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## Role of Epidemiological Studies in Disease Prevention

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Today's society is full of disease that are of different natures including genetic, infectious and metabolic etc. Every disease has its own mechanisms of affecting humans and different prevention mechanisms as per disease nature. These factors are included in epidemiology of disease. Other factors include prevalence and incidence of diseases in different populations. Exactly knowing about disease epidemiology helps governing authorities to prevent the disease. Unfortunately, under-developed and developing nations are not focusing on diseases epidemiology. On the other hand, all developing nations developed best public health practices based on diseases epidemiology data. These studies may vary from basic epidemiological surveys to identification of microorganism strains etc.

**Epidemiology Surveys:** Kanwal et al. reported survey's methodology for cancer and genetic diseases. Similar models may be adopted for future studies by government agencies and other research groups. (1)

**Frequency Studies:** Frequency studies are much common in developing nation's research however they are not good indicator of disease epidemiology. But frequency studies of risk factors and sign/symptoms may be better indicator of epidemiology. As identification of risk factors in a case-control manner may help to prevent the condition in future. Shahwar et al. reported association of risk factors of ectopic pregnancy in the same case-control method thus identification will remain helpful in prevention. (2)

**Species Identification:** Many infectious diseases are vector borne or caused by different microorganisms. To better understand disease pathology, potential species causing infectious diseases are identified using microbiologic assays. Molecular biology techniques are also utilised sometimes for species identification at genetic levels. (3)

**Genetic Studies:** To understand genetic diseases, the genetic studies involving DNA based analysis are employed. Different types of PCRs, sequencing and gene wide association studies are used in this regard. These studies aim to identify significant mutations responsible for causing genetic diseases. (4)

## References:

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