Target reproduction numbers: A general framework for threshold parameters in epidemiological models

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A general framework for threshold parameters in epidemiological models is developed using the concept of target reproduction numbers [4]. This framework identifies reproduction numbers and other threshold parameters in the literature (see, e.g., [1, 3]) in terms of their roles in disease control. The framework is applied to the analysis of several common control strategies in epidemiology, which provides new biological insights using cycles and walks on digraphs [2].

This talk is based on a recent collaboration with Mark Lewis (Alberta) and Pauline van den Driessche (Victoria).

References

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