

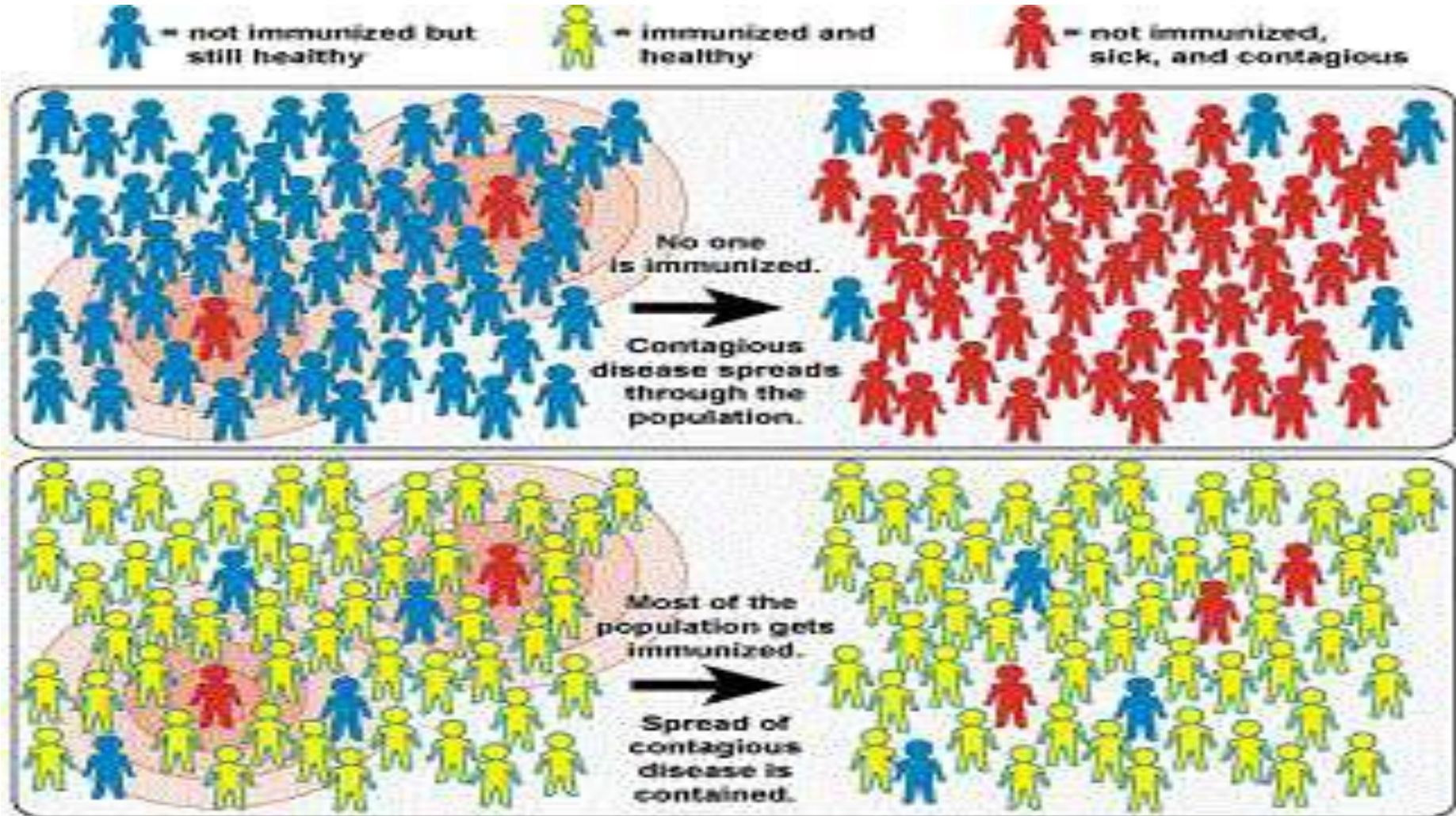
Herd immunity

Lec. 5

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Herd immunity

- Overall immunity in a community
- Useful in control of epidemics



Herd immunity

- Herd immunity is defined as the overall immunity of a community (or herd) towards a pathogen.
- Elements that contribute to create a strong herd immunity are-
 - Occurrence of clinical and subclinical cases in the herd
 - On-going immunization programme
 - Herd structure i.e. type of population involved
 - Type of pathogen-Herd immunity may not be strong in a community against all the pathogens.

Herd immunity

- Herd immunity develops following effective vaccination against some diseases like:
 - Diphtheria and Pertussis vaccine
 - Measles, Mumps and Rubella (MMR) vaccine
 - Polio (Oral polio vaccine)
 - Smallpox vaccine

Adaptive immunity

- Special type of cell mediated immune response (CMI) which develops following injection of immunologically competent T-lymphocytes known as Transfer factor.
- Useful for treatment when the CMI is low- e.g. in lepromatous leprosy.

Conclusion

- The innate immunity provides critical early phase defenses against invading microorganisms
- While the adaptive immunity provide mechanisms by which the host can become more efficient in protecting against specific pathogens.

THANK YOU