



Mês de: Outubro 2009

SEMINÁRIO DE ANÁLISE E EQUAÇÕES DIFERENCIAIS

Dia 15 de Outubro (quinta-feira), às 14h15, na Sala B2-01

“Modeling the risk-benefit of chemoprophylaxis for travelers to areas with stable malaria transmission”

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Abstract:

Malaria has emerged as a frequent problem in international travelers. The risk depends on destination, duration and season of travel. We used mathematical models to estimate the risk of non-immune persons to acquire falciparum malaria when traveling to the Amazon region. From the force of infection we calculated the risk of malaria dependent on duration of stay and season of arrival. Our results highlight that the risk for non-immune travelers to acquire malaria in the Amazon region is substantial but varies greatly with seasons and epidemic cycles. For instance, for a traveler who stays in the Amazon for 120 days during the high season, the risk of acquiring malaria was 0.5%. Cost-effectiveness analysis allows us to conclude that for people arriving at summer time, the period they can safely remain without chemoprophylaxis is restricted to one week, whereas for people arriving in the winter, that period is extended to 2 months, with intermediary values for the other seasons. Risk estimates based on mathematical modelling will help the travel medicine provider give better evidence based advice for travelers to malarial countries.

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