

Short Communication

Verbal Autopsy Benefits and Limitations – Literature Review

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Abstract: Verbal Autopsy has been a method used in getting information about the symptoms and signs that could have led to the death of a deceased in densely populated environment where the facilities and manpower are lacking and in most cases the population is of lowly poverty ridden, overwhelming area. This involves interviewing close relatives who may not even know anything about medical parlance about possible events and past history of ailment the individual must have been or suffered sequel to the death. This is then analysed at end of the whole exercise and possible cause of death of the deceased arrived at for death registration where available and for future studies; in terms of research and preventive measures instituted in the society.

Keywords: Verbal Autopsy, Benefits, Limitations, Population

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INTRODUCTION

Evaluating of causes of death retrospectively date as old as medical statistics. It happened at 17th century far away United Kingdom where houses of dead people from communicable diseases were visited to ascertain the outcome of the so called deaths. By 19th century, registration of the dead gradually brought to some certain level to end of verbal autopsy in most areas. However, in some developing nations with gross lack of professional in the field of death investigation (Anatomical Pathologist, Forensic Pathologist/ other experts in this field) and poverty ridden with densely populated areas this system is still been employed using non-medically trained workers (Biraud, Y. 1956).

In 1950 and 60's at Asia (Khana and Narangwal in India, Campaniganj in Bangladesh) all used well Structured interviews which was then analysed by trained physicians as to get to the cause of death. This is then termed verbal autopsy. However, use of questionnaires became the tool used in large scale deaths in highly poverty ridden and densely developing countries where manpower is grossly low or lacking. Moreover, it has merit of recording information, collection of data and does not require proof hence objective decision to arrive at cause of death made easier (Biraud, Y. 1956; & WHO. 1978). It has found

use in finding cause of death in areas with inadequate registries as its validity could not be assured. In Addis Ababa has been use to evaluate cases of human immunodeficiency virus and Acquired immune deficiency patients (HIV/AIDS) and malaria cum antiretroviral therapy interventions (Araya, T. *et al.*, 2011).

Its remarkable to note that verbal autopsy have long been acceptable by WHO (world health organization) whereby signs and symptoms are used in arriving at cause of death with good questionnaires (Biraud, Y. 1956; & WHO. 1978; Araya, T. *et al.*, 2011; & WHO. 1975). Verbal Autopsy becomes necessary when the list of target diseases is extensive as in communicable diseases. The introduction of questionnaire – base on verbal autopsy suffices with good precision and specificity. Here lay people – not necessary medical qualified are employed to administer the questionnaire as the few highly trained Physicians needs only to read the forms and stories. This allows statistical analysis and use of systemic algorithms easier to apply. Now some of these questionnaires are now modified and produced in late 1970's and 80;s at reproductive age mortality studies (RAMOS), Metlab and Niakhar. These have found use in many research settings example in depth network, national or large scale regional surveys in Morocco, India and China

(Fauveau, V. 2005). It's also valuable when is applied to all deaths in a population, as is important when a fraction is registered or occur in hospitals.

However, in all cases verbal autopsy requires skilled field personnel officers, office staff to really assess the actual cause of deaths as to give appropriate code and statistically analyse any data obtained (WHO. 1975). Also numbers of death that could be assessed by this method is often small as compared to list of causes of death seen in medical certificates (WHO Limits to the use of Verbal Autopsies. 2006). Is imperative to note that the results obtained in this analysis depends on quality of the assessment, sensitivity and specificity of each diagnosis. This could work well in small communicable diseases like measles, whooping cough, Cholera, dysentery and even at cases of tetanus as well as in some medico-legal deaths like in road traffic accidents (RTA), violent/sudden deaths (Fauveau, V. 2005; & WHO Limits to the use of Verbal Autopsies. 2006)

Verbal Autopsy have found use in knowing cause of death when neither medical records or medical attentions was given to the individual before his or her death (Ram, U. *et al.*, 2015). In most cases, is based on asking caregivers, relatives signs and symptoms of what the patient present with and life style behaviours or other features noticed before the demise (Chandramohan, D. *et al.*, 2001). This is however, presumptive that most causes of diseases could be extrapolated from signs and symptoms (Chandramohan, D. *et al.*, 2001).

In essence, we tend to evaluate the benefits and possible limitation of verbal autopsy in developing densely populated nation where both manpower and facilities deem to appropriately carry out detailed autopsy are grossly lacking. We are aware this is still going on in most nations like in kano state, Nigeria recently with outbreak of the coronaravirus pandemic with sudden deaths reported there was a need to carry such task there. This was acceptable to the citizens there mostly because of religious inclination and culture as is majorly Islam.

MATERIALS AND METHOD

This is basically based on study design of the area in question, data collection with involvement of local personnel who could communicate effectively with local languages. Data analysed statistically Using SPSS version 20 or use of computer Statistical algorithms. Ethical clearance: This is obtained from the next of kin or the care giver.

DISCUSSION

Recently, with the covid -19 Pandemic, verbal autopsy started gaining influence in use for health planning, priority settings, monitoring/evaluation in

nations with incomplete or no vital registration system/effective data system. Is remarkable to note since it has long been acceptable by WHO whereby signs and symptoms are used in arriving at cause of deaths with good questionnaires little do we wonder why it just surface at these time (Biraud, Y. 1956; & WHO. 1978; & Araya, T. *et al.*, 2011). These could be why it has found use in some mystery deaths investigation recently like in kano, Nigeria. In some other places in Africa and Asia it appears as the only applicable method for extraction of cause of death at the moment (Snow, R. W. *et al.*, 1992).

Verbal autopsy have found use in finding cause of deaths in areas with inadequate registries as its validity could not be assured in most cases. In Ethiopia is often use to evaluate HIV/AIDS and at times in cases of deaths from Plasmodiasis and in ART (antiretroviral therapy) interventions (Snow, R. W. *et al.*, 1992; Soleman, N. *et al.*, 2006; & Deressa, W. *et al.*, 2007).

It has found use in identification of major health problems, comparisons of local and natural differences in mortality rate; monitoring of diseases overtime and interventions/health programmes evaluations. However, this depends on quality and standardization as if conducted haphazardly will produce misleading results with its consequences to the health planning of the nation defective. Hence the need for structured guidelines for coding and launching validation studies as to compare verbal autopsy with medical diagnosis where applicable and further evaluate causes of deaths derived from verbal autopsy with that of gold standard autopsy(systemic dissection of the dead body with histological analysis and evaluation by the pathologist/Forensic Pathologist as the case may be) (WHO. 1975).

Finally, several limitations affects verbal autopsy despite a few benefits. Since most deaths follows symptoms of difficulty in breathing and fever hence assessment by this way only show a fraction of the list that is often used in medical certification of deaths. This often leads to bias in the system thus causing already assessed to be used as main factor for the aetiology of the death. Most important, is quality and standardization, sensitivity with specificity of each diagnosis and local personnel used in extraction of the symptoms/signs often could not interpret actual facts to the trained physicians thereby misleading the final recording of the cause of death.

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