Syphilis screening in pregnancy at Indigenous primary health centres in Australia

Nattabi B[1], Rumbold A[2], Matthews V[3], Gibson-Helm M[4], Boyle J[4], Larkins S[5], Bailie R[3]

[1]Western Australian Centre for Rural Health, University of Western Australia, Geraldton, [2]The Robinson Research Institute, Adelaide, [3]The University of Sydney, University Centre for Rural Health, Lismore, [4]Monash Centre for Health Research and Implementation, Monash University, [5]College of Medicine and Dentistry, James Cook University, Townsville

@ASHMMEDIA #SH17

I acknowledge the traditional owners of the land on which we meet, the Ngunnawal people, their elders, past, present and future.

I also acknowledge the Yamatji people on whose land I have been privileged to live, work and prosper for the last seven years.

2017 AUSTRALISIAN SEXUAL HEALTH CONFERENCE • WWW.SHCONFERENCE.COM.AU

syphilis

bacterial infection caused by *Treponema pallidum:* transmitted sexually and mother to child

incubation is 3-90 days

chancre at site of inoculation (genital, oral, rectal mucosa)

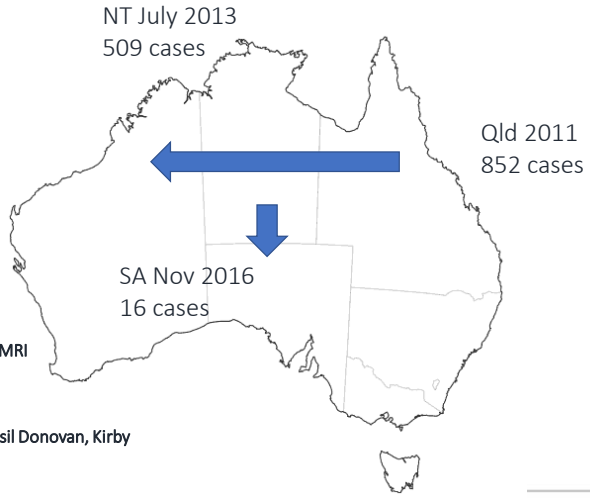
complications: spontaneous abortions, stillbirths, prematurity, congenital syphilis

three stages (primary, secondary and tertiary syphilis) and two latent phases (early and late)

diagnosis: dark field microscopy, non-treponemal and treponemal antibody tests

current syphilis epidemic in Northern Australia

1500 cases as at June 2017



"*It's a national shame*" James Ward, SAHMRI

"*Worst epidemic in 30 years*" Basil Donovan, Kirby

Syphilis and antenatal care

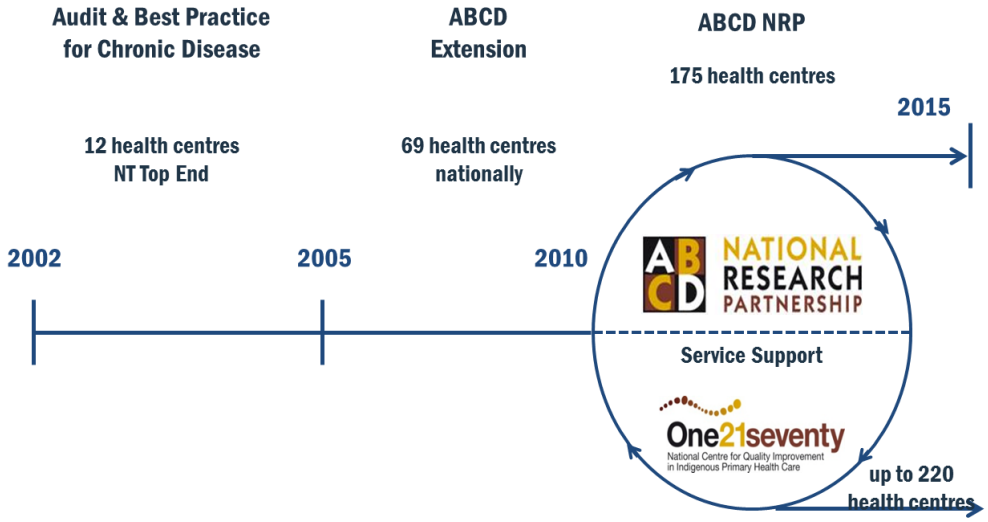
early detection and treatment of syphilis in pregnancy is essential to prevent adverse pregnancy outcomes and to prevent transmission to the infant

Aboriginal and Torres Strait Islander women at risk of syphilis: live in high prevalence areas, have babies at younger age and notifications are higher

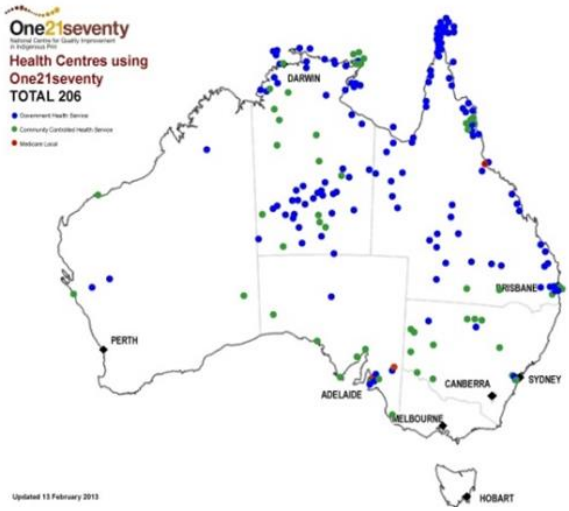
However rates of STI testing in pregnancy vary across primary health care centres in Australia (Rumbold et al 2011)

study aim: to investigate variation in antenatal syphilis testing at Indigenous primary health care centres

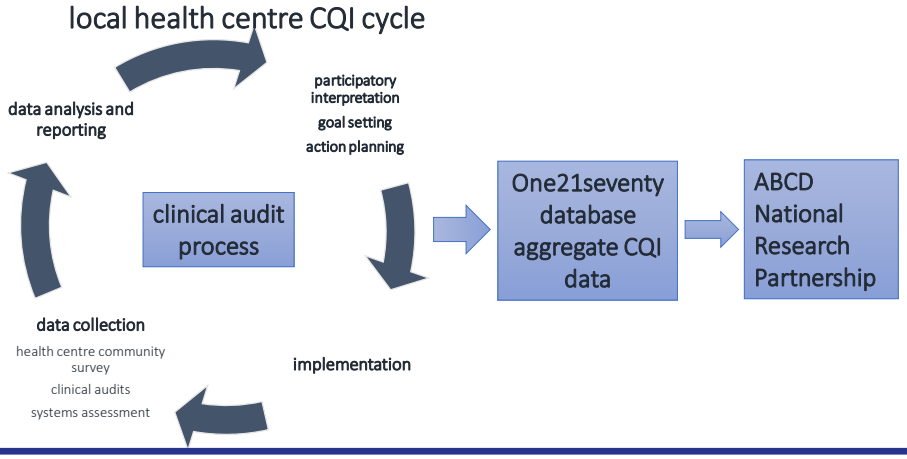
audit & best practice for chronic disease 2002-2014



ABCD/One21seventy sites



maternal tool audit process



eligible: mothers with an infant aged 2-14 months, who resided in the community during their pregnancy and attended for pregnancy care at least once
sample number: <30 eligible patients: all records; >30 eligible patients: random selection of 30

methods

analysis of clinical records from the ABCD National Research Partnership database 2007-2014

outcome:

testing for syphilis in current pregnancy

explanatory variables:

health centres: location, governance, accreditation, population size, length of CQI participation, provider at first visit, delivery of other routine investigations (e.g. blood group)

clients: age, Indigenous status, number of antenatal visits, gestation at first visit

statistical methods:

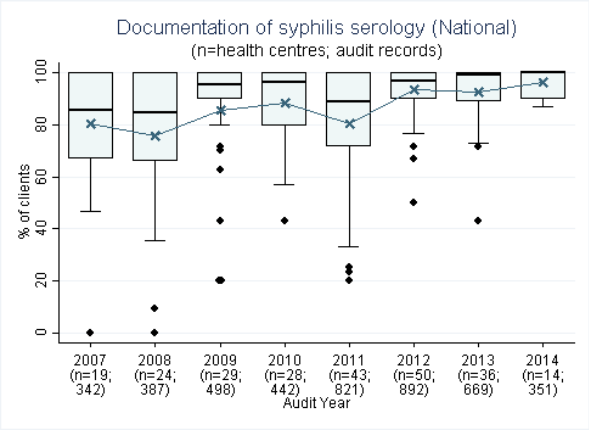
descriptive, univariate and multi-level logistic regression analyses ($p<0.05$ and $p<0.0016$)

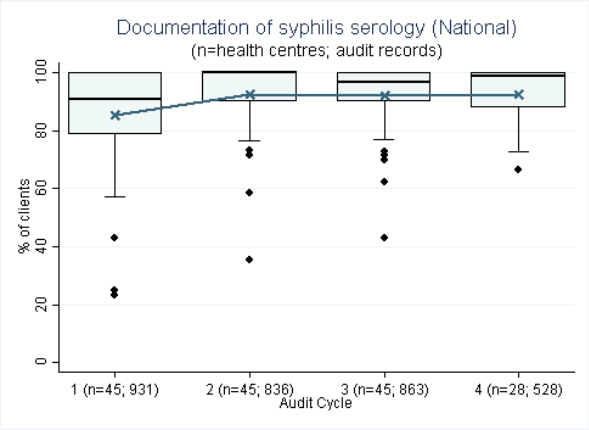
results

health centre level (%)	NSW N=5	NT N=32	QLD N=38	SA N=4	WA N=12	Total N=91
remote location	40	90	84	25	42	76
community governed	100	41	3	50	58	31
service population ≥1000	60	50	34	75	100	52
CQI experience: baseline	40	50	53	75	75	55
≥3 cycles	20	6	24	0	8	14
client level (%)	**N=414**	**N=1271**	**N=1918**	**N=96**	**N=700**	**N=4399**
Aboriginal and/or Torres Strait Islander	72	96	66	97	88	79
age group: <20	16	17	13	19	17	15
≥35	13	9	12	7	11	11
antenatal visits: <4	23	12	11	19	16	14
≥7	50	61	61	62	51	59
first visit <13 weeks	63	57	60	57	57	59

results

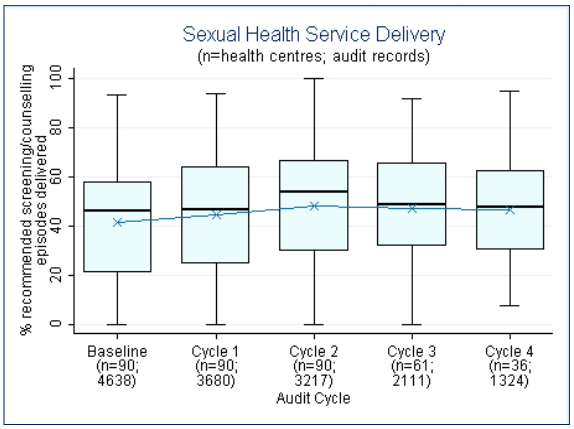
proportion of women who received a syphilis test





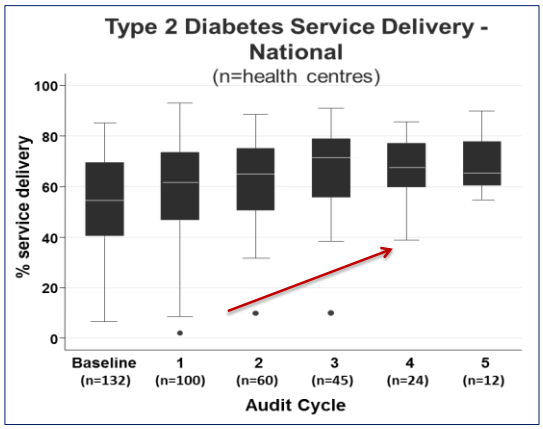
comparison

impact of CQI on sexual health care (15-54 years)



Nattabi B, et al. BMC Infect Dis. 2017;17(1):148.

impact of CQI on type 2 diabetes care



Matthews V, et al. BMC Health Serv Res. 2014;14:578.

results

factors associated with syphilis testing

characteristic		syphilis (n=4239)	
		crude	adjusted
maternal age	age group >=35 vs <20	0.60 (0.41-0.88)	
Indigenous status	Indigenous vs non-Indigenous	1.57 (1.16-2.13)	
gestational age at first visit	13-27 weeks vs <13 weeks >=27 vs <13 weeks	0.51 (0.41-0.65) 0.18 (0.13-0.26)	
number of antenatal visits	(>=4 & >7) vs <4 visits >=7 visits vs <4 visits	2.69 (2.03-3.56) 4.49 (3.41-5.92)	
audit year	2008	1.12 (0.68-1.84)	
	2009	3.43 (2.07-5.67)	
	2010	1.76 (1.04-2.96)	
	2011	1.52 (0.94 - 2.45)	
	2012	4.69 (2.76 - 7.98)	
	2013	4.34 (2.49 - 7.59)	
	2014	4.02 (1.95 - 8.31)	

characteristic		syphilis (n=4239)	
		crude	adjusted
governance	community controlled vs government	3.48 (1.48-8.17)	
CQI experience	1 cycle (vs baseline) 2 cycles	2.70 (2.03-3.59) 2.71 (2.07-3.53)	
provider at first visit		0.52 (0.27 – 1.01)	
midstream urine taken		15.9 (12.3-20.6)	
HIV testing		36.1 (26.4-49.4)	**3.18 (2.11-4.80)**
FBE, blood group, antibodies, rubella		71.2 (49.6-102.7)	**3.36 (2.04 - 5.54)**
screening for alcohol, smoking, drugs	e.g. screened for smoking vs no recorded screen	3.11 (2.38-4.07)	
screening for medical risk factors		2.45 (1.89-3.2)	
diabetes screening		3.06 (2.44-3.84)	

conclusions/implications

conclusions:

- many primary health care centres are achieving high rates of testing for syphilis in pregnant women
- rates of testing are improving over audit cycle and variation reducing
- syphilis testing is linked closed with the delivery of other routine tests in pregnancy

implications:

- efforts should focus on the first antenatal visit but even later in pregnancy
- support for services to improve syphilis testing must be maintained

acknowledgements

ABCD National Research Partnership and One21seventy and all services and individuals who have participated in the ABCD Projects

B Nattabi is a NHMRC Early Career Fellow (#1072777) and received a UWA Teaching grant in 2015 to support this work.

ABCD National Research Partnership was funded by the National Health and Medical Research Council (#545267) and the Lowitja Institute