

---

**NICOLA MULBERRY**, Simon Fraser University  
*HIV Epidemic Control among Sex Workers and their Clients*

Controlling the spread of HIV among hidden, high-risk populations such as sex workers and their clients is becoming increasingly important in the fight to end AIDS. We identify a number of sociological and structural factors which render general control strategies ineffective among these key populations, and instead call for focused testing and interventions. A bipartite network model of sexual contacts between female sex workers and male clients is motivated using historical data from a South African mining community. HIV transmission and progression is modelled as a stochastic process on the network, and the effect of various intervention strategies on HIV prevalence in the population is determined through numerical simulations. We find that preventative interventions are highly cost-effective when targeted at female sex workers. For aggressive reduction in HIV prevalence, however, the client population cannot be ignored and treatment of both populations is necessary.