

affecting children and adults but its consequences are graver among children and pregnant women.

Nigeria is known for high prevalence of malaria [1-3] and it is a leading cause of morbidity and mortality in the country [2]. Available records show that at least 50 per cent of the population of Nigeria suffers from at least one episode of malaria each year and malaria accounts for over 45 per cent of all out-patient visits [2,4]. It is reported that malaria prevalence (notified cases) in 2000 was about 2.4 million [2]. The disease accounts for 25 per cent of infant mortality and 30 per cent of childhood mortality in Nigeria [2,4]. Therefore, it imposes great burden on the country in terms of pains and trauma suffered by its victims as well as loss in outputs and cost of treatments [5].

The disease is often treated in Nigeria by self-medication, the use of local herbs, use of the services of spiritualists/traditional priests or/and the use of clinic/hospital services. Similarly, common prevention measures include use of medicine (prophylaxis), insecticides (coils and sprays), ordinary mosquito nets, insecticide-treated nets (ITNs) and widow and door nets.

Nigeria can be divided into three major malaria epidemiological zones, namely, forest, savannah and grass-land zones. The forest zone consists of coastal areas stretching from Lagos in the South-Western Nigeria to the forest areas in the Eastern Nigeria up to the Northern portion of the forest zone of Oyo state. The Savannah zone consists of areas north of Oyo state to the central areas of Kogi and Benue states and the Grass-land zones consist of the most northern parts of Nigeria – Katsina state and areas to its north.

The most dominant species of anopheles mosquito in Nigeria are *anopheles funestus*, *anopheles gambiae* complex, *anopheles arabiensis* and *anopheles melas*. The dominant vector in the forest zone is *anopheles melas* while the dominant vectors in the savannah zone are a combination of *anopheles melas* and *anopheles arabiensis*; the dominant vector in the grass-land zone is *anopheles arabiensis*. Though *Plasmodium falciparum* is reported in all zones, it is not rampant.

There have been some global responses to the devastating effects of malaria. These include the establishment of the Roll Back Malaria partnership by the World Health Organization (WHO) and the Global Fund to fight AIDS, Tuberculosis and Malaria (GFATM). Domestically, the government of Nigeria has subscribed to some known malaria control and prevention measures, including the free distribution of ITNs to the vulnerable groups. A major policy issue is how to put in place a programme of malaria treatment, control and prevention that is fiscally sustaina-

ble [5]. Resolving such a policy issue will be facilitated if the malaria burden is quantified and public willingness to pay for the respective components of malaria programmes are known but such evidence has been scanty [3].

It is, therefore, clear that while it is now generally accepted that malaria is a serious problem in Africa in general and in Nigeria in particular [1-4], evidence on the magnitude of the malaria burden in Nigeria is scanty and its value for generalization is limited because of its limited scope [3]. Besides, there is currently no measure of the intangible burden of malaria in Nigeria.

One of the approaches to measuring the burden of a disease is the Willingness To Pay (WTP) approach. The WTP approach is one of the two subsets of the method of Contingent Valuation (CV). The WTP and its twin concept, the Willingness To Accept (WTA), are the two approaches that are often used to implement the method of contingent valuation of health-care programmes [9,10]. The method of CV is founded in welfare economics and in value theory in particular.

It has been suggested that CV is a method of choice when valuing health programmes for the purposes of decision making and priority setting in the health-care sector [11,12]. It has been used widely to value public safety, disease prevention and control programmes (or services in general), and to value health outcomes or states [13-15].

The CV method in general and the WTP in particular, is particularly suitable for evaluating the burden (or cost) of malaria and especially for valuing malaria control programmes. However, because WTP involves asking individuals to state the maximum amount that they would be willing to pay to acquire a service (or to prevent an undesirable health outcome), it is important that relevant questions be asked in a correct manner and after making available to the respondents all information relevant to making a sound decision; the sample must also be representative.

One advantage that can be derived from using the WTP to value the disease burden of malaria is that it is capable of measuring the intangible costs that neither the production function nor cost of illness approach is equipped to measure [16]. This is because after a respondent knows what it would cost him to treat an episode of malaria and the indirect cost (in terms of lost outputs during the sick days), whatever he states in excess of the sum would reflect his valuation of the pains/trauma, etc. (the intangible costs) that are not contained in the direct and indirect costs. Thus, it is a powerful tool for analysts in providing evidence-based policy prescriptions.