only as the Head of the Virology Department at the College of Medicine, University of Ibadan, but also, the Director of the Postgraduate Institute of Medical Research and Training (PIMRAT) now known as IMRAT. Professor Tomori later became the first WHO Regional Virologist for the African Region (Babalobi, 2012c).

Between 2013 and 2014, the One Health World witnessed the demise of three pioneers of One Health in Nigeria:-

1. Prof Gabriel Oluwole Esuruoso, the Father of Veterinary Public Health in Nigeria, who died on 26th January 2013 aged 80 (University of Ibadan Bulletin 3070 Special Release 20 February, 2013). Prof Esuruoso was the First African Dean of the Faculty of Veterinary Medicine, University of Ibadan and was responsible for establishing the Department of Veterinary Public Health and Preventive Medicine, which he headed 1975-1986. He initiated the approval by the University of Ibadan Senate, of the National Zoonotic Center at the Department of Veterinary Public Health and Preventive Medicine, University of Ibadan, Nigeria.
2. Prof James Steele, often referred to as the “father of veterinary public health”, died Nov. 10 2013, aged 100 years old.” James H. Steele, DVM, MPH, professor emeritus at the School of Public Health, University of Texas, is credited with introducing the principles of One Health to the world. Steele dedicated his life to investigating zoonotic diseases and his work introduced the principles of veterinary public health to the world. He was an Assistant Surgeon-General of the United States. The results of

his efforts, including the development of a rabies vaccine and the establishment of the veterinary division of the Centers for Disease Control in 1947, have helped save countless lives. Steele's biography, *One Man, One Medicine, One Health: The James H. Steele Story* was published in 2009, and an article on Steele appeared in the April 2013 issue of *Journal of the American Veterinary Medical Association*.

3. Prof David Goldsmith Montefiore- passed away recently on June 10 2014, aged 85. Prof Montefiore, a retired Professor of Medical Microbiology who had a lifelong career at the University of Ibadan between 1960 and 1989, established the Arbovirus Unit in the University College Hospital before the establishment of the Department of Virology, College of Medicine, University of Ibadan; and is credited to have pioneered One Health practice in Nigeria through the Arbovirus unit (Babalobi, 2012b)

As late Prof James Steele asked the author (and by extension the present generation) during the April 2012 Texas interview "*So what progress have you made (are you making) to maintain that?*" This is a standing charge and challenge the present generation of One Health professionals- Agriculturists, Bio-

Medicals, Physicians, Veterinarians and associated (public health) professionals- must take up in the One Health spirit of collaboration, communication, cooperation and coordinated partnership in Nigeria; in honor and memory of the pioneers of One Health in Nigeria.

In conclusion, the author quotes late Prof Steele's longtime Nigerian veterinarian-physician friend, Prof Ade Ojeniyi who ended his presentation (Ojeniyi, 2015a) thus:

IN MEMORY OF THE PIONEER OF VETERINARY PUBLIC HEALTH: DR. JAMES HARLAN STEELE, DVM, MPH. APRIL 3, 1913 - NOVEMBER 10, 2013 (100 YEARS, 7 MONTHS & 7 DAYS).

With all respect for everyone that has contributed his or her quota to the advancement of Public Health, the legendary Dr James H. Steele: Father of Veterinary Public Health must be recognised as having had the greatest impact on ONE HEALTH during the twentieth century. He was truly a Giant among Giants.

*REQUIESCAT IN PACE-
Ojeniyi, 2015a*

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2. Dr Peter Cowen, an Associate Professor of Epidemiology and Public Health, Population Medicine and Pathobiology Department, College of Veterinary Medicine, North Carolina State University. A long time professional friend and well-wisher who facilitated my 2012 interactive interview with James Steele, making necessary contributions and clarification when needed.
3. Prof Ade Ojeniyi, MD, PHD, DVM, Cert. Internat. Health: Prof Ojeniyi a graduate of Veterinary Medicine and of Human Medicine was educated at the FAO Veterinary Faculty and at the Faculty of Medicine in Copenhagen, Denmark while his double research PhD work was carried out partly in Nigeria and partly in Denmark, Britain and USA. Prof Ojeniyi was physically present at the interviews, participated making useful comments and contributions.

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