**Class Note**

**4TH SEMESTER 2020 (M.Sc. Anthropology)**

[Course Code: ANT 403B ; Course Name: Medical Anthropology]

Topic: Epidemiology of Selected Diseases (29.3)

**EPIDEMIOLOGY OF CHOLERA: ANTHROPOLOGICAL CONTRIBUTION (II)**

**Contd….**

**The phase of individual and social risk**

Even if the population of Lima, Peru, lives in an environment susceptible to infection by cholera, aspects of city life can either facilitate or inhibit the spread of cholera once the population is exposed. Lima has wealthy districts in the city center, but its rapid urbanization has largely been characterized by the growth of urban slums called *pueblos j´ovenes* or “young towns,” often the result of coordinated land invasions by hundreds of families. Areas of rock and sand are covered with shacks made of cardboard and scrap wood, and neighborhoods arise rapidly out of the desert. These settlements initially have no piped water, no sewage systems, and no electrical service. Electricity is stolen from nearby power lines; water is purchased from tanker trucks. If tankers bring contaminated water the residents have no alternative.

Vulnerability of these neighborhoods to cholera is determined by both institutional and individual capabilities: on one hand, vast numbers of poor residents are given access only to polluted water; on the other hand, some of those poor residents boil or chlorinate their water to reduce their risk of infection. But epidemiologists tend to limit their definitions of “transmission pathways” to factors suggested in the individual “natural history” of disease model. These factors are primarily individual and behavioral, not social or political. The larger social and political causes of disease described in the previous sections do not tend to be perceived as

relevant components in the chain of cholera transmission, as summarized in Table 5.1.

This table represents how researchers at the U.S. Centers for Disease Control and Prevention (CDC) described transmission mechanisms for cholera in studies conducted during the first few years of the Latin American epidemic. These transmission mechanisms are specific and are, in general, capable of being influenced through health-related interventions that emphasize proper behavior. With one possible exception, that of drinking untreated water from a municipal system, all the specified mechanisms are individual in nature and, at least in theory, subject to an individual’s control.

But at about the same time that the CDC researchers published this comparison, a group of Latin American researchers (Gotuzzo et al. 1994:185) wrote that the “damaged socioeconomic system that causes extreme poverty” was the first of three principal causes of cholera in Peru. (The others they mentioned were the frequency of the O blood group in Peru and environmental factors such as increasing water temperatures of El Ni˜no.) Cholera is a disease that primarily afflicts the poor because of their limited access to safe drinking water. But although this fact is known to all, poverty was not commonly investigated by U.S. researchers as a risk factor for cholera at the beginning of the Latin American epidemic. Ten years after the Latin American epidemic began, a CDC fact sheet on cholera stated that the risk group for cholera comprises “[p]ersons living in poverty in the developing world” and that “[e]pidemics [of cholera] are a marker for poverty and lack of basic sanitation” (CDC 2003). But these types of statements take poverty for granted. Poverty as a marker can be taken for granted, assumed impossible to change, and yet still used to justify quicker and shorter-term solutions. To call cholera a marker of poverty is not the same as calling poverty a target for a cholera intervention.

**The Mechanism of Transmission in Latin America**

The following mechanisms of transmission of cholera have been identified in the epidemiological investigations in Latin America during 1991-1993 ( Tauxe et.al.1995). Of these mechanisms, Peru returned the maximum number of factors responsible for carrying the cholera bacterium. The mechanisms include:

There were two major sources – 1. Water borne 2. Food borne.

Water-borne sources included the following agents-

i.Municipal water

ii.Surface water

iii. Putting hands in water vessel

The food borne sources were-

i.Street vendors’ food

ii. Street vendors’ beverages

iii. Street vendors’ ice

iv. left over rice

v. Fruits and vegetables

vi. Sea food – a. Cooked b. Uncooked

**Anthropological Implications**

The above data indicate the conditions which play important role in the spread of cholera. The social scientists talked about the ‘index of deterioration’ which reflected the declining municipal services. The analyses of the above factors lead to different anthropological approaches to study the epidemiology of cholera in particular and diseases in general.

*Political economy of health*

Analyses like these take cholera as the outcome of a set of social and cultural processes, and they study those processes themselves in addition to studying the individual behaviors that bring people in contact with infectious agents. They thus see economicsand politics as fundamental components of epidemiology. This approach is variously labeled the “political economy of health” or “critical medical

anthropology” (Baer et al. 1997, Farmer 1993) in the United States, but in Latin America it is part of a strong school of social medicine (Morgan 1998). Examining social and cultural causes of disease at the population level is part of the political economy of health.