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Effect of ^{PS} COVID-19 on the blood supply in a Caribbean country



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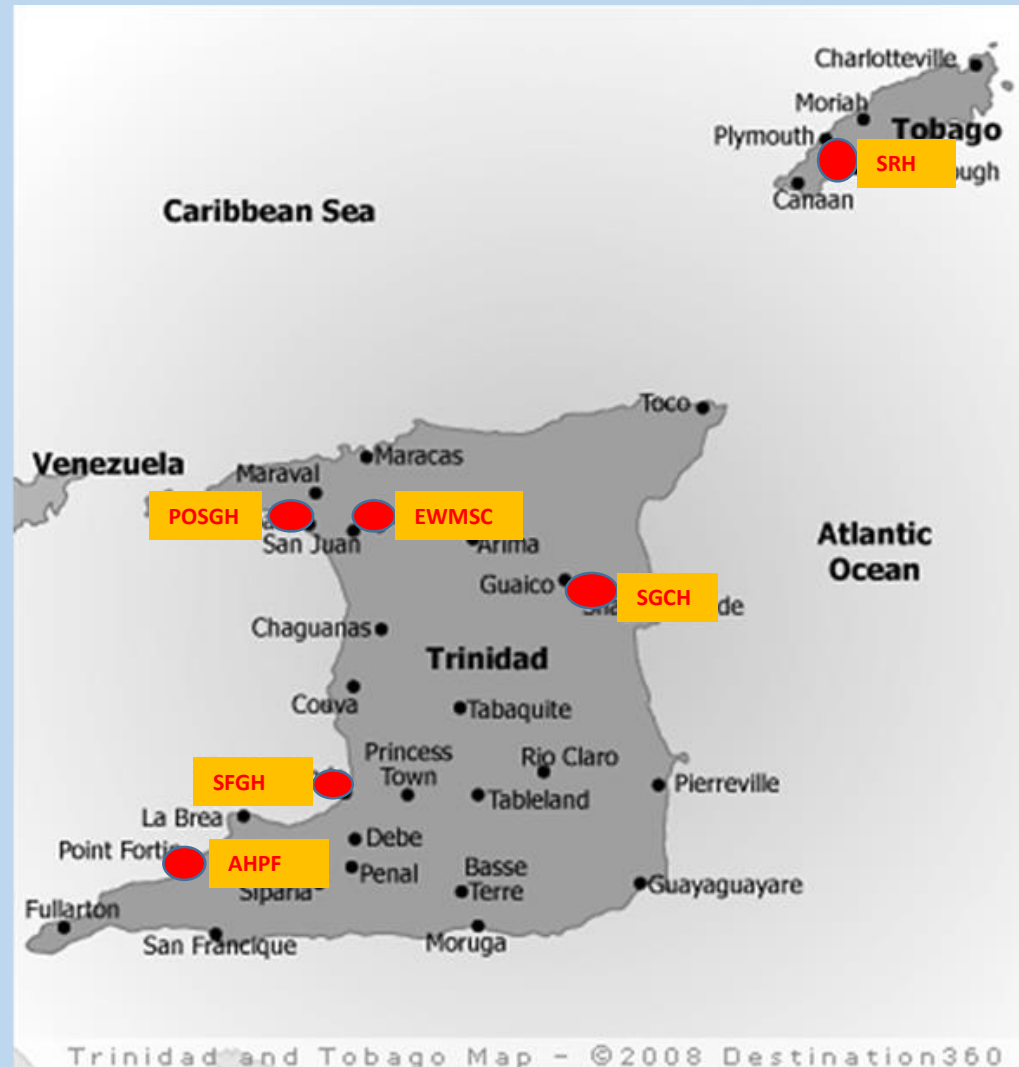
Introduction

- Arrangement of blood donation system in Trinidad and Tobago (TTO)
- National blood donations 6 months before and 6 months after first COVID case
- Voluntary non-remunerated blood donations in period
- Medical student attitudes to blood donation during pandemic
- Conclusions and recommendations

TTO Blood transfusion system arrangement

- Six hospital-based donation centres (replacement and remunerated donors)
- One mobile unit (remunerated donors)
- University of the West Indies Blood Donor Foundation (UWIBDF) voluntary non-remunerated donors (VNRD) since 2015 at Eric Williams Medical Sciences Complex (EWMSC)
- Policy, guidelines established and monitored by National Blood Transfusion Service, Ministry of Health (NBTS, MOH)
- Annual blood bank data to Pan American Health Organization/World Health Organization (PAHO)
- First case COVID-19 March 22nd 2020

TTO Blood transfusion system arrangement



POSGH - Port of Spain General Hospital

SFGH - San Fernando General Hospital

EWMSC - Eric Williams Medical Sciences Complex

SGCH - Sangre Grande County Hospital

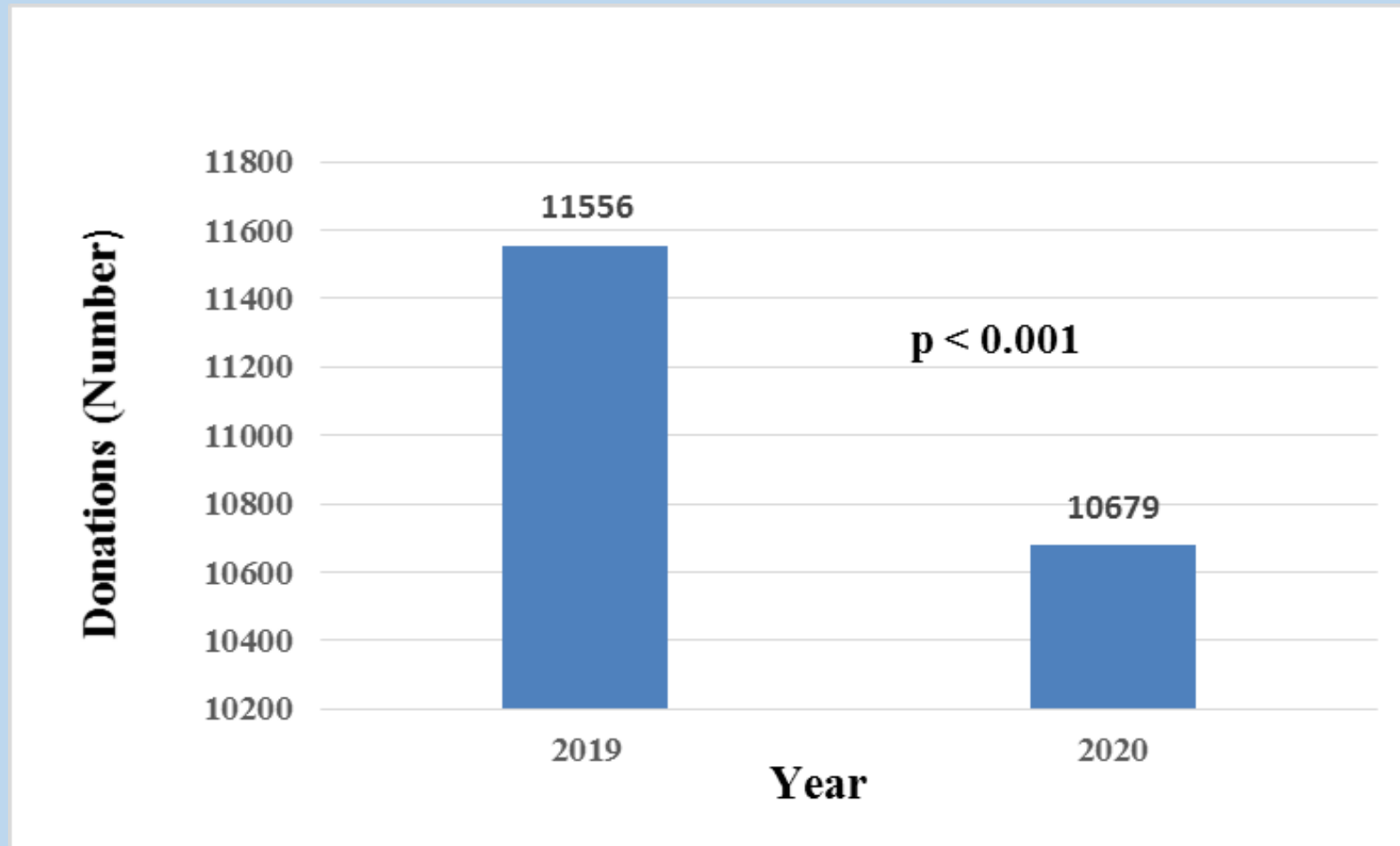
AHPF - Area Hospital Point Fortin

SRH – Scarborough Regional Hospital

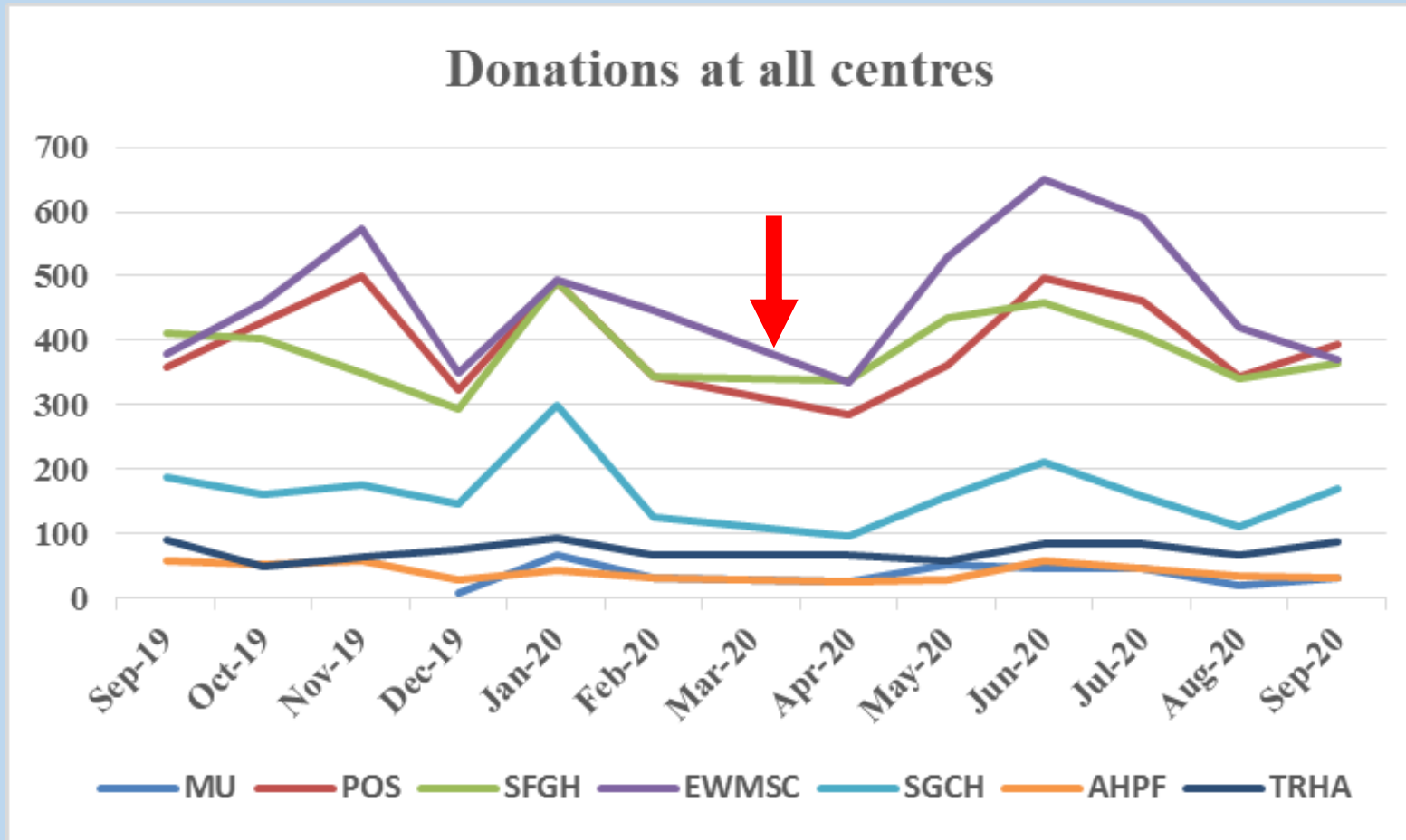
Methodology

- Observational, retrospective study
- Records from National Blood Transfusion Service, EWMSC transfusion laboratory and UWIBDF for period six months preceding and six months national lockdown for COVID
- SPSS for data analysis. Chi square for significance of associations and logistic regression for correlation analysis

March – September donations national



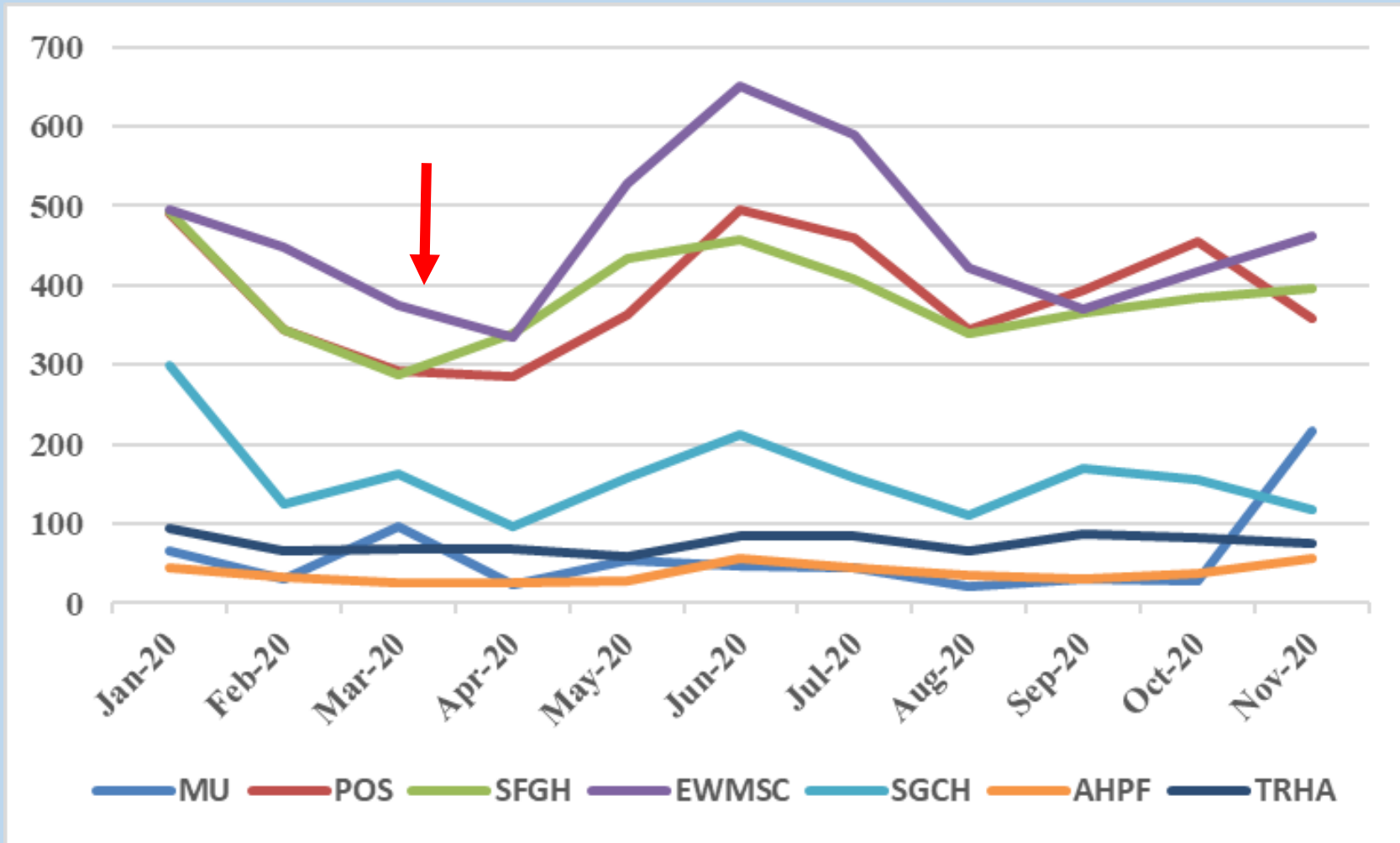
National Blood donations in six months before and after first COVID case



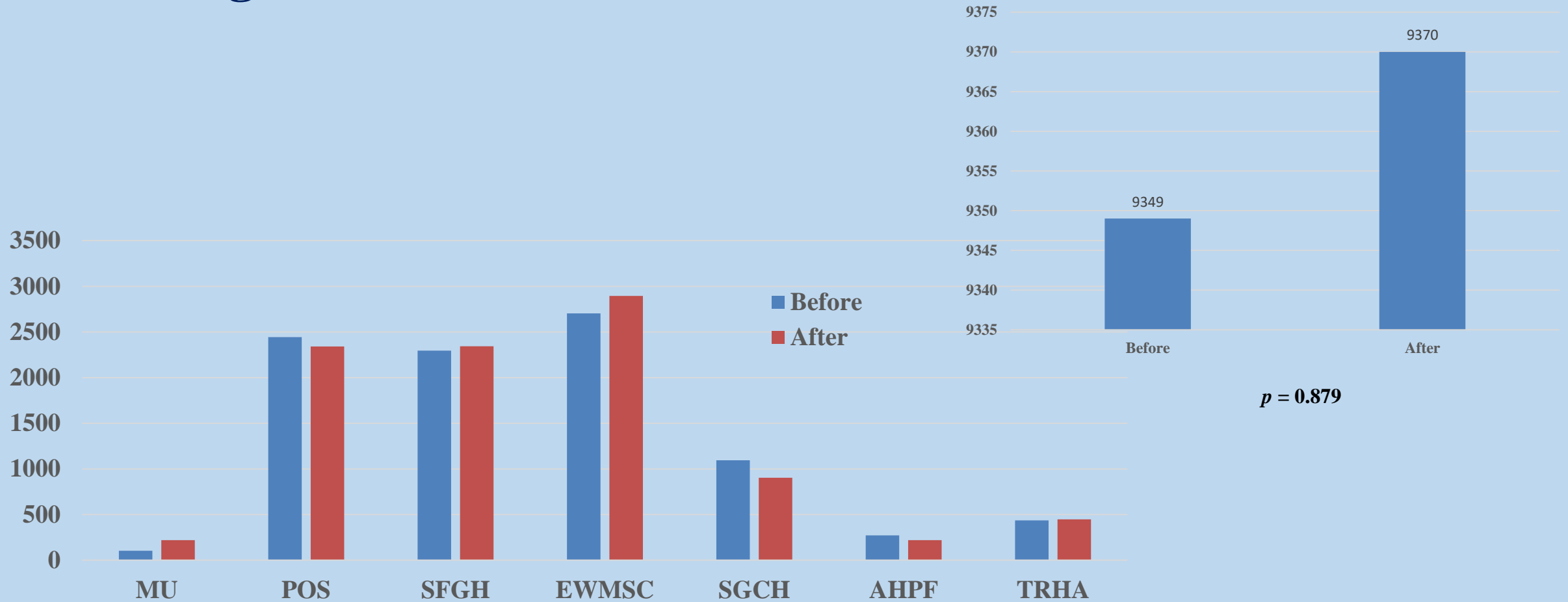
Annual donations 2019 and 2020



2020 donations



Total national donations in 6 months preceding and succeeding national lockdown



Pattern of donations at EWMSC

	6 months preceding	6 months following	<i>p</i> value
Family replacement %	90.9	92	0.14
Remunerated* %	4.5	3.6	0.63
Voluntary non-remunerated %	4.5	4.4	0.88
Total	2559	2951	< 0.001

UWIBDF donations 2015 - 2020

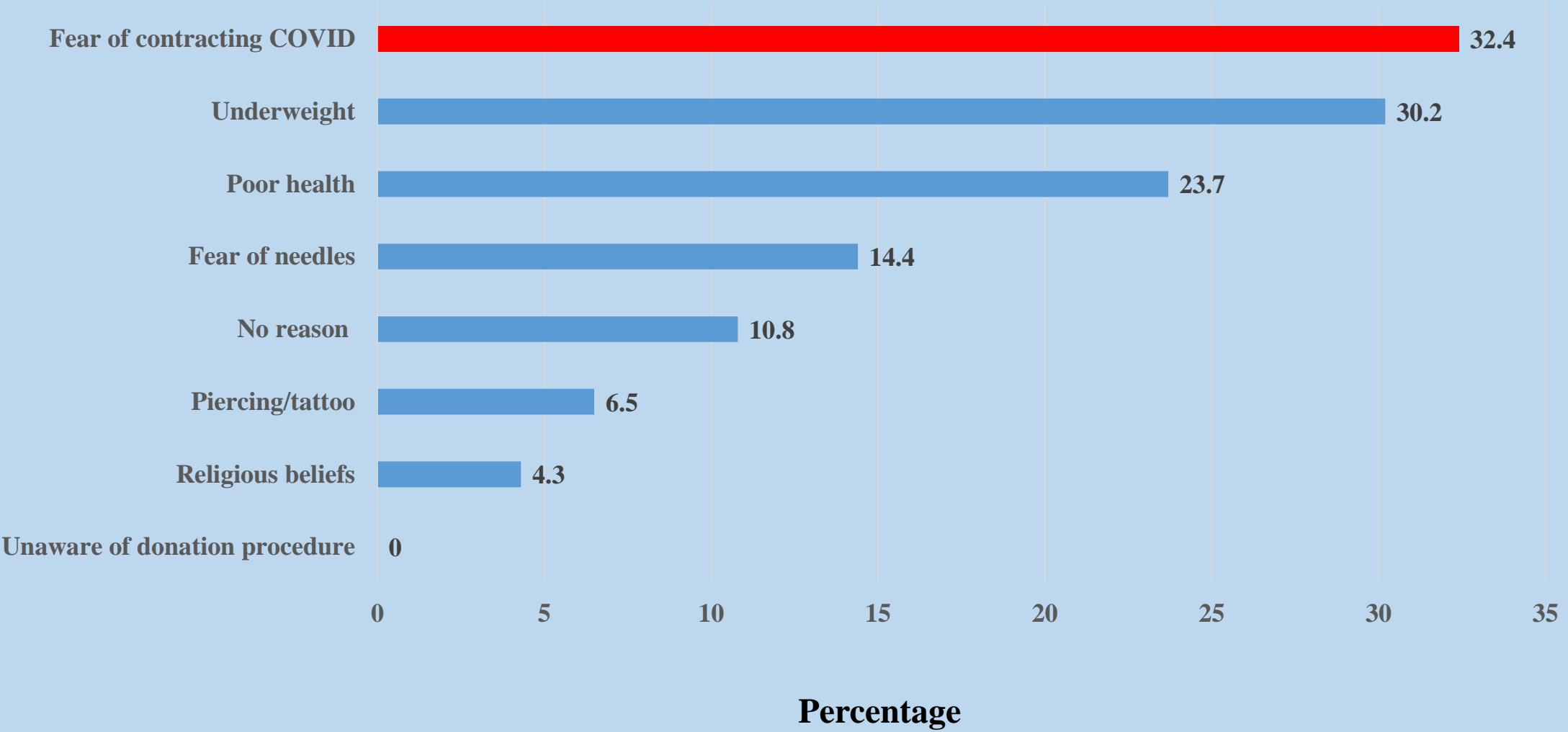


VNRD demographics

Variable	Pre - COVID	During COVID	<i>p</i> value
18-25 year old	52%	45%	< 0.05
Female	54%	78%	< 0.05
Repeat	51%	55%	< 0.05

Deterrents to blood donation during COVID among medical students

(n = 282)



Summary of findings

- The total number of blood donations did not change significantly in the six months preceding compared to the six months following imposition of COVID-19 restrictions
- The number of VNRD donations per blood drive decreased significantly
- The proportion of female and repeat VNRDs rose during COVID
- Fear of contracting COVID was the main deterrent to blood donation among a sample of medical students

Discussion

- MOH call for VNRD increased replacement donations despite reduction in elective surgeries, lockdown, social distancing
- ? Increased efficiency at donation centres
- University closure changed age demographics of VNRDs
- Repeat, female VNRDs more reliable
- Fear of COVID transmission by donation major VNRD deterrent ? overcome by coercion of replacement

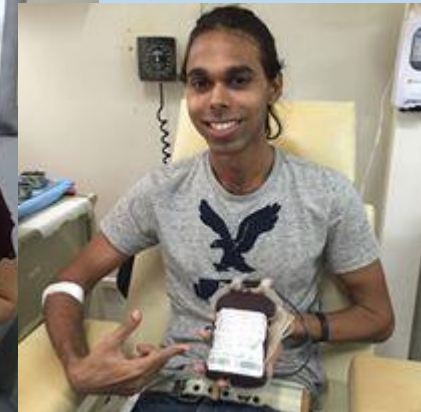
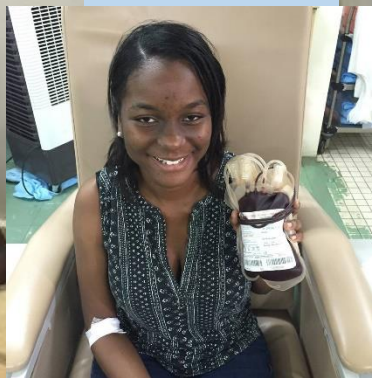
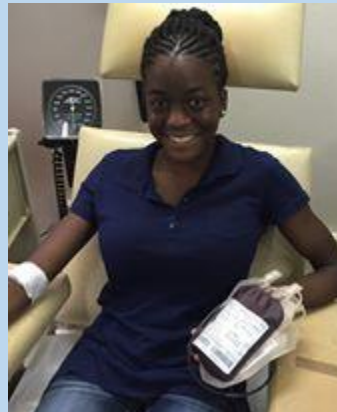
Conclusions

- MOH VNRD campaign encouraged FRD and remunerated donors
- Family member in need or remuneration stronger motivators than altruism
- Females and repeat VNRDs most reliable

Recommendations

- A national blood donor campaign that explains the different types of blood donor
- Donor education about COVID – 19 and blood donation

Acknowledgements



Summary

- Trinidad and Tobago country data
- Blood donation system in Trinidad And Tobago
- National blood donations 6 months before and after first COVID case
- Voluntary non-remunerated blood donations in period
- Medical student VNRDs
- Conclusion and recommendations

References

1. Charles KS, Friday M, Lall D, Harricharan K, De Four M, Guy K, et al. A university - led initiative to promote voluntary non-remunerated blood donation in a developing country. *Transfusion and Apheresis Science*. 2019; 58(5):674-9.
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3. Sampath S, Ramsaran V, Parasram S, Mohammed S, Latchman S, Khunja R, Budhoo D, Poon King C, Charles KS. Attitudes towards blood donation in Trinidad and Tobago. *Transfusion Medicine*. 2007 Apr; 17(2):83-87.

