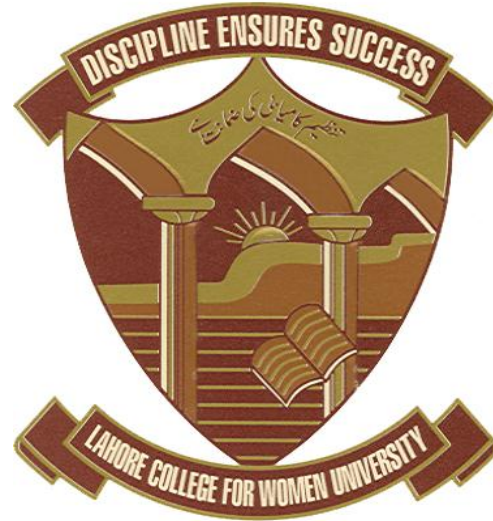


BASIC PRINCIPLES AND CONCEPTS: I

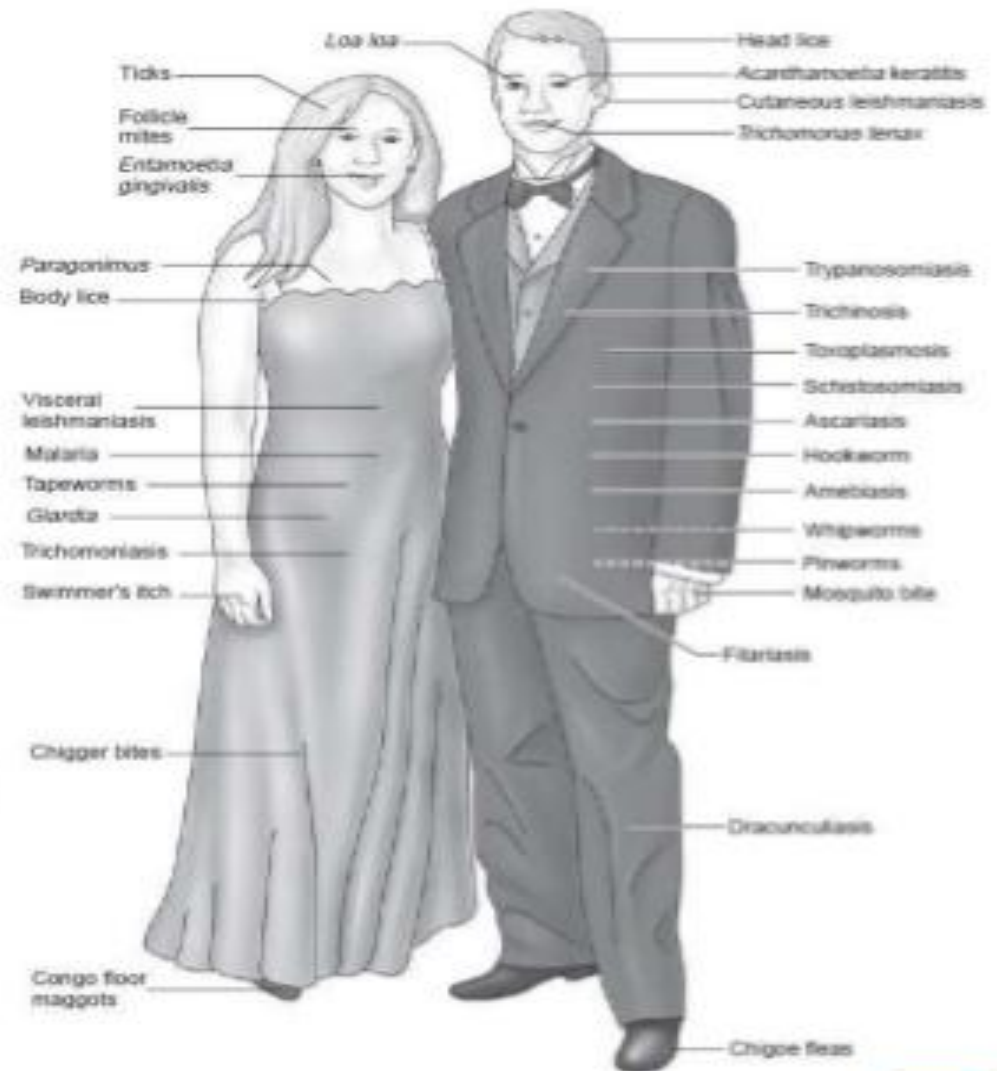


Dr. Asma Abdul Latif
Department of Zoology,
Lahore College for Women University, Lahore.

BASIC PRINCIPLES AND CONCEPTS: I

INFECTION SITES

- Site specificity is actually evidence of parasite adaptation to a particular habitat within a host
- Parasites that inhabit the lumen of the intestine or other hollow organs are said to be **coelozoic**, while **those living** within tissues are called **histozoic**.



INFECTION SITES



Salmonella

- **Infrapopulation:** All the parasites of one species in a single, individual host.
- **Metapopulation:** All the parasites of one species in a host population.
- **Infracommunity:** All the parasites of all species in a single individual host.
- **Component community:** All the parasites of all species in a host population.
- **Compound community:** All the parasites of all species in all host species in an ecosystem.

Incidence Vs prevalence

Incidence rate considers only new cases of a disease

Prevalence rate considers all (new + old) cases of a disease

Incidence rate considers population at risk as a denominator

Prevalence rate considers total population as a denominator

Incidence & period prevalence rates require follow up studies

Point prevalence rate requires cross- sectional study



Salmonella



Salmonella



Salmonella

Macroparasites vs. Microparasites

- ❑ Macroparasites are defined as parasites large enough for the human eye to see.(Humans)
- ❑ Microparasites are not able to be seen by the human eye and they need a host to survive.
 - ❑ Some microparasites live in a mutually beneficial relationship with their host.
 - ❑ survive and multiply.
 - ❑ Some microparasites hurt their hosts.
 - ❑ Host dies along with microparasite
 - ❑ Host becomes immune to microparasite.

EPIDEMIOLOGY

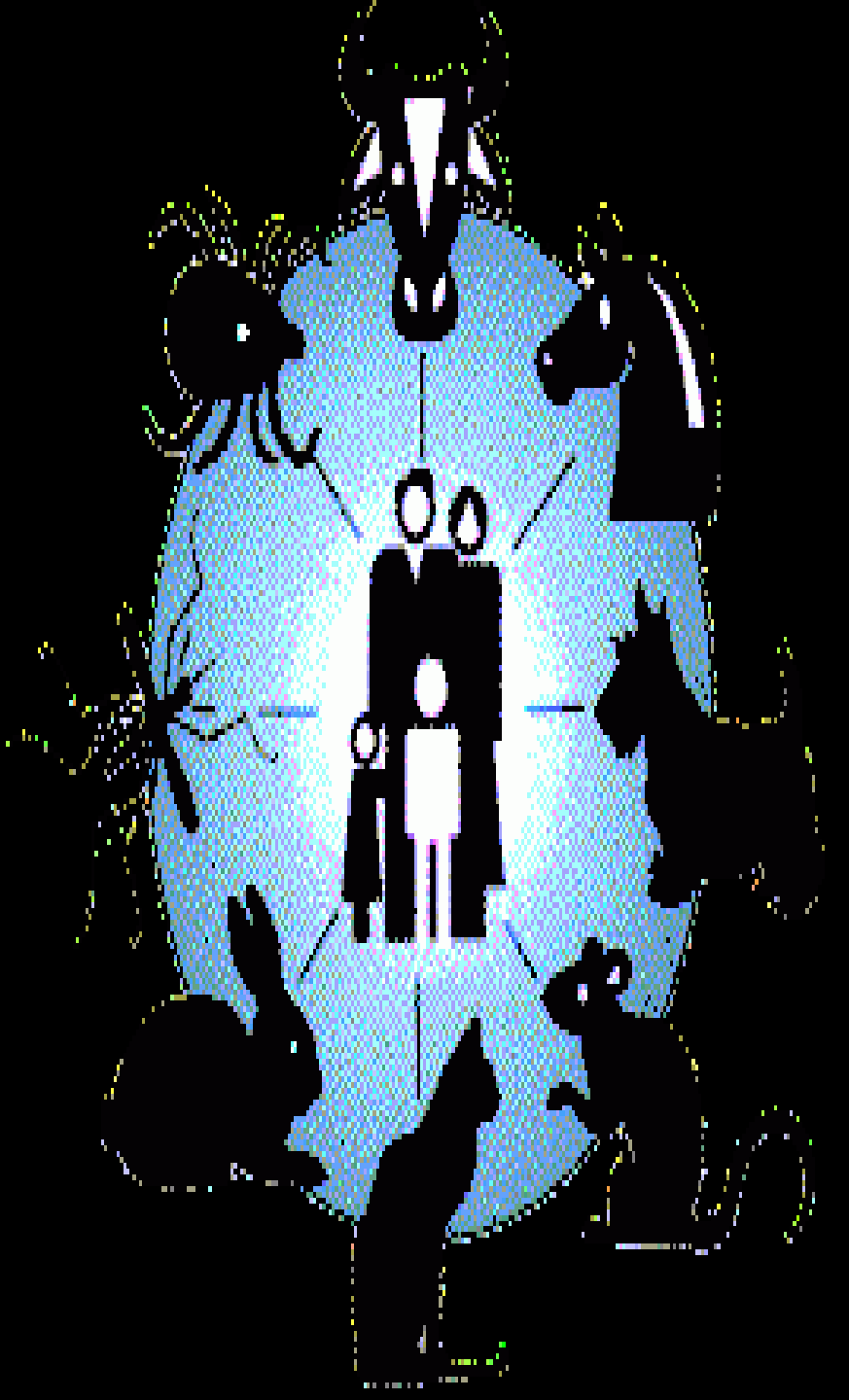
- Epidemiology is considered as the basic science of public health.
- It provides useful tools and methods to describe variations in disease occurrence and identify factors that influence the occurrence of disease among population.
- The occurrence of disease is dependent on variations in exposure of individuals in the population to the causes of the disease that are commonly behavioral and environmental.



ZOONOSIS

A zoonosis is an infectious disease caused by a pathogen that has jumped from a non-human animal to a human.

Typically, the first infected human transmits the infectious agent to at least one other human, who, in turn, infects others



THANK YOU