

Aboriginal and Torres Strait Islander DBS

A novel testing modality to address barriers to Hepatitis C testing and treatment among Aboriginal and Torres Strait Islander People in New South Wales, Australia: the NSW DBS Pilot Study

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Background

Over-representation of Aboriginal and Torres Strait Islander people in HCV notifications in Australia is an urgent public health priority. Dried Blood Spot (DBS) provides an alternative testing modality that may circumvent intersecting stigmas experienced by this population when accessing HCV healthcare. This study examined characteristics of Aboriginal and Torres Strait Islander people enrolled in a state-wide DBS pilot.

Methods

The NSW DBS Pilot is an interventional cohort study of people testing for HIV and/or HCV in NSW, Australia. Participants received RNA testing via: 1) self-registration online with postal DBS kit, home-based sample collection, and postal delivery to the laboratory; or 2) assisted registration online and sample collection at 36 community health sites (including drug treatment clinics, needle and syringe programs and sexual health services) and prisons. Participants completed an online survey and received results via text (negative) or healthcare provider (positive). Logistic regression identified factors associated with positive result and treatment initiation for Aboriginal and Torres Strait Islander people within the study population.

Results

Between November 2016 and December 2020, 7,392 unique people tested using DBS: 28.9% Aboriginal and Torres Strait Islander and 71.1% non-Indigenous.

Variables	Overall		Not Aboriginal or Torres Strait Islander		Aboriginal or Torres Strait Islander	
	n	%col	n	%col	n	%col
Total	7392	100%	5255	100%	2137	100%
Gender						
Male	5752	78%	4237	81%	1515	71%
Female	1573	21%	970	18%	603	28%
Other	67	1%	48	1%	19	1%
Age						
≤<25	1194	16%	821	16%	373	17%
25-34	2308	31%	1582	30%	726	34%
35-44	1981	27%	1363	26%	618	29%
45-54	1279	17%	971	18%	308	14%
>55	630	9%	518	10%	112	5%
Recently injected drugs						
No	3780	51%	2927	56%	853	40%
Yes	3360	45%	2154	41%	1206	56%
Prefer not to say	250	3%	172	3%	78	4%
Registration type						
Online (self-registration)	1559	21%	1499	29%	60	3%
Community (assisted)	2523	34%	1791	34%	732	34%
Justice Health (assisted)	3310	45%	1965	37%	1345	63%

Among Aboriginal and Torres Strait Islander people tested for HCV (n=2,103), 17% (n=349) received a positive result. A positive result was associated with male gender and having recently injected drugs.

Variables	Total people tested for HCV	Negative result		Positive/borderline result		Un-adjusted	Adjusted
	n	n	%row	n	%row	OR (95% CI)	OR (95% CI)
Total	2103	1754	83%	349	17%		
Registration type							
Online	52	47	90%	5	10%		
Assisted (community)	710	592	83%	118	17%	1.87 (0.73-4.81)	
Assisted (prison)	1341	1115	83%	226	17%	1.91 (0.75-4.84)	
Gender, n (%)							
Male	1499	1237	83%	262	17%	1.27 (0.97-1.66)	1.36 (1.04-1.79)
Female	588	504	86%	84	14%		
Other	16	13	81%	3	19%	1.38 (0.39-4.96)	1.52 (0.41-5.62)
Age							
≤<25	361	294	81%	67	19%	3.39 (1.51-7.61)	3.32 (1.47-7.50)
25-34	719	611	85%	108	15%	2.63 (1.19-5.80)	2.44 (1.10-5.43)
35-44	609	496	81%	113	19%	3.38 (1.53-7.47)	3.11 (1.40-6.91)
45-54	303	249	82%	54	18%	3.22 (1.42-7.32)	2.77 (1.21-6.34)
>55	111	104	94%	7	6%		
Major city postcode							
No	255	213	84%	42	16%	0.99 (0.70-1.41)	
Yes	1848	1541	83%	307	17%		
Men who have sex with men							
No	2015	1675	83%	340	17%	1.78 (0.89-3.59)	
Yes	88	79	90%	9	10%		
Recently injected drugs							
No	838	755	90%	83	10%		
Yes	1188	934	79%	254	21%	2.47 (1.90-3.23)	2.50 (1.91-3.28)
Prefer not to say	77	65	84%	12	16%	1.68 (0.87-3.24)	1.65 (0.85-3.21)

Of those who received a positive result, 47% (n=164) initiated treatment within six months. Testing in prison compared to community site was strongly associated with treatment initiation.

Variables	Total people with positive/borderline HCV DBS result		Did not initiate treatment within 6 months		Initiated treatment within 6 months		Unadjusted	Adjusted
	n	% row	n	% row	n	% row	OR (95% CI)	OR (95% CI)
Total	349	53%	185	53%	164	47%		
Registration type								
Online	5	100%	5	100%	0	0%	-	
Assisted (community)	118	83%	98	83%	20	17%		
Assisted (prison)	226	36%	82	36%	144	64%	8.60 (4.95-14.95)	8.46 (4.37-16.37)
Gender, n (%)								
Male	262	48%	126	48%	136	52%	2.16 (1.29-3.61)	1.41 (0.78-2.55)
Female	84	67%	56	67%	28	33%		
Other	3	100%	3	100%	0	0%	-	
Age								
≤<25	67	33%	22	33%	45	67%	3.77 (1.77-8.03)	0.95 (0.37-2.39)
25-34	108	51%	55	51%	53	49%	1.78 (0.90-3.48)	0.49 (0.21-1.17)
35-44	113	58%	66	58%	47	42%	1.31 (0.67-2.57)	0.69 (0.31-1.56)
45-54	54	65%	35	65%	19	35%		
>55	7	100%	7	100%	0	0%	-	
Major city postcode								
No	42	79%	33	79%	9	21%		
Yes	307	50%	152	50%	155	50%	3.74 (1.73-8.08)	
Men who have sex with men								
No	340	53%	181	53%	159	47%	0.70 (0.19-2.66)	
Yes	9	44%	4	44%	5	56%		
Recently injected drugs								
No	83	57%	47	57%	36	43%		
Yes	254	53%	135	53%	119	47%	1.15 (0.70-1.90)	
Prefer not to say	12	25%	3	25%	9	75%	3.92 (0.99-15.52)	

Conclusions

DBS provides an accessible testing alternative that can improve testing and treatment uptake for Aboriginal and Torres Strait Islander people, particularly in key settings such as prisons.



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