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Role of household size and community structure on the spread of tuberculosis

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Some northern communities in Canada see inordinately high tuberculosis incidence compared to the rest of the country. Most of the affected locations are isolated First Nations communities and while this means that the usual argument of tuberculosis as an indicator disease of poverty is applicable, it does not explain the specifics of the situation. To try to understand the role of the various factors at play, we focus on two specific aspects: household size and community structure. We investigate this using a simple discrete-time model for households, which we study analytically and with numerical simulations.

This is joint work with Ryan Sherbo.

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