

Eliminating syphilis in remote Aboriginal and Torres Strait Islander communities

Francis J Bowden

TO THE EDITOR: In their article on the decline of infectious syphilis in the Australian Indigenous population from 2005 to 2009,¹ Ward and colleagues conclude that it “might be the right time to move toward the elimination of infectious syphilis from remote Indigenous communities”. They note that another previously endemic sexually transmitted infection, donovanosis, has almost completely disappeared from Australia as a result of an elimination program.² I strongly support their call to action and believe that syphilis can, and should, be next.

It is likely that, outside of the small number of communities who have been able to implement a coordinated screening program, the decrease in syphilis in remote areas is an unintended benefit of the use of azithromycin for genital chlamydia and trachoma, and amoxicillin for gonorrhoea. Syphilis is only transmissible to sexual partners for a few weeks during the primary phase (when a chancre is present) and during the secondary phase (when mucocutaneous lesions may be present). Although syphilis is highly infectious during these stages, the relatively short duration of infectiousness partly explains why it is less common than other bacterial sexually transmitted infections. Because the painless ulceration of syphilis is easily ignored by men, or may go unnoticed by women with genital lesions, the diagnosis and treatment of latent (ie, subclinical) disease has been the main focus of syphilis control in remote areas. This approach has had only a limited effect on reducing the incidence of infectious syphilis. Indeed, as latent disease detection and treatment improves, there may be a paradoxical increase in the incidence of infectious cases because latently infected individuals become susceptible to new infection again after treatment.³ Therefore, detection and treatment of all cases of early, infectious syphilis must be the aim of an elimination program, but it will be extremely difficult to achieve this in a remote or rural setting using current diagnostic strategies that almost exclusively rely on serological testing.

Serology is still the mainstay of syphilis diagnosis, despite the development of sensitive and specific polymerase chain reaction (PCR) tests for *Treponema pallidum*. Multiplex PCR tests that can also detect herpes simplex and donovanosis have been used to diagnose

genital ulcerative disease in remote areas of Australia,⁴ but not to screen asymptomatic individuals. The validation of a syphilis PCR test that can be used to identify early, infectious syphilis should be a research priority — one that could be carried out as part of an Australian Government-funded, centrally coordinated but locally implemented, targeted syphilis elimination program.

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- 1 Ward JS, Guy RJ, Akre SP, et al. Epidemiology of syphilis in Australia: moving toward elimination of infectious syphilis from remote Aboriginal and Torres Strait Islander communities? *Med J Aust* 2011; 194: 525-529.
- 2 Bowden FJ. Donovanosis in Australia: going, going... *Sex Transm Infect* 2005; 81: 365-366.
- 3 Pourbohloul B, Rekart ML, Brunham RC. Impact of mass treatment on syphilis transmission: a mathematical modeling approach. *Sex Transm Dis* 2003; 30: 297-305.
- 4 Mackay IM, Harnett G, Jeoffreys N, et al. Detection and discrimination of herpes simplex viruses, *Haemophilus ducreyi*, *Treponema pallidum*, and *Calymmatobacterium (Klebsiella) granulomatis* from genital ulcers. *Clin Infect Dis* 2006; 42: 1431-1438. □