Implementation of a script for pre-donation interviews: impact on HIV risk in South African blood donors

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Background

- Donor selection plays a crucial role in ensuring blood safety.
- Strategies used include donor education, direct and indirect questioning of the donor regarding risk behaviour.
- Evidence of efficacy of these practices is limited.

Background

- All blood donors who present are screened for HIV risk behaviours and exposures.
- A considerable number of donations are found to be HIV positive.
- SANBS implemented a script to assess donors during the face-to-face interviews.

Background

- Supplemental education regarding high risk behaviours
- Importance of donor honesty
- Standardise the interviewing process from one staff to another
- Confidence for the staff to address sensitive life style questions and risk behaviours

- The aim of this study was to evaluate the impact of using a script to assess donor eligibility interviews, on HIV risk in South African blood donors

Methods

- We conducted a pre-post implementation evaluation study to determine the impact of a scripted interview on:
  - Pre-donation high risk deferral (HRD) and
  - Recently acquired HIV (RAH) infections among accepted blood donors.
- We compared historical data from two 18-month periods
  - Before (unscripted period, November 2013 to April 2015)
  - During (scripted period, June 2015 to November 2016).

Methods

- For this study, the HRD were identified as all donors who were deferred due to high risk behaviours or exposures, as per SANBS Deferral Guidelines.
- Recently acquired HIV infections included;
  - HIV NAT yields (HIV ID-NAT+/Serology-) and
  - HIV concordant positive with Lag- Avidity EIA (<= 1.5 OD).

Methods

- Chi-square tests were used to determine statistical significance.
- Multivariable models were developed to determine odds ratios separately for each outcome (HRD and RAH) while adjusting for covariates, including gender, population group and age.

Results

Figure 1: Schematic illustration of distribution of donor presentations for unscripted versus scripted periods, N= 3,169,656

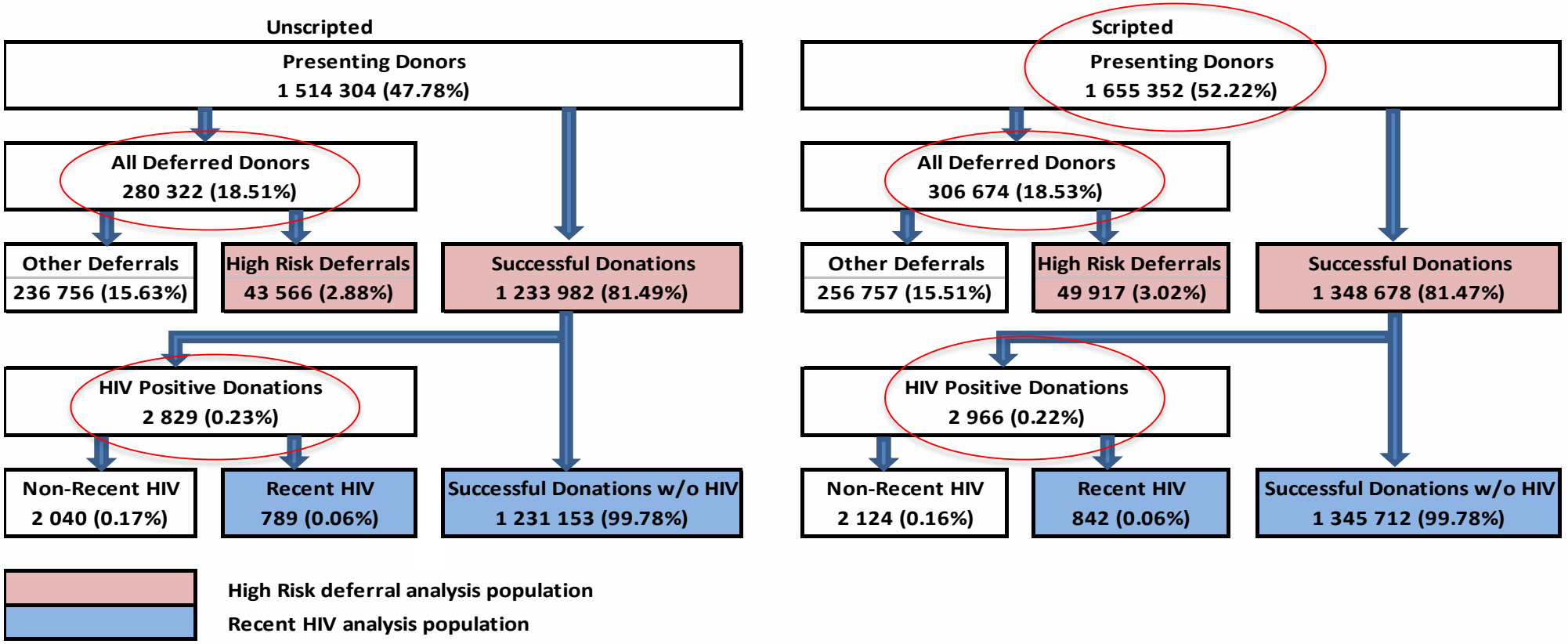

Table 1: Multivariable Model- Odds ratios for high risk deferrals (HRD) with adjusted co-variates

Parameter	Categories	Odds Ratios	95% CI	p value
Scripted period	No	1		
	Yes	1.06	1.05 - 1.07	<0.0001
Gender	M	1		
	F	0.69	0.68 - 0.70	<0.0001
	Unknown	1.52	0.52 - 4.47	0.4476
Population group	White	1		
	Asian	0.89	0.85 - 0.92	<0.0001
	Black African	1.48	1.46 - 1.50	<0.0001
	Coloured	1.12	1.08 - 1.16	<0.0001
	Unknown	1.28	1.22 - 1.35	<0.0001
Age (years.)	< 21	6.44	6.13 - 6.76	<0.0001
	21-30	8.38	7.99 - 8.80	<0.0001
	31-40	3.88	3.69 - 4.08	<0.0001
	41-50	2.19	2.07 - 2.31	<0.0001
	>=51	1		

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Table 2: Distribution of high risk deferrals by deferral codes for unscripted versus scripted period

		Unscripted		Scripted		
Deferral Codes	Deferral Description	N	%	N	%	p value
Total presentations		1,514,304	47.78	1,655,352	52.22	<0.0001
All high risk deferrals		43,566	2.88	49,917	3.02	<0.0001
BPG	Body piercing	5,857	0.39	5,409	0.33	<0.0001
BTAB	Blood transfusion recipients and their partners/ Accidental blood exposure	792	0.05	858	0.05	0.9500
HOVA	High Risk: Unclassified / other/HIV vaccine trials	97	0.01	131	0.01	0.0817
HSTD	HIV positive donors / Partners of HIV positive persons / Anti-retroviral drug use	770	0.05	984	0.06	0.0011
IVDU	Intravenous drug use	219	0.01	184	0.01	0.0133
MSM	Male to male sex	76	0.01	14	0.00	<0.0001
NMSP	New/Multiple sexual partners	27,144	1.79	33,600	2.03	<0.0001
SAT	Sexual Assault	122	0.01	160	0.01	0.1826
TATC	Tattoos/Traditional/tribal cutting/ scarification/circumcision	8,051	0.53	8111	0.49	<0.0001
TSX	Transactional sex	438	0.03	466	0.03	0.4886

Table 2: Multivariable Model- Odds ratios for recently acquired HIV (RAH) with adjusted co-variates

Parameter	Categories	Odds Ratios	95% CI	p value
Scripted period	No	1		
	Yes	0.88	0.79- 0.97	0.0074
Gender	Male	1		
	Female	2.06	1.85- 2.29	<0.0001
Population group	White	1		
	Asian	1.43	0.84- 2.44	0.1887
	Black African	27.01	21.42-34.06	<0.0001
	Coloured	7.34	5.24-10.27	<0.0001
	Unknown	8.31	4.96-13.92	<0.0001
Age (years.)	>=51	1		
	< 21	1.82	1.37- 2.42	<0.0001
	21-30	3.25	2.47- 4.26	<0.0001
	31-40	2.19	1.65- 2.91	<0.0001
	41-50	1.53	1.12- 2.09	0.0070

Discussion and Conclusion

- There was a significant increased odds of high risk deferral which was associated with 12% lower odds of recently acquired HIV infections.
- This finding suggests that using the script was successful in drawing the attention of the donors to their potential risk behaviors and encouraged disclosure.
- The increased disclosure in the category of New/multiple sex partners and HIV positive donors/partners, further suggests an improvement in understanding and comprehension of risk behaviors by the donors, as well as the importance of honesty.

Discussion and Conclusion

- This study indicates potential improvement in blood safety associated with the implementation of a scripted donor interview and has relevance to other high HIV endemic countries.
- To fully assess the efficacy of high risk deferrals among donors, we need to consider investigating the HIV incidence and prevalence among donors deferred for high risk behavior.

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