TRMD 7420 Population Based Malaria Prevention and Control

Professor: Joshua Yukich

Credits: 3

Semester(s) offered: Fall

Course Description:

This course introduces the principles of prevention and control of malaria infection and disease, as well as population based methods for evaluating the success of control programs or new interventions. This course investigates how culture, society, and the environment influence disease transmission, risk factors, and health status. Students will analyze data and integrate information using a monitoring and evaluation framework to inform prevention and control policy. Topics covered will include vector ecology, malaria epidemiology, malaria control strategies, malaria monitoring and evaluation, issues around cost-effectiveness, and prospects for elimination.
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Learning Objectives:

A. Identify the underlying biologic and social causes of malaria, and the direct and indirect links to public health policy;

B. Distinguish the underlying societal, cultural, and environmental factors that interact to influence malaria infection and disease;

C. Relate the life cycle of the malaria parasite, mosquitoes and transmission patterns, for the disease to prevention and control measures;

D. Evaluate how population-based surveys, health facility and surveillance data and models are used to assess levels of malaria transmission intensity, patterns of infection, and coverage levels of key interventions;

E. Use data to guide the appropriate choice of control measure;

F. Select appropriate indicators to capture transmission intensity, incidence, and prevalence of malaria;

G. Assess evaluation strategies for establishing malaria program/intervention effectiveness at the national and sub-national levels;

H. Compare the main prevention and control methods for malaria, their strengths and weakness, and the appropriate monitoring and evaluation strategies for each intervention; and

I. Distinguish current trends in malaria research and policy