Animal Health Surveillance Infrastructure reporting

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FACTORS LIMITING THE EFFICIENCY OF NADIS

(1) Insufficient fund-

- For sending samples to Laboratories

- Making telephone calls

(2) Limited field transportation

(3) Ill trained – SA. SA are para-vet. They can make mistakes in taking, preparing and sending samples

(4) Weak enforcement of Vet regulation

(5) Lack of knowledge of regulating laws and regulations

(6) Outdated regulations

(7) Ineffective Quarantine stations in impounding illegally transported animals

(8) Ill financed VTH

(9)- Electricity problem

(10) Weak knowledge of regulatory laws.

Efficacy of National Reporting System

Efficacy of NDRS can be measured by various parameters such as

(i) Number of reports submitted /1000head of livestock/district/month
(ii) No of individual livestock inspections /staff member/mouth
(iii) Percentages of observed disease incidents for which laboratory samples were submitted
(iv) Percentage of suspected cases actually confirmed for any particular disease
(v) Time lag from sample submission to final laboratory diagnosis

Towards improving – NDRS in Nigeria

(1) Development of manpower
(2) Provision of adequate fund
(3) Retraining of existing SA and other staff members
(4) Putting in place a feed back delivery system which is to be run by a system manager who perform the following task

(i) Monitor data flow in the system
(ii) Check data quality
(iii) Carrying out data analysis and ensuring that analysed information reaches decision makers
(iv) Ensuring feedback to the field

OIE- International Office of Epizootic (World Organisation for Animal Health)

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Why International Disease Reporting?

- The world has become a global village. Diseases can easily spread from one country to another.
- Awareness on risk involved in importation of animals.
- Making diseases communication possible

DISEASE REPORTING SYSTEM

Definition of terms

Disease reporting system- This is diseases accounting system in a population. It entails how diseases records and information should be kept, stored, transmitted and utilized.

Disease prevention- : Measures taken to protect our environment from invasion. These are measures taken so that clean population is not affected.

Disease control – This is carried out in affected population to stop the spread of a disease.

Disease eradication- This is stamping out of disease in a population e.g. eradication of small pox and rinderpest.

Pattern of disease occurrence

Endemic /Enzootic diseases – The constant presence of a disease or infectious agent in the population

Pandemic /panzootic disease-: Greater epidemic disease spreading faster. Outbreak of a disease throughout the world/part of the world for example Influenza.

Sporadic –: No specific pattern of occurrence of a disease in a particular population.

If a disease occurs only occasionally, rarely or without regularity in a population-Anthrax

Epidemic: Occurrence of a disease in a given area clearly in excess of normal expected frequency. It can either be a point epidemic or propagative epidemic:

Frequency of Diseases Occurrence

Incidence: This represents the rate of occurrence of new cases of a disease or event in a population at risk during a specified period of time

Prevalence: This represents the number of existing cases of disease at a given point in time.

Diseases outbreak: An increase in occurrence of a disease in a particular population–

Incubation period: Time of entrance of an infectious agent to the first signs of disease.

IMPORTANCE OF DISEASE REPORTING

- It can help the govt in planning and budgeting
- Determination of location of livestock project
- Vaccine production and distribution
- In case of an outbreak the report will arrive early, this enables planning a better control system for early arrest of the disease
- For assessment of losses
- Planning of research project: Where to collect data and type of research to carry out
- Syllabuses is based on this reporting in colleges because emphasis are placed on the disease that are prevalent
- International benefits- Importing from disease free countries, business with other countries become easier

HISTORY OF ANIMAL DISEASE REPORTING IN NIGERIA

First attempt at livestock disease reporting in Nigeria was around 1914 after the establishment of the veterinary department. The Disease of Animal Ordinance of 1917 allocated the report of 17 diseases to provisional veterinary officers until the period between 1967 and 1974 when central collation was stopped. In 1975 the national livestock development council redefined and updated the previous reporting procedure. About 113 animal diseases were divided into five categories. Out of these 30 diseases were made compulsorily reportable in case of

occurrence or suspected to occur at any location in the country. Animal disease Act of 1988 CAP 54, Laws of the federation backs them up.

- The disease reporting system was designed by Dr. Lang who came from England and was mandated to recommend diseases reporting system in Nigeria. Under the system, diseases are to be classified into two major groups.

Group I	A	5 diseases – Rinderpest CBPP FMD Rabies, NCD
	B	29 not reported in Nigeria except ASF and avian influenza
Group II	C	18 diseases
	D	10 diseases
	E	51
Total		113 diseases

Group A – These are transmissible diseases which have the potential for very serious and rapid spread, which are of serious socio-economic or public health consequence. Also this disease can kill 100% of the affected animals (High mortality).

Group 1B – The diseases under this category cause high mortality, great economic losses but have not been reported in Nigeria. Group 1b has been as enlisted for actions to be taken. The disease should be reported even in suspected outbreak to veterinary authority by the fastest means to the monitoring officer of the state once the veterinary officer diagnose for example any of this disease, he will order Ring Vaccination 10km radius to the centre of the site of diseases outbreak, or order a restricted movement of animals in and out of such area.

Group II- This is divided into subgroup C, D & E. C group are those of socioeconomic importance but the risk/loss is not as high as those in A & B e.g. Gumboro, PPR, blue tongue, Bovine brucellosis, lumpy skin disease, sheep pox and mareks. All the diseases are very important outbreak should be reported as they occur – documented and reported.

Group D- 10 diseases – Anthrax, backleg, Strangles, Epizootic, lymphagitis, Ulcerative lymphagitis, Erysipelas, Fowlpox- outbreaks of this disease are to be reported on monthly basis. These diseases can easily be managed.

E- There are 51 diseases in this group. The outbreak is reported quarterly e.g Actinobacillosis, trypanosomosis, babesiosis, fowl cholera, footrot, Actinomycosis, Anaplasmosis, Coccidiosis

Evolving database systems used in the health Surveillance and disease reporting

From the early passive surveillance evolved the present NADIS active surveillance reporting platform which is a hybrid software database which was developed by the Nigerian Federal Epidemiology unit using characteristics of PACE and WAHIS

PACE – Pan African Program for the control of Epizootics

The Pace Program began operations in Africa in 2001 and was completed in 2006- it was an African passive surveillance support network, implemented and technically managed by AU-IBAR (African Union- International Bureau for Animal Research using ARIS (animal research information system) owned by IBAR

The disease control and surveillance format in Nigeria PACE program's objective in Nigeria was to eradicate Rinderpest, FMD, PPR (Pestes des petites ruminante), BCPP, ASF NCD and HPAI. PACE program introduced into Nigeria the institutional and operational framework used in passive disease surveillance reporting and control /eradication policies and programs. PACE left 179 surveillance posts across the country and continue to be used as focal points for area surveillance and disease reporting.

World Animal Health Information System (WAHIS).

This is a web based interactive information system used by OIE to enter and evaluate livestock disease from disease reports submitted by member countries. It provides for the entry of four levels of reporting by participating countries.

- Emergency reports following initial disease outbreaks
- Periodic follow up reports until the disease is under control
- Biannual reports providing amalgamated disease information
- Annual reports which amalgamate the biannual reports

WAHIS provides GIS information of outbreak locations, as well as natural inventories of geo-positioned livestock establishments, markets, abattoirs and control post.

-WAHID and PACE database software is being used by the NFVEU (Nigerian Federation Veterinary Epidemiology Unit) to configure its own database platform called the National Animal Disease Information System (NADIS), on which an active Nigeria Veterinary Surveillance and disease reporting system will be based.

WAHIS provides the yardstick used by the OIE to certify countries free of reportable diseases

NADIS is operating with inputs for VCN, NVMA, Private Veterinary and Nigeria Agro Credit & Rural Development Board (NACRDB). It receives information from the surveillance agents at the LGA level and from the 179 Surveillance points in the 15 zones across the country's 37 state left by PACE using the WAHIS reporting format of monthly, biannual and annual disease reporting reports. Monthly disease information data originating from the SA were originally submitted by hard copy, laboriously keyed in manually but with NADIS software, data are now electronically transmitted to the NADIS server at the NCO office for electronic entry, automatically. This has significantly improved the quality control of data submission in terms of timeliness data quality

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