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The Role of Libraries in the Dissemination of Information Related to Dangers of Bird Flu (H5N1) in Rural Areas of Nigeria

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Abstract

This opinion paper highlighted the danger posed by Bird Flu (H5N1) in rural areas, strategies for combating the deadly disease and explored the strategic role of libraries in this direction. It described how the public could become vulnerable to Bird Flu and how they could protect themselves from its threat. The paper emphasized the role of Libraries in educating the public on the deadly threat posed by Bird Flu. It posited that to educate the public has become an indispensible responsibility of libraries because of the strategic position of libraries in information dissemination. Hence, libraries should therefore be positioned and equipped to curtail the threat posed by this disease. This could be done through dissemination of vital information and the adoption of precautionary measures and routine to enable people be on their guards to forestall and stem the occurrence of the deadly disease.

Keywords: *Bird Flu, Dissemination of Information, Education, GlobalHealth Issues, Rural Areas, Libraries.*

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Introduction

Information is the material for developing both urban and rural dwellers especially health information seekers. Prosperity, progress and development of any nation depend upon the nation's ability to acquire, produce, circulate and use pertinent information. There is indeed, a sense in which one could argue that information has come to represent the prime commodity of the present age. Information is an indispensable requirement for human development. In the opinion of Olarewanju (2006), information is an input, which reduces the level of uncertainty in any decision process, and it is a crucial factor for a healthy life. Some diseases are dangerous and destructive to life and should be tackled with adequate information. One of such diseases is Avian Influenza which is tormenting most of the poultry farms in Nigeria. OIE (2015) stated that avian influenza (AI) is an acute and highly contagious viral disease caused by a single strand of negatively sensed segmented RNA influenza type A virus from the family *Orthomyxoviridae*.Access to quality health information is critical to many facets of health care design and delivery. Health information can be published or unpublished knowledge on all aspects of health and healthcare. Individuals seek health and health care information for reasons ranging from curiosity to self-diagnosis and treatment. The role of information professionals (libraries) on health care information cannot be ignored. Health librarians, because of their knowledge and training in the identification, selection, organization and dissemination of evidence based health information, play an important role in both consumer health information and patient education of rural dwellers.

Rural societies (dwellers) as defined by CDCP (2015), means “ways of life which are traditionally – oriented, linked with but separate from urban centers combining market activity with subsistence production with which poultry is among. CDCP went further to say that they are known with their low level of education. However such people need health information in the language and ways they will understand. People when running short of health information may ignorantly contact diseases in one way or the other. For example, some people think that bird flu does not affect human being, but it does.

Avian/Bird flu, caused by Avian Influenza Virus (AIV) belongs to the Orthomyxoviridae family, and can be said to be the most dangerous and fear

depositing viral disease of birds and other farm animal including human beings. H5N1 subtype of AIV attack poultry and humans due to its high economical impacts (Dhama, 2013). In the past ten years, the Highly Pathogenic Avian Influenza (HPAI) H5N1 subtype alone has affected more than 60 countries of the world. Bird flu is also called Avian influence (H5N1). It is a contagious disease of animals caused by viruses that normally infect only birds and less commonly pigs but currently affect human beings due to one reason or the other (Abdu, Assam, & Tabe-Ntui, 2013). Avian influenza or bird flu is an infection found in birds that is caused by the influenza a virus. The virus can be passed from bird to human, although transmission is considered rare. (WHO 2010) went further to say that there are various types of bird flu. In recent years, the term bird flu has often been used to describe the H5N1 or H1N9 avian influenza viruses. The influenza a virus can cause influenza in birds and some mammals (Martin, Pfeiffer, Zhou, Xio, & Prosser, (2011). A form of the virus adapt to birds known as highly pathogenic avian influenza A (H5N1), referred to as HPA1 or simply avian influenza.

OIE 2013), defined bird flu as an infection caused by avian (bird) flu viruses. There are many different flu viruses that occur naturally among birds. In poultry, infection with avian influenza viruses (AIVs) causes two main forms of diseases, distinguished by low and high extremes of virulence. According to (WHO 2013), the so called low pathogenic" form commonly causes mild symptoms (ruffled feathers a drop in egg production and may easily go undetected. The highly pathogenic form is far more dangerous. It spreads very rapidly through poultry flocks, causes diseases affecting multiple internal organs and has a mortality that can approach 100%, often within 48hours (Wang , Zhang , Li X., Jiang , Jiang, Chen, *et al* (2014

He went further to sate that current outbreaks of highly pathogenic form have been caused by influenza A/H5N1 virus. Fumento, Michael (2006), defined Avian influenza as a disease caused by the highly pathogenic H5N1 virus. The origin of bird flu started in Europe, Asia and has reached Nigeria - the first African country to record the disease in February, 2006 (Waziri, Musa, Abdu,, Saidu and Bello, (2017).The incubation period is 3-5 days in chicken and after that death would occur on the affected bird.

Symptomsand the Signs

The affected animal experience the following: high temperature, loss of appetite, bird rapidly becomes lethargic, nasal discharge, oedema of the neck and neck and head, hock may be swollen and discolored. Symptoms of avian influenza in humans have ranged from typical human influenza-like symptoms e.g. (fever, cough, sore throat, and muscle aches) eye infections, pneumonia, severe respiratory diseases and other severe and life-threatening complications (Garba, Nwanko, Manu & Falake, 2012). The symptoms of avian influenza may depend on which virus caused the infection. Avian influenza can spread from infected birds to people.

Mode of Transmission

The mode of transmission is through direct contact with the excretion of infected birds as well as contact with carrier migratory birds and indirectly through contaminated equipment, shoes, clothing, egg crates and vehicles (OIE, 2013). Swayne, (2008), was of the opinion that most people with bird flu become infected when they have prolonged contact with nasal discharge or dropping of infected birds. In general, eating egg and meat from infected birds is another means of transmission of avian flu. According to Swayne & Halvorson (2007), People cannot spread avian flu to other people. H5N1 avian influenza virus is lethal to humans but so difficult to spread from human to human. Unlike other influenza viruses, it was shown by (OIE, 2015) that H5N1 preferentially infects cells in the lower respiratory tract, residing deep in the airways. The spread of bird flu (H5N1) through wild birds is rampant in Asia and Europe (WHO 2005).

There is indeed, a sense in which one could argue that information has come to represent the prime commodity of the present age. It is now a common place observation that the material prosperity of a nation is linked almost directly to its information wealth and vice versa connecting with prevention and curing of disease like bird flu.Bird flu is a deadly disease to human beings, birds and likewise waste wealth. Literature proved that it affect almost all animals on earth and have been causing sickness in time past, all because of a virus disease called bird flu.

Information accessibility on this angle is needed by librarians and there is the need for familiar ways of relaying such information to the rural dwellers. That is the reason why this research is carried out to suggest ways through which librarian can help in dissemination of information related to the danger of bird flu to human life and wealth in rural areas of Nigeria. From the foregoing, the study seeks to identify easy ways of relaying information on the dangers of bird flu (H5N1) to people in rural area of Nigeria (Chen, Huang, & Wang (2009).

Types and Subtypes of Bird Flu (Avian influenza)

There are three types of influenza viruses: A, B and C. Type A and B cause the annual influenza epidemics that have up to 20% of the population sniffing, coughing and running high fever.(Bello, Lukshi, & Sanusi, 2008). Type A flu are capable of infecting animals and man even though, wild bird commonly act as the hosts for this flu virus. Rodrigo (2012) was of the opinion that wild aquatic birds-particularly certain wild ducks, geese, swans, gulls, shore, birds and terms are the natural hosts for all known influenza type a viruses. The type a virus are the most virulent human pathogens among the three influenza types and cause the severest disease. Influenza A can be divided into subdivisions based on the antibody responsible to these viruses. Those that have been confirmed in humans are H1N1, H2N2, H3N, H5N1, H7N7 and H1N2. Those that affect animal alone are: H9N2, H7N2, H7N3, H10N7, and H7N9 (OIE, 2015). Type B flu is found only in humans. It causes less severe reaction than type a flu virus, but occasionally, type B flu can still be extremely harmful and does not cause epidemics. Types C are milder than either type A or B. Generally, people do not become very ill from the influenza type C and it does not cause epidemics. It usually affects human, birds dogs and pigs.

TheImplications of Bird Flu out Break on both Birds and Human Health in Nigeria

WHO (2015), views the threat of Avian influenza to the children and their families in Nigeria as grave considering the limited access to information as it regard to bird flu, water supply and sanitation facilities, especially in rural areas, inadequate hygiene, education, the large non-commercial or backyard poultry population and the preponderance of human interaction with wild birds for trading and as pets. The negative impact of bird flu (Avian Influenza) outbreak in

Nigeria cannot just before then since it is a continue process. Avian influenza posses a lot of discomfort in Nigeria, as stated by Emikpe, Ohore, Olujonwo & Akpavie (2010. The following are the major threat of avian influenza in Nigeria.

* Avian influenza outbreaks among poultry would lead to deaths among birds, and associated economic costs for poultry producers, transporters traders, and consumers.
* The disease could be transmitted to humans from infected birds in Nigeria, leading to human mortality.
* Outbreaks of avian influenza among birds in Nigeria could lead to a strain of influenza that is directly transmissible between humans, which could trigger a pandemic, with human mortality and mortality throughout the world.
* A strain of avian influenza transmissible between humans could emerge in another country, causing a pandemic that then spreads to Nigeria through movement of infected people and arboreal animals (birds).

Economically, H5N1 (bird flu) the outbreak of bird flu has threatened to throw the poultry industry into a crisis. Olanrewaju, (2006), reported that Nigeria farmers have been affected negatively by the outbreak of avian influenza. Many refused to eat chicken and eggs to avoid being exposed to the risk of contracting the disease. Moreover, the closure of affected farms has resulted to unemployment to many farmers leading to idleness and even stealing. Musa, Abdulahi, Lawal, Bello and Abdu (2017) citing the Central Bank of Nigeria reported that Nigeria used about 450,000 birds between February and March 2006 to avian, influenza H5N1 strain. He went further to say that France's poultry sector the biggest in Europe is now loosing 40million Euros a month as bird flu hits sales at home and abroad.

All these threat could be managed through improved surveillance, diagnosis, isolation and treatment capacity among humans. Also the risk can be managed by improving bio-security among birds and by identifying and controlling outbreaks among birds. Bird flu could also be prevented by reducing ones exposure to sick and dying birds, one should not eat meat or egg from infected birds. View wildlife from distance and don't touch dead or sick animals. If one

notices sick or dying birds, report it to local wildlife or public health officials or veterinarians. If one is traveling to another country, she/he should avoid contact with sick patients who have suspected or confirmed bird flu.

Simple ways of relaying Information on Bird Flu (H5N1) to Nigeria Rural Societies: The librarians' perspective

The basic characteristics of Nigeria rural populace according to Awad, Baylis & Ganapathy (2014) are inability to read and write, scattered settlement, low level of education, poor reading habits and petty trading. Such group of people needs a peculiar way of accessing information. This should be considered because information is power and should be made available at any point in time and to every member of the society irrespective of level of education, home town, rich or poor. As stated by Assam (2014) the availability and free flow of health information through an effective dissemination net work represents a necessary pre-condition for the emergence of a crop of well informed citizenry. Library has been identified as the propeller of information dissemination for the overall national development. The Librarian is an intermediary between official information and the citizens assigned with the role of information dissemination for rural development in most societies. He stressed the need for community information services where library would play reference roles to the community. Information workers who would render the vital health information services to the rural dwellers are known as librarians. Aina (2006) identifies the link between the library and information extension officers in providing adequate and timely information to the health care centres. This link remains pivotal in disseminating health information in rural communities. Librarians have developed Communication Strategies to make health information reach rural dweller on time and in simple mannerthey are as follows:

Behavior change communication: Promoting rural communities health information and education through community dialogue and establishment of local public enlightenment committees. This includes strengthening interpersonal communication skills on Avian Influenza knowledge of community resource persons such as teachers, religious leaders, women's group, and agriculture and health extension workers to sensitize and discuss bird flu prevention measures in their spear of influence.

Transforming printed information into oral form: Oral information delivery according to Ezema (2010), is the most suitable means of reaching out the rural societies in Nigeria. Most of the existing information on bird flu appears mainly in printed forms and often through medium that is not easily accessible to the rural information seekers. This is a proper way of helping rural dwellers to understand important health information.

Use of focal group discussion: Information on Avian Influenza (A1) can be repackaged in form of stories, songs and drama and be presented to different organization and village meetings. When sensitive information are presented in this form low leveled educated people always show interest for it make information clear and understandable.

Social mobilization and advocacy: Bird flu information communication according to (Quadric, (2004), is also targeting traditional and village leaders, youth organizations, civil society organizations such as National Union of Transporters, the parent teachers association, market association etc. This group of people can mobilize themselves and go round the town to mobilize villagers on the danger of such deadly disease. They can equally go on inspection to different animal farms to check if their poultries are clean, their level of maintenance and if they are of acceptable standard.

Transformation of existing information on bird flu to local language: the translation of avian influenza information written in foreign language into simpler language should help a lot in local utilization of bird flu information. The intention here is to ensure that such useful information is disseminated to the target audience with ease. Teru, Manu, Ahmed, Junaidu, Newman, Nyager, Iwar, Mshelbwala, Joannis, Maina & Apeverga (2012), stated that librarians (information disseminators) and Nigeria Medical Association should be involved in this translation project so as to package and disseminate the information properly.

Mass media campaign: This encourage the media to air regularly jingles and supports on bird flu, integrating all message about poultry management, healthy behavior and improve hygiene practices into existing programmes, developing interactive broadcast programme to allow discussion and questions

from the audience.. Also radio programmmes is good for packaging information on Avian Influenza because of the depth of its penetration, affordability, easy and cheap to power and operate (Ezema 2010), was of the opinion that the use of motion pictures creates a near real life situation and therefore, deepens the penetration of the message on bird flu (BF) to the rural Nigerians. The popularity of home videos in conveying informantion especially health information to the public is no longer in doubt.

Capacity building: Empowering key stakeholders, networks and allies with knowledge, skills and tools to enable them disseminate avian influenza (A1) information and conduct public enlightenment sessions within their spheres of influence to eradicate or reduce the dieses.

The use of community library and information centers: This idea is bringing library on the door step of the target groups. Such information centers include hospitals, churches, schools; village square, civic centers and libraries. These are heavily dependent on for effective penetrating information dissemination in rural areas more especially information on bird flu. Librarians take part in all the above mentioned ways of information circulation to rural dwellers.

Preventive and control measures

Important information for the control measure of bird flu aimed at clearing of AI virus infection from the grass root in poultries. Among others ways include disease awareness, early detection, culling and stamping out, proper disposal of affected birds, timely notification, strict bio-security measures, isolation, zoning and quarantine, control of live bird market and judicious vaccination strategy (Dhama et al, 2013). Global surveillance is another measure which should be followed to prevent the avian influenza. Avoid exposure of dead birds and rapidly follow the elimination/culling of the infected ones to reduce further spread of the disease. Adapt the key principles of bio-security i.e., isolation, traffic control and sanitation. Cleanliness cannot be under estimated for viruses, bacteria, fungi which are carriers of diseases likes living in dirty environment Monne , Hussein, Fusaro, Valastro, Hmoud, Khalefa, Capua & Cattoli, (2012).. For that reseason good sanitation and hygienic practices, along with suitable decontamination and disinfection procedures on the farm is needed in every

farm (WHO, 2010). Vehicles coming into or outside any poultry farms should be sanitized before coming and while leaving the poultry farm.

If there is any information the outbreak of bird flu, preventive measures should be taken immediately to avoid the spreading of the virus as it is an air borne disease. Human traffic needs to be checked and visitors should also be checked thoroughly to avoid some people who may purposely want to bring in such virus disease. Disinfectant should be kept and spread at interval in every poultry farm to reduce the probability of spreading the infection. The accumulation of standing and stagnant water should be prevented as it is a great source of attraction to migrating waterfowl and shorebirds (Costa-Hurtado, Afonso, Miller, Shepherd, Chi, Smith, Spackman, Kapcynski, Suaez, Swayne & Patin-Jackwood (2015).). Employees of the poultry farm house need to be given information about the dangers and mode of transition of this disease through live birds markets which are potent source of H5N1 infection. Sick or dying and dead birds should be appropriately and immediately submitted to recognized laboratories for a timely diagnosis (Swayne & Saurez, 2013).). Dead birds should be properly disposed of using burial or incineration methods. Poultry attendants and every other person that come in contact with infected bird should wash of hands and feet frequently with soap and water whether the birds are dead, sick or healthy. Surveillance, monitoring and epidemiological investigations of Avian influenza virus should be followed regularly to know when the disease is about the corner. Prohibition needs to be imposed on sale and transportation of poultry products and closure of poultry markets in the infected zone (Seifi, Asasi & Mohammadi, 2010).). Any importation of bird should be under control through the use of quarantine measure as a means of detecting the infected ones before bringing them in.

Conclusion:

The risk posed by bird flu (H5N1) in both bird and human is causing concern to all stakeholders, producers and consumers. Also surroundings to every poultry farm should be kept clean and should also be disinfected time after time. If the observations and suggestion made about bird flu is given a second thought it will be good for human beings and animals.

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