

ERADICATION OF SYPHILIS?—NOT THERE YET ONGOING PUBLIC HEALTH RESPONSE TO A SYPHILIS OUTBREAK IN THE NORTHERN TERRITORY, AUSTRALIA

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Background

From 2007 (157.0 per 100,000) to 2012 (17.2 per 100,000) the Northern Territory (NT) Indigenous rates of notified infectious syphilis declined by nearly 90%, prompting dialogues about its eradication. However, a surge in new cases (n=7) in July 2014 from the same community, led the NT Centre for Disease Control to launch an intensified outbreak response.

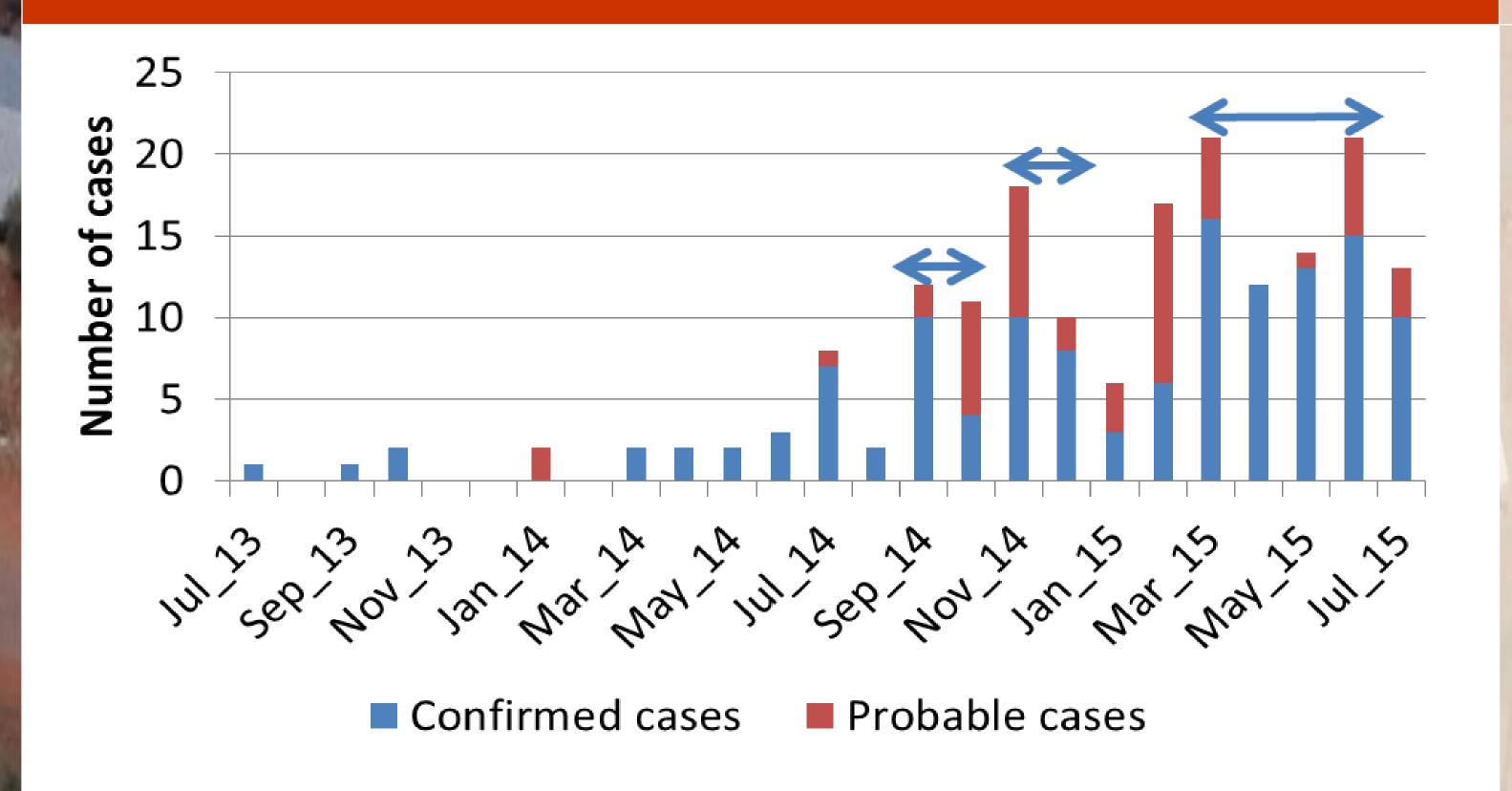
Measures taken included enhancing awareness of the outbreak among clinicians and communities; enhanced promotion of opportunistic testing at community clinics; and appropriate community engagement to screen 12-30 year olds in high prevalence communities using a Point of Care Test (PoCT). Despite these measures, the outbreak spread to the neighbouring Katherine and Barkly regions and then to Western Australia by late 2014. The outbreak and coordinated responses are described here.

The Outbreak

Table 1: Comparison of the age distribution of outbreak cases and pre-outbreak cases (non-outbreak Indigenous cases of infectious syphilis notified in 2008-2013)

Age									
category		Pre-outbreak cases				Outbreak cases			
	Female	Male	All	%	Female	Male	All	%	
<15	3	1	4	2%	18	4	22	12%	
15-19	16	12	28	14%	41	42	83	46%	
20-24	15	14	29	15%	23	19	42	23%	
25-29	10	15	25	13%	8	11	19	10%	
30+	45	63	108	56%	4	12	16	9%	
Total	89	105	194		94	88	182		
%	46%	54%			52%	48%			
Median	30	34	36.5		17.5	19	25.5		
Mean	31.6	33.8	32.8		19.2	21.4	20.3		
(95% CI)	(29.0-34.3)	(31.6-36.0)	(31.1-34.5)	-	(17.8-20.5)	(20.0-22.9)	(19.3-21.1)	J	

Fig 1: Epicurve of outbreak cases (including confirmed and probable cases)
Note: arrows indicate community-wide screens



Community- wide screening results

- In 2014-15 there were Initial community screens were conducted in 3 communities classified as high priority due to high number of new infections and unidentified contacts
- o Intensive community engagement was conducted to gain consent
- o Remote clinicians were educated in syphilis testing and management
- Due to ongoing detection of new cases, in 2015, re-screens were conducted in 2 communities, previously screened in 2014

Results: Initial screens in 3 communities (Table 2)

- 44 diagnosed with infectious syphilis (22 males, 22 females)
- Combined total prevalence of 7% in those aged 12-30 years
- Highest prevalence (13%) in females aged 12-19 years

Results: Comparison of testing coverage in 2 communities screened twice (Fig 2)

- Population coverage of the combined 2 communities decreased from 64% to 52%
- Combine infectious syphilis case prevalence decreased from 7% to 4%

Outcomes of Outbreak Response

Table 2: Results of community-wide screens for syphilis for 12-30 year olds in 2014-2015

Category	Male	Female	Total	
Community residents on population lists aged 12-30 years	359	420	779	
Syphilis testing coverage among listed residents aged 12-30 years n (%)*	223 (62%)	277 (66%)	500 (64%)	
Syphilis testing in visitors aged 12-30 years n (%)	48	44	92	
Total number tested aged 12-30 years	271	321	592	
Prevalence of infectious syphilis among those tested:				
12-19 year-olds	11% (16/143)	13% (19/159)	12% (35/302)	
20-30 year-olds	5% (6/128)	2% (3/162)	1% (9/290)	
All 12-30 years olds	8% (22/271)	7% (22/321)	7% (44/592)	
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*Communicable Disease Network Australia (CDNA) target for community screen coverage = >70%

Fig 2: Comparison of population testing coverage between 2 communities screened 1st in 2014 then in 2015

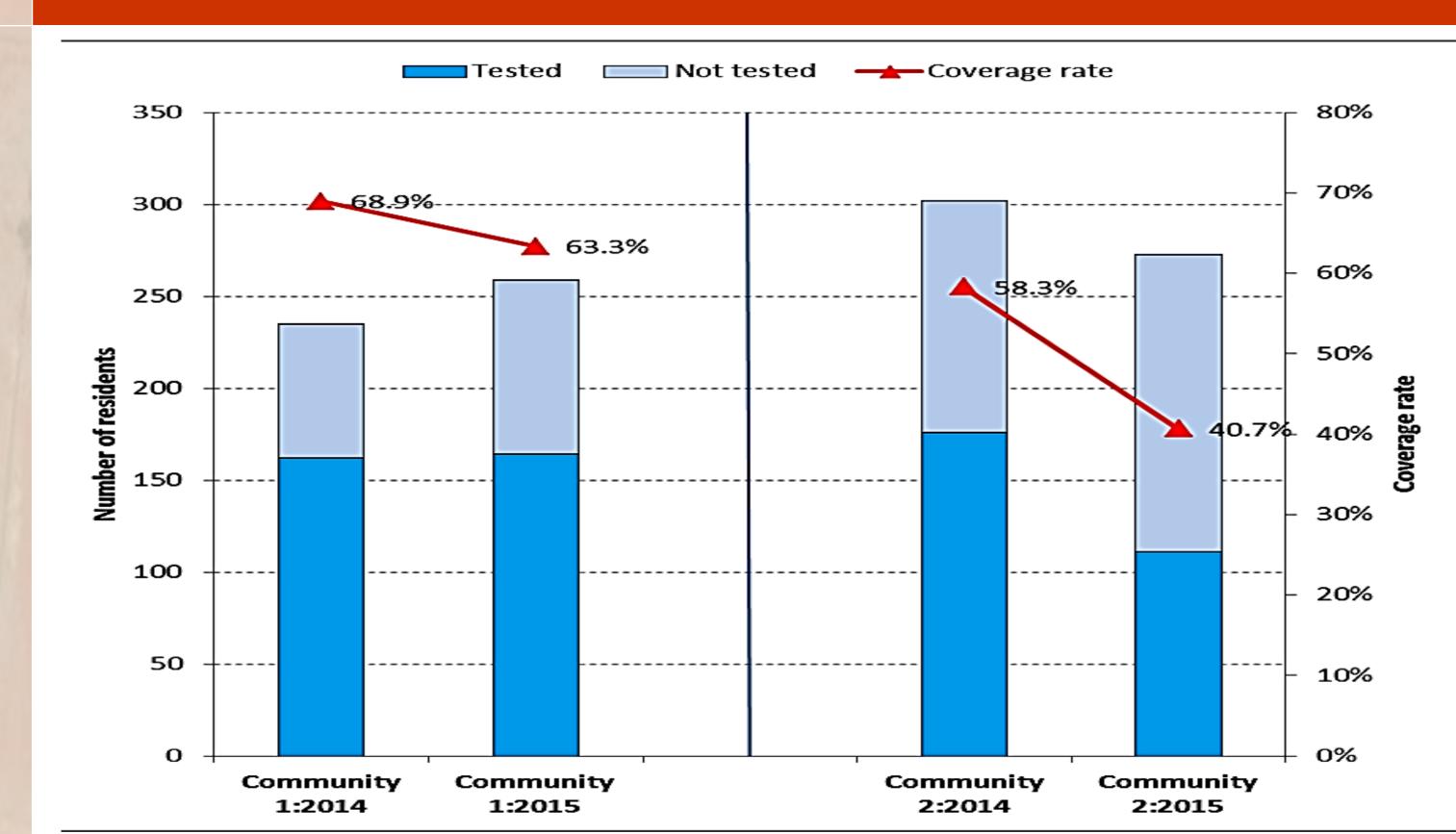


Table 3: Assessment of NT outbreak response (using indicators prescribed in CDNA Guidelines for syphilis outbreak management

Target	2015 1st QTR	2015 2 nd QTR
80% of cases treated within two weeks	79% (34/43)	72% (38/53)
80% symptomatic cases treated on first visit	100% (6/6)	64 % (9/14)
80% cases retested 3-6 months post treatment	47% (22/47)	Not calculated
80% of cases have at least one named contact treated within two weeks of case treatment	33% (14/43)	49% (26/53)
80% of contacts treated for syphilis within 2 weeks of being named	66% (27/41)	59% (34/58)
100% diagnosed with another STI have syphilis test	57% (113/199)	64% (301/469)
100% of antenatal women checked for syphilis at 1 st visit (data from 2 Primary Health Care services)* * Testing to be done 5 times during pregnancy	96% (27/28)	100% (28/28)

Conclusion

- The outbreak cases exhibited significantly different epidemiology compared to previous NT cases; the outbreak cases were younger, with multiple contacts, many of whom were untraceable.
- As evidenced by the epicurve, despite a considerable response, the outbreak is large and ongoing. Outbreak response indicators demonstrate that more needs to be done. An NT-wide audit on antenatal STI testing, 5 times during pregnancy, is underway.
- Community-wide screens achieved relatively low coverage rates (64% in initial screens, and 52% in re-screens) below the CDNA target of >70%. Further screens, may be more difficult particularly with PoCT unavailable from mid-2015 due to a TGA ruling.
- More effort is required to improve and sustain community engagement in the outbreak response, especially in enhancing community awareness of the outbreak, increasing testing rates and improving contact tracing completeness. This places additional burdens on already busy remote clinicians.
- The inter-jurisdictional outbreak response committee formed in April 2015 to guide and enhance a coordinated approach to managing the syphilis outbreak affecting Northern and Central Australia will hopefully assist and strengthen the response in the affected regions.