

# Blood donation Upper age eligibility

The Australian experience  
Jo Speedy

# Overview



Lifeblood context



Age eligibility criteria



Operational

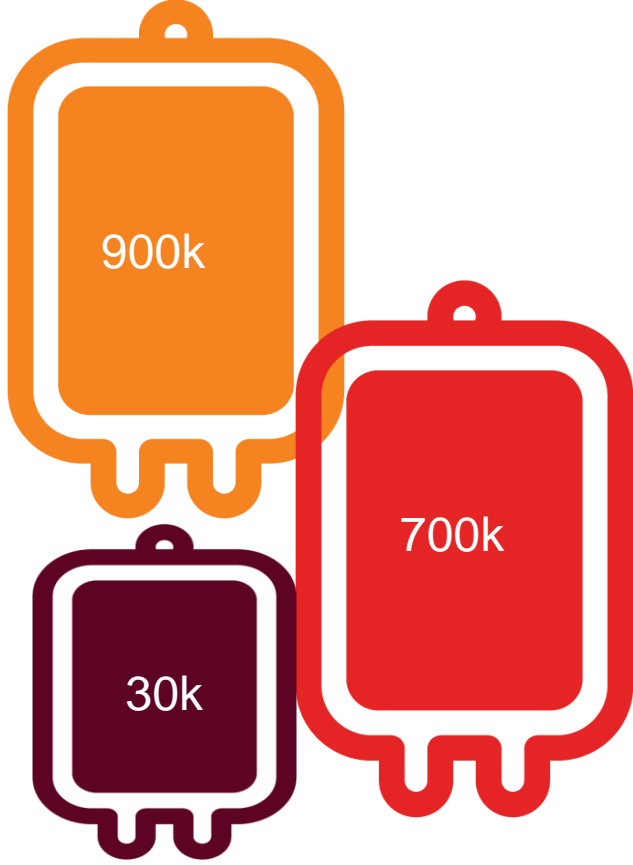


Donor safety



Road ahead

# Lifblood 2020 ...



# Lifeblood oversight



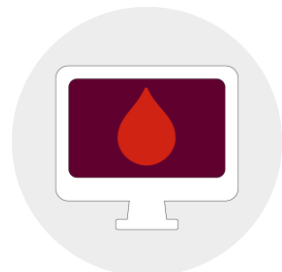
## **Regulators**

- Therapeutic Goods Administration (TGA)
- Therapeutic Goods Order (102) – mandates Lifeblood to the requirements of CoE Guide (19<sup>th</sup> Edition)



## **Lifeblood Medical and Nursing staff**

- 24/7 phone support
- Eligibility queries and donor adverse event support



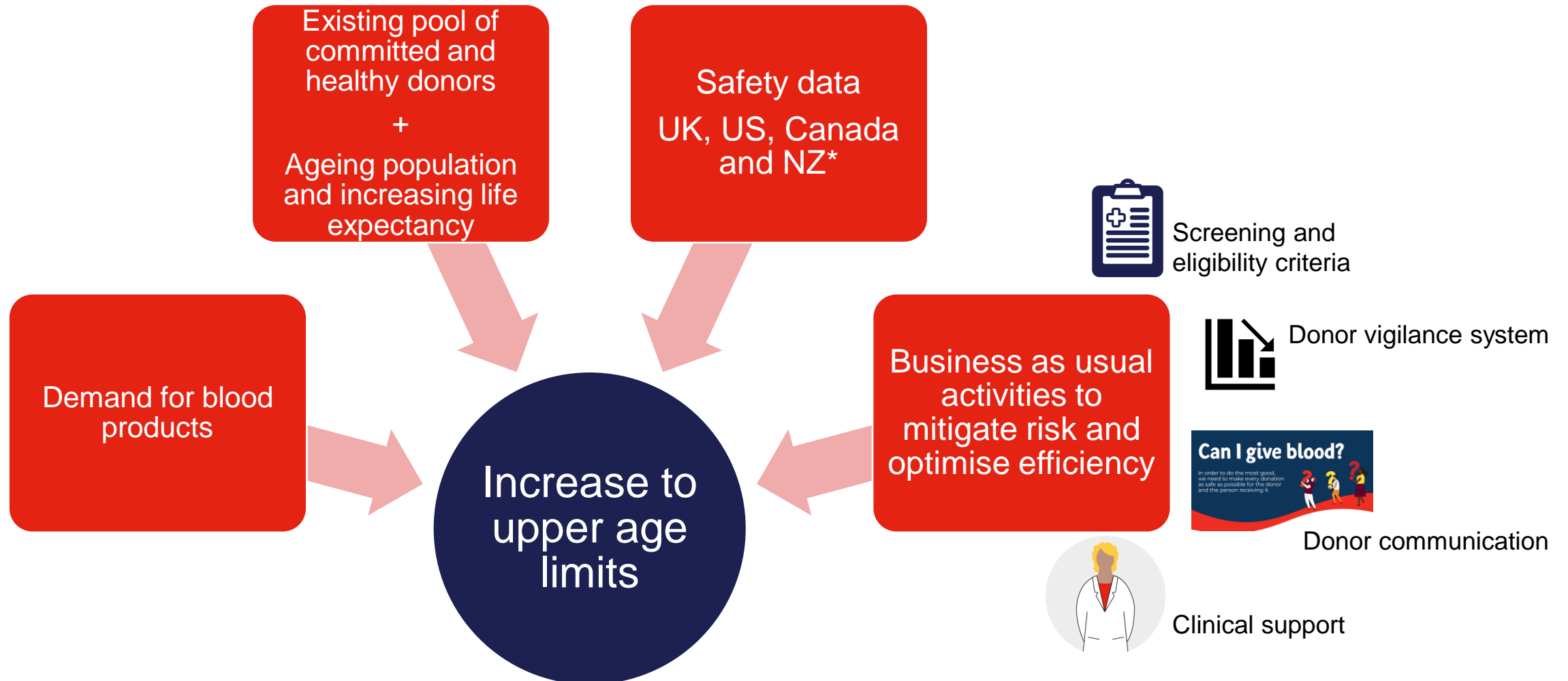
## **Donor vigilance system**

- Record all adverse events
- Regular internal and external reporting

# History of upper age eligibility criteria

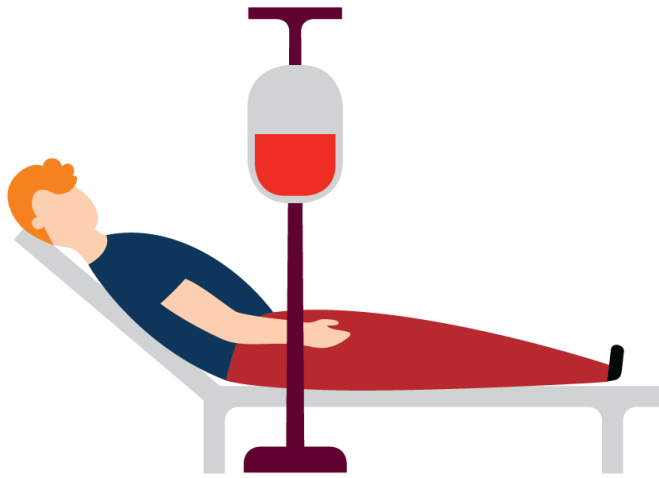
	Pre-2010	Mandated to CoE 14	2010	2015	July 2019	
<b>New donors upper age limit</b>						
Whole blood	70		70	70	75	
Apheresis	65		65	70	75	
<b>Returned donors upper age limit</b>						
All donation types	80		80	80	No upper age limit	
<b>Annual Medical Review form</b>						
Whole blood	71+		No longer required			
Apheresis	66+					

# Age eligibility changes - drivers



\*Goldman M, Germain M, Gregoire Y, et al.: Safety of blood donation by individuals over age 70 and their contribution to the blood supply in five developed countries: a BEST Collaborative group study. *Transfusion* 2019;59:1267–12728

# Operational aspects of age eligibility changes



- Eligibility and donation processes
- Contribution of older donors to the donor pool
- Deferral rates
- Phlebotomy success
- Collection success

# Managing age eligibility – universal



**Donor Questionnaire**



**Eligibility criteria\***



**Haemoglobin and vitals**



**Advice**



**Donation intervals**



**Donation volumes**



**Marketing and call-ups**

\*some exceptions if donor 76 years or older and has history of vasovagal reaction



# Managing age eligibility – tailored



**Eligibility post -VVR**



**Threshold for escalation and referral**



**Interview time**



**Pandemic management**

# Donor panel 2020



	≤65 years	>65 years
<b>Donors n</b> (% of all donors in 2020)	473,169 (92.6%)	37,806 (7.4%)
<b>Donations n</b> (% of all donations in 2020)	1,478,056 (91.1%)	144,584 (8.9%)
<b>Annual donation frequency</b>		
<b>Whole blood</b>	1.79	2.03
<b>Plasmapheresis</b>	4.1	6.47
<b>Donate across donation types</b>	17.5%	29.2%



Apr-Oct 2020: In keeping with government advice we encouraged donors aged 70 and over to postpone their donation during this period.

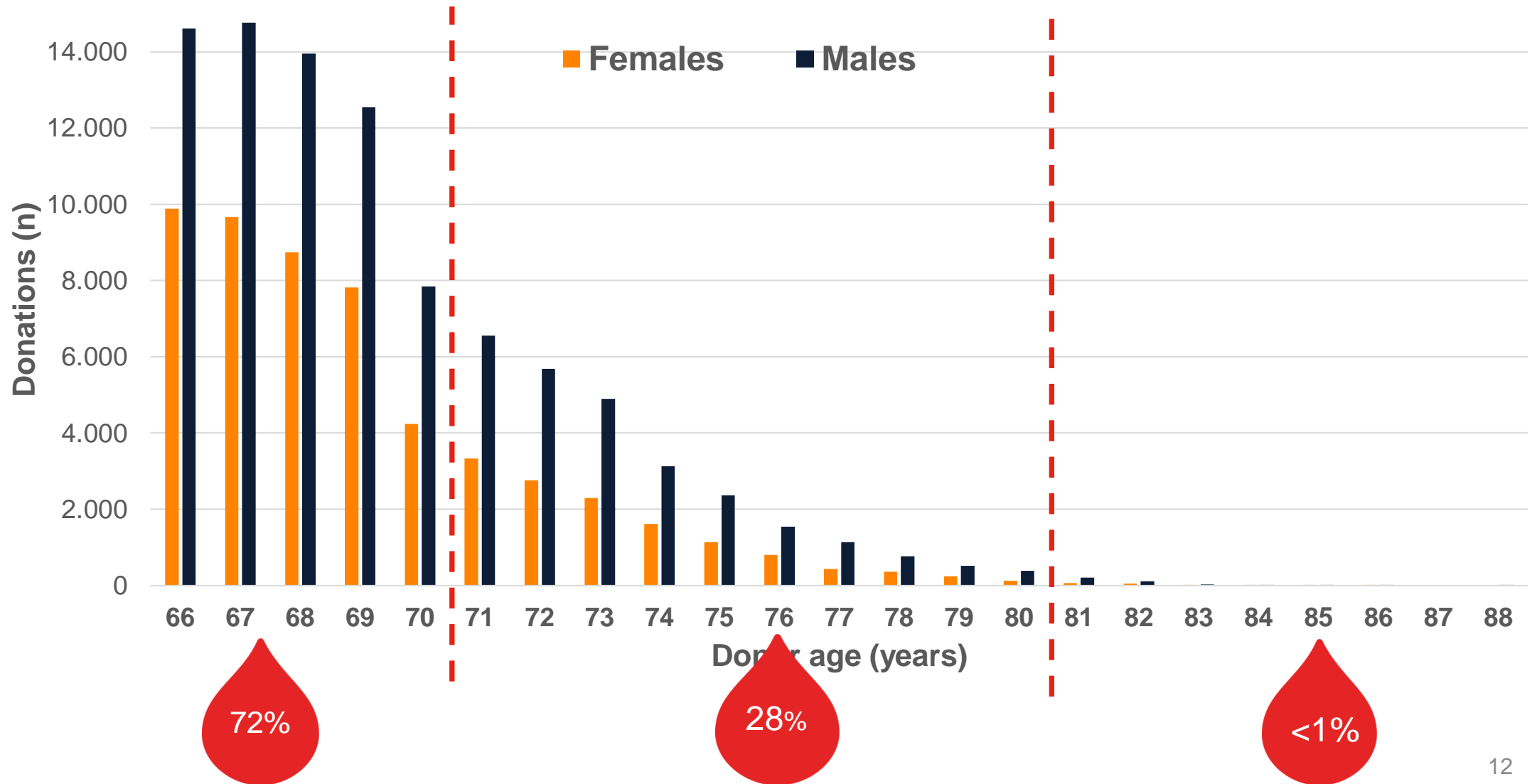
# Donor panel 2020



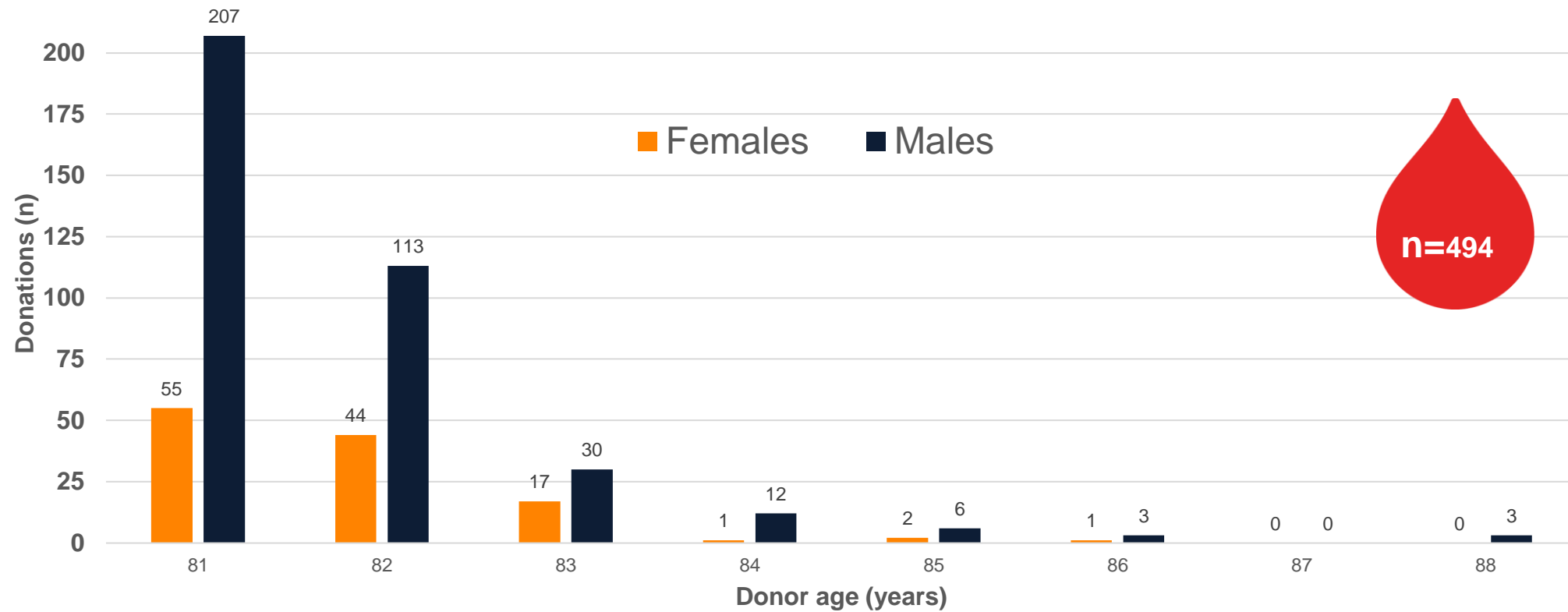
		≤65 years	>65 years
<b>Males</b>			
Donors		46.8%	58.3%
Donations		53.0%	63.0%
<b>New donors (% of donors in the age group)</b>			
Whole blood* n (%)		29.3%	10.3%
Plasmapheresis n (%)		11.9%	7.6%
<b>O negative donors</b>		10.3%	13.0%
<b>Therapeutic donors</b>		2.6%	6.9%

\* Calculated based on donors aged 66-75

# Donations by donors over 65 in 2020



# Donations by donors over 80 in 2020



# Deferrals

Deferral	Attendances deferred (%) in 2020		P value Chi-square
	≤65 years	>65 years	
BP	0.34	0.44	<0.001
Pulse	0.23	0.26	0.004
Vasovagal (VVR)	0.18	0.13	<0.001

Acceptable BP Range: (90-180)/(60-100)

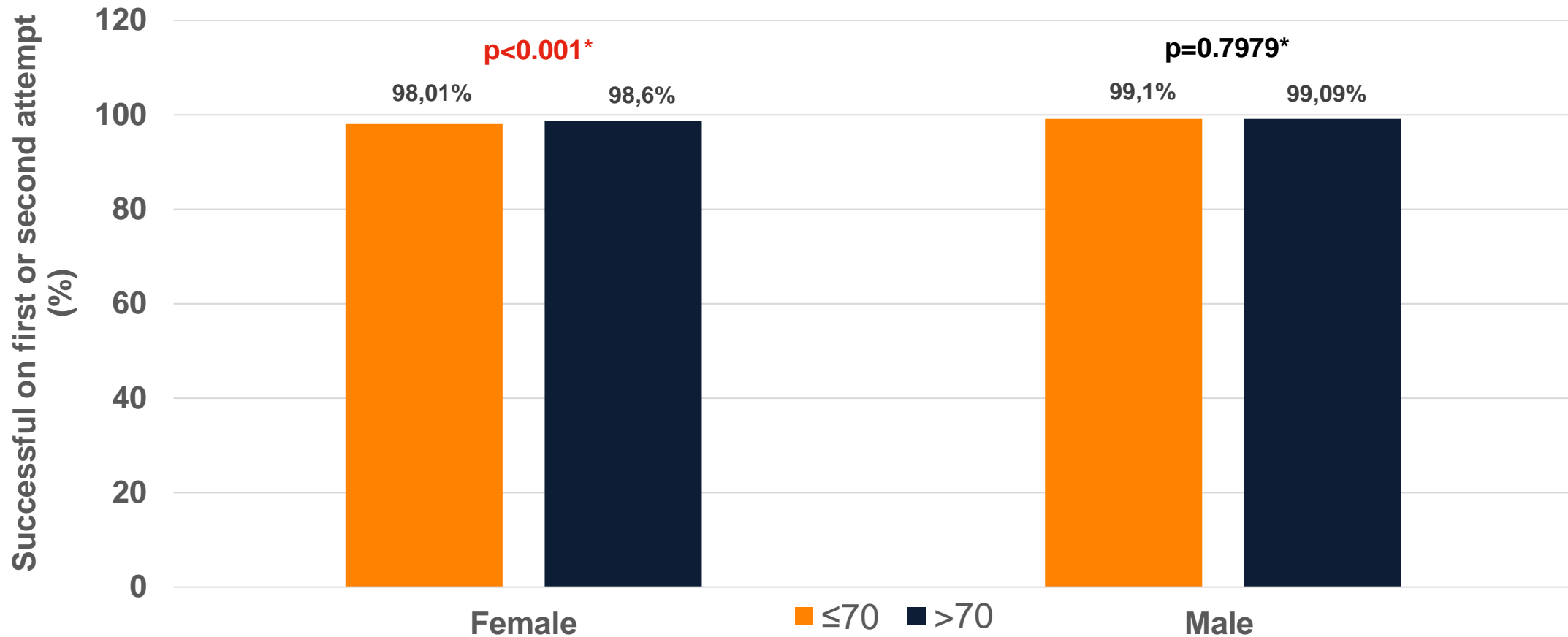
Acceptable Pulse: 50-100

# Haemoglobin eligibility

Donation type	Gender	Minimum Hb for donation	Low haemoglobin (% of attendances)		
			≤65	>65	P value
Whole blood 2020	Females	120g/L	1.51	1.21	<0.001
	Males	130g/L	0.50	1.09	<0.001
Apheresis 2020	Females	115g/L	0.31	0.11	<0.001
	Males	125g/L	0.07	0.14	<0.001
All new donors 18/19 and 19/20	Females	120g/L	1.98	1.4	0.039
	Males	130g/L	0.63	1.6	<0.001

# Phlebotomy Success

Phlebotomy success – all donation types

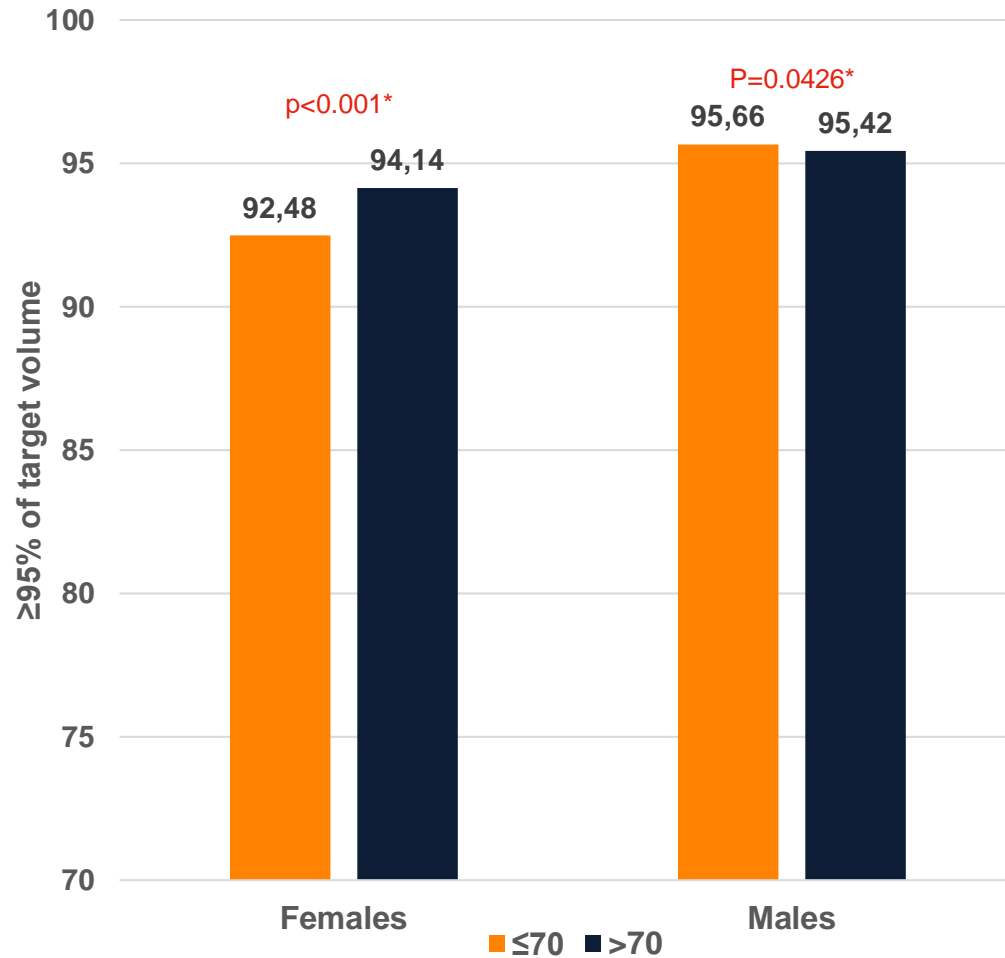


\*Chi-square analysis

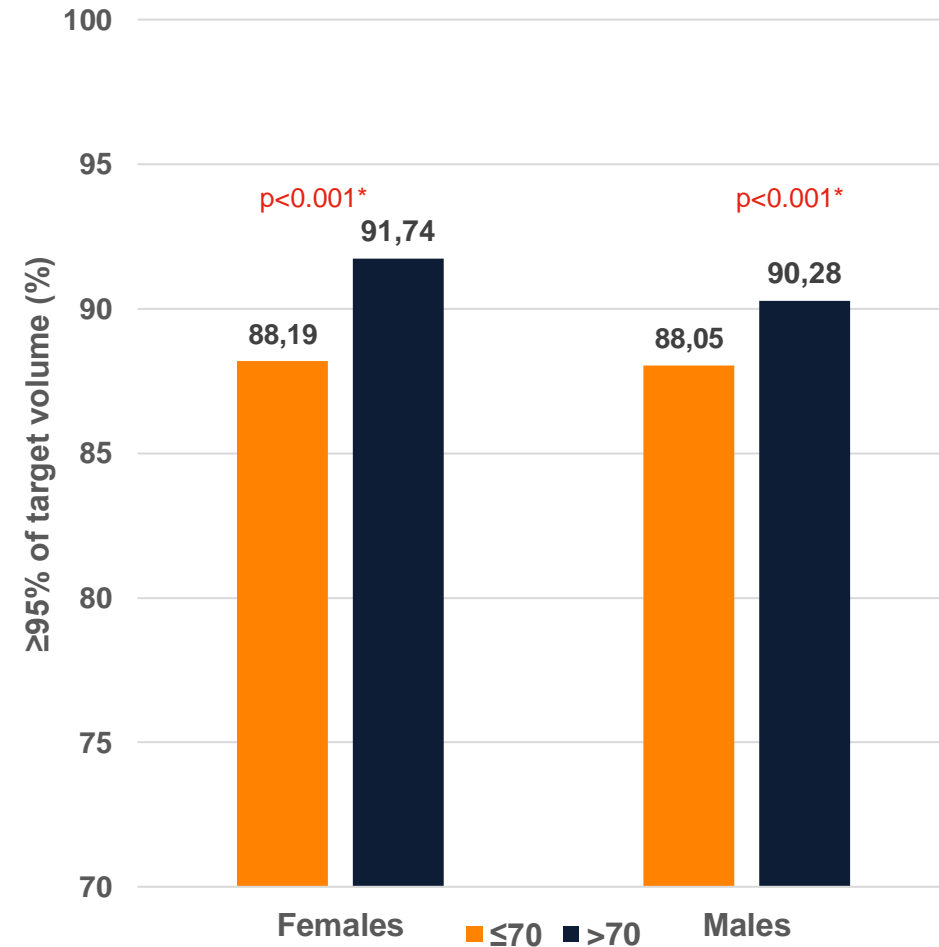


# Collection Success

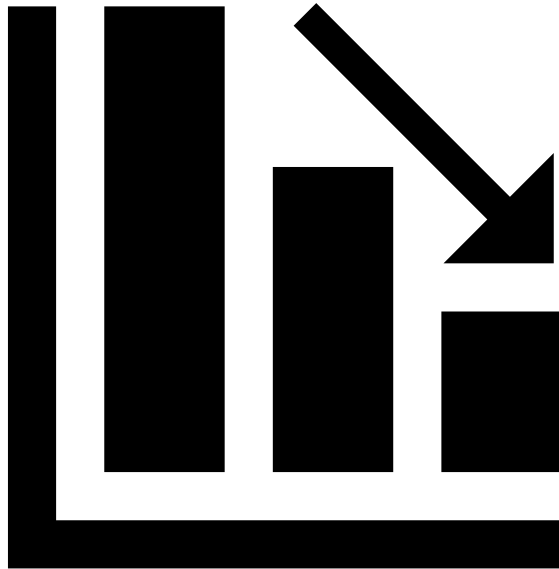
## Returned Whole Blood



## Returned plasmapheresis

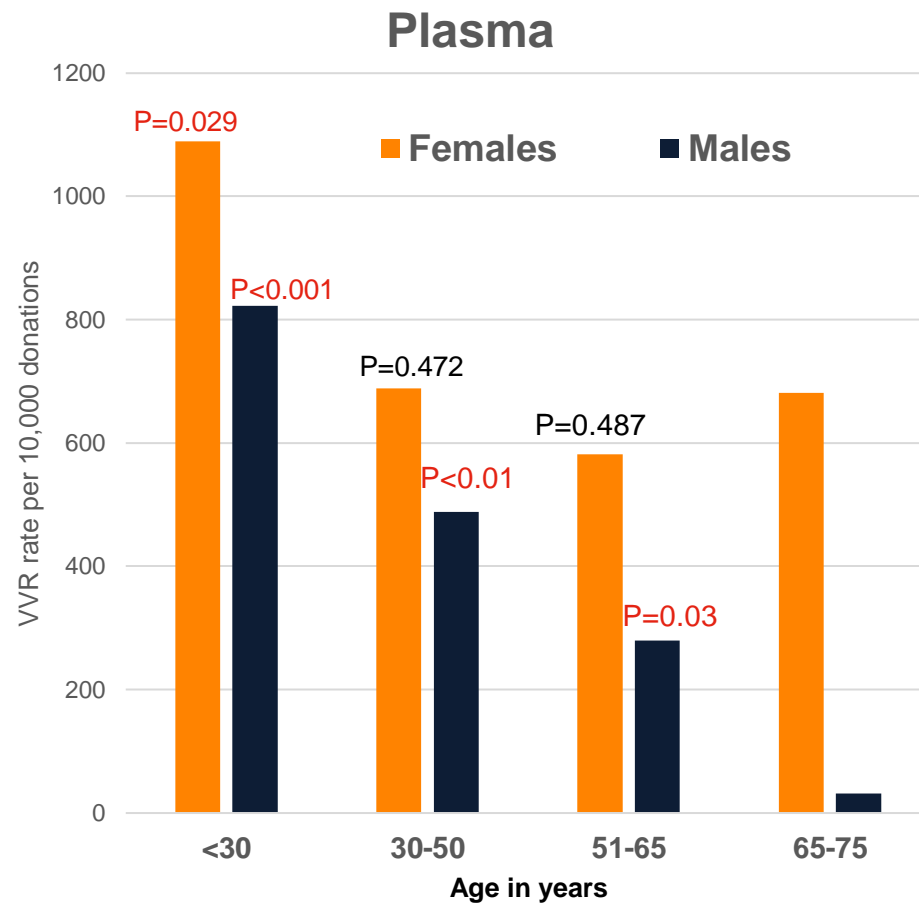
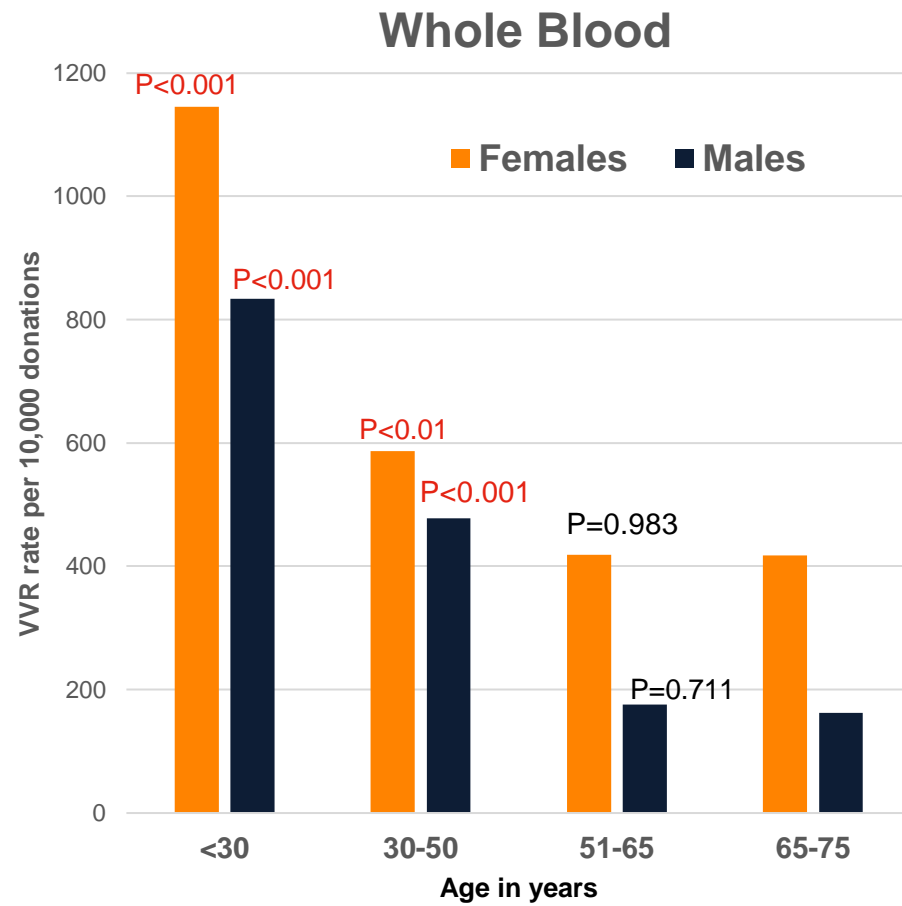


# Donor Safety



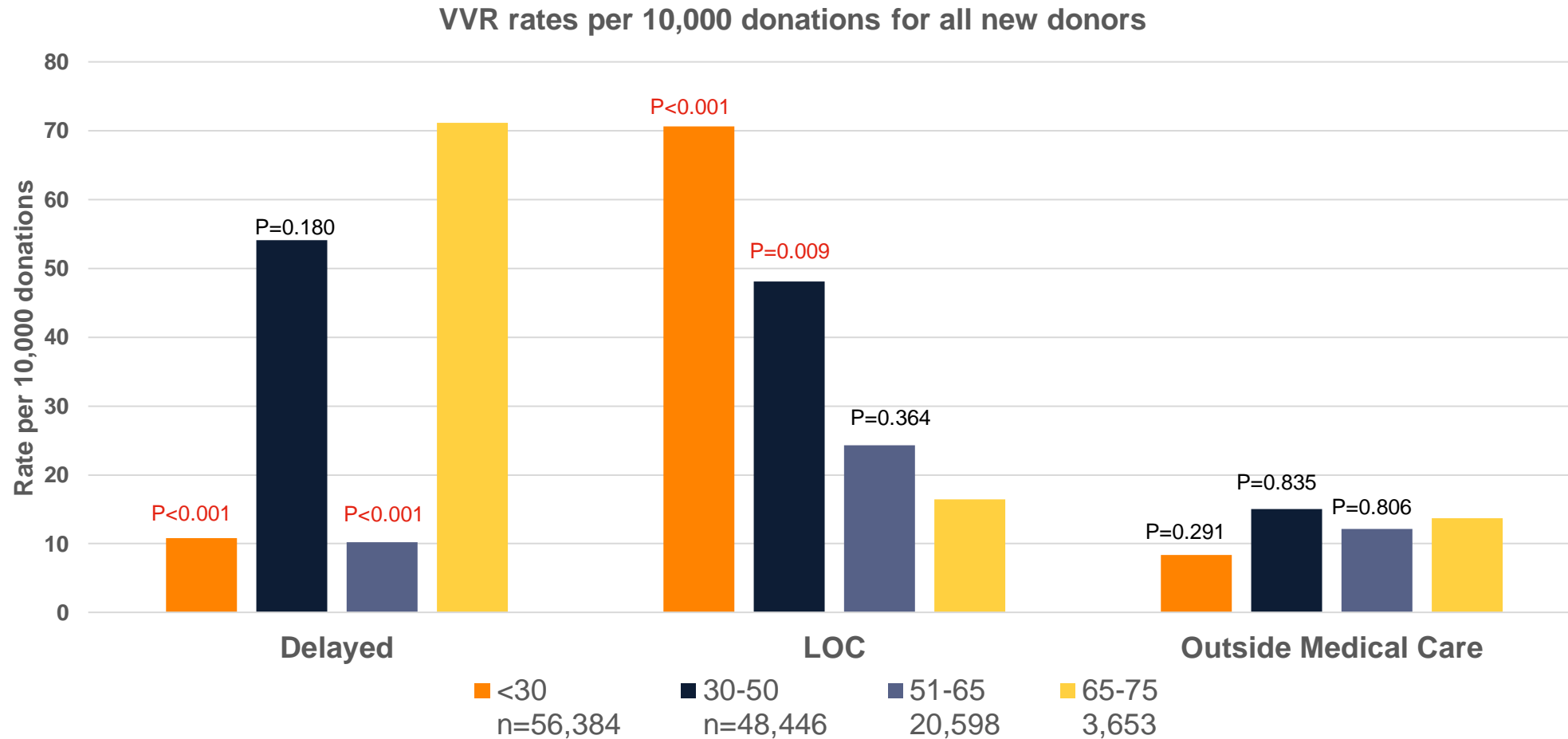
- Vasovagal reactions
- Phlebotomy injuries
- Citrate reactions

# New donors – Vasovagal reactions



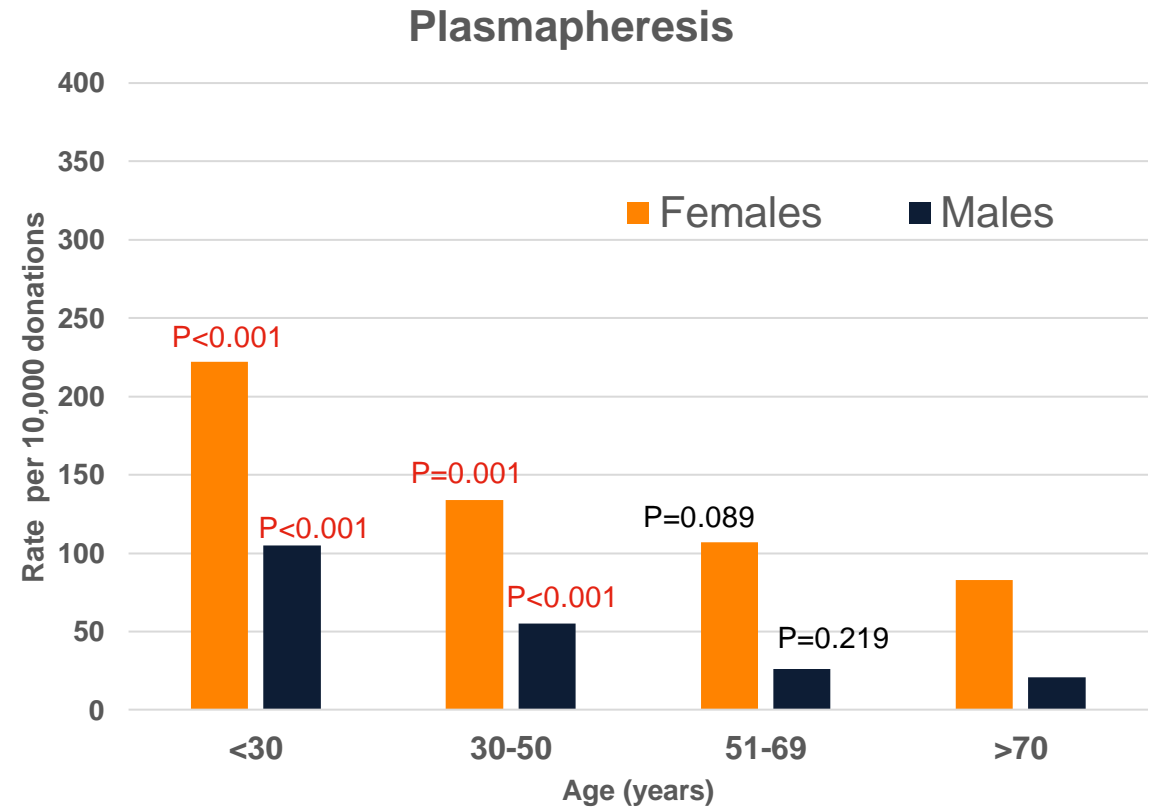
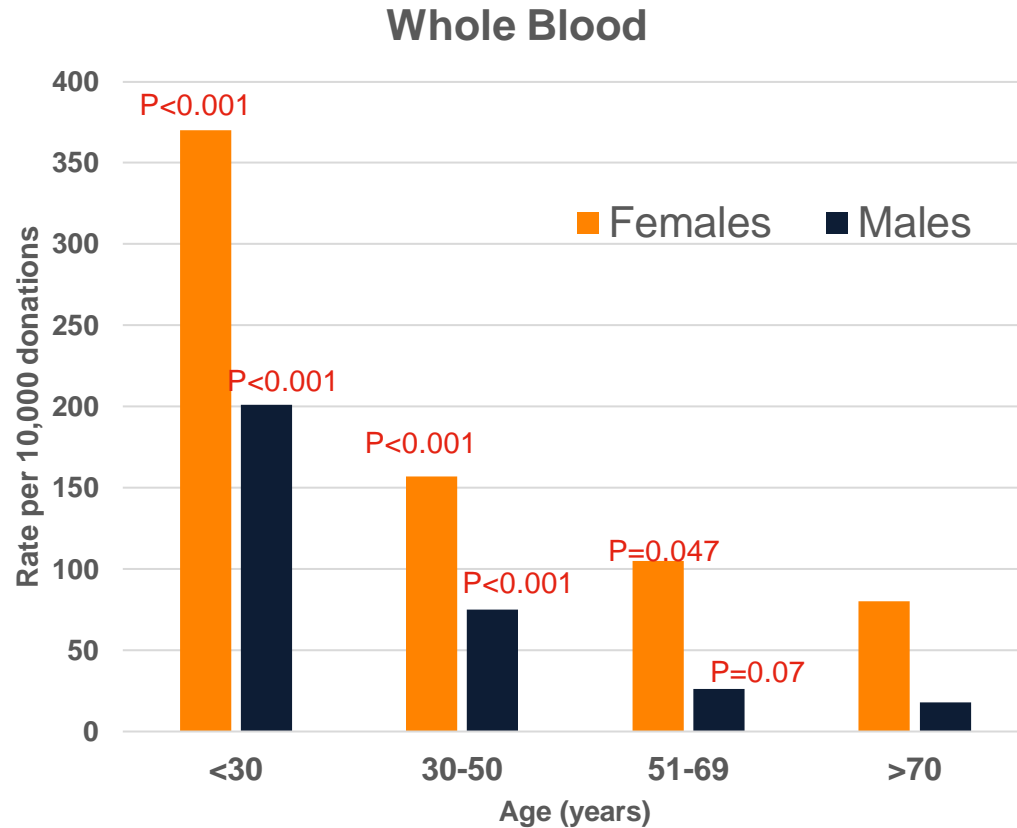
P values for comparison against 65-75 cohort

# New donors – Vasovagal (severe)



P values for comparison against 65-75 cohort

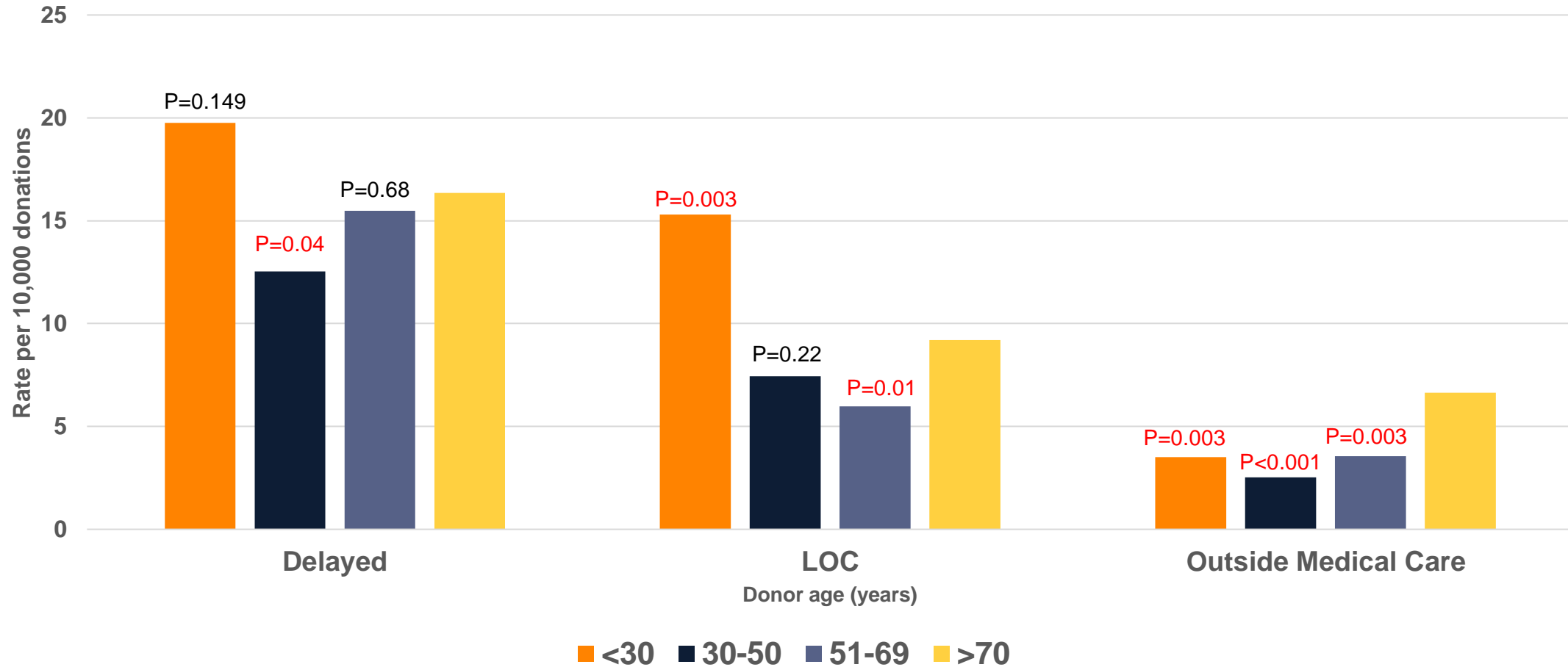
# Returned donors – vasovagal reactions



P values for comparison against >70 cohort

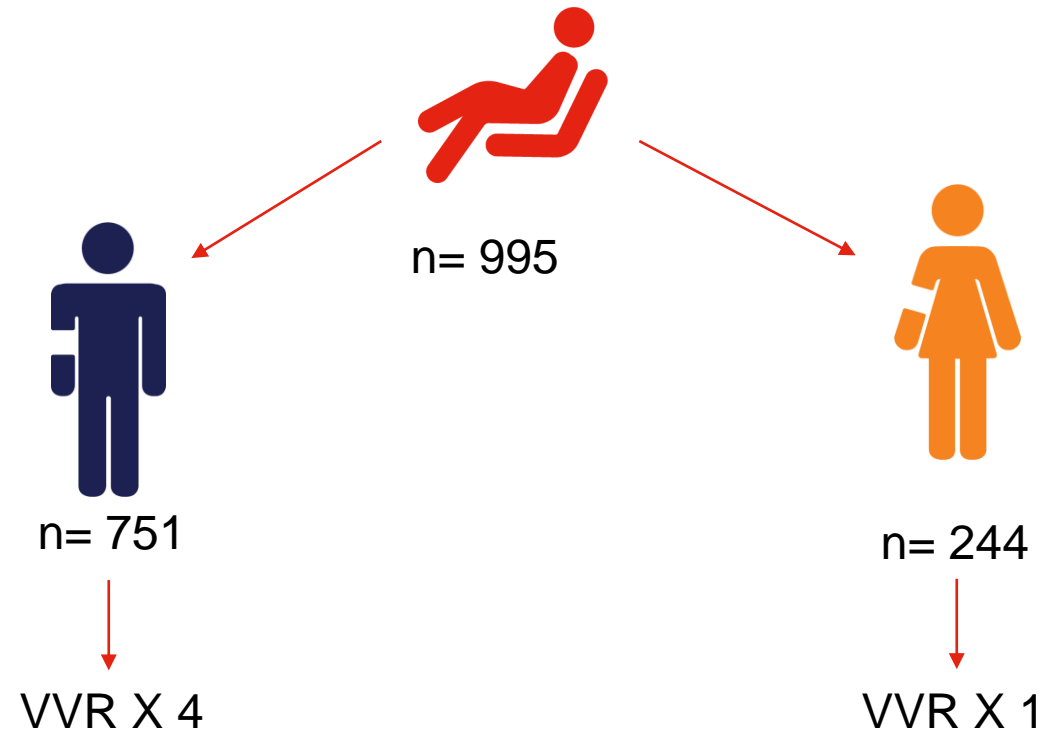
# Returned donors – Vasovagal (severe)

VVR rates per 10,000 donations (all types)



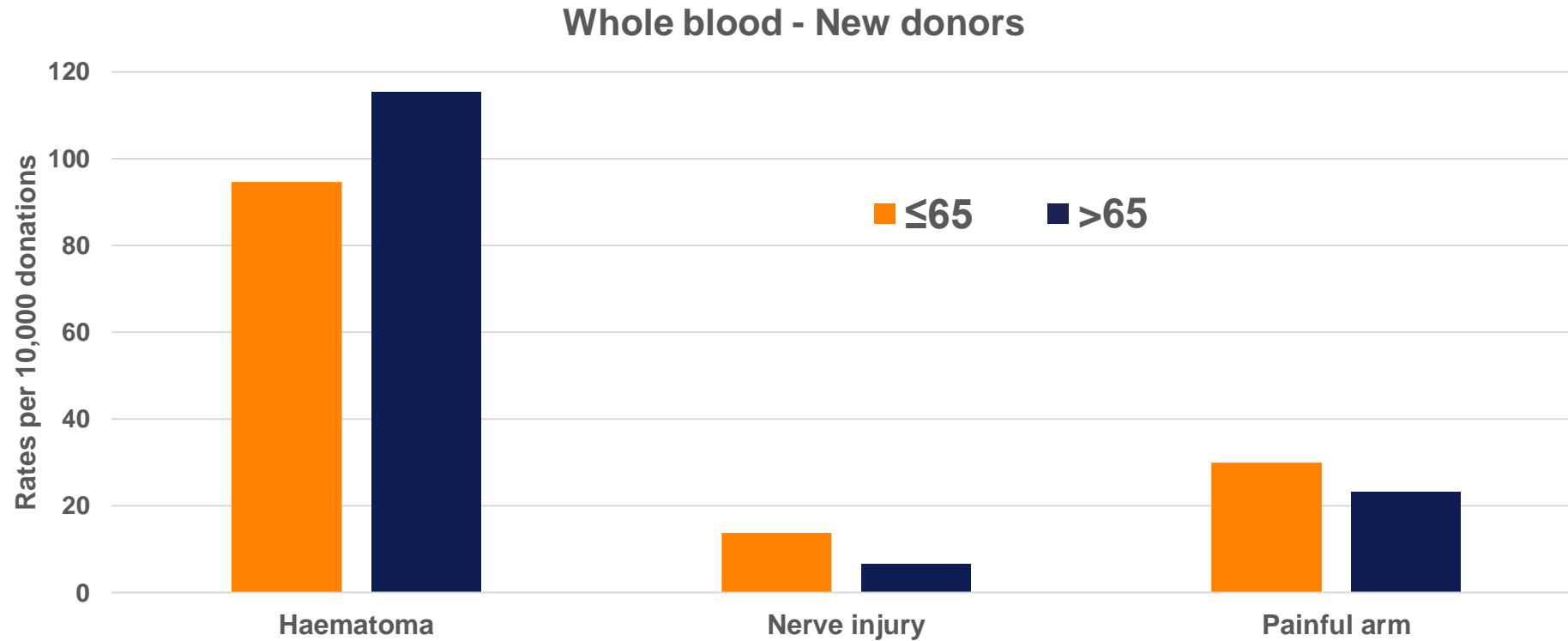
P values for comparison against >70 cohort

# Returned donors 80 and over in 2020



VVR rate in 80 and over group remains lower than rates in returned females >70 overall

# Phlebotomy injuries – new donors

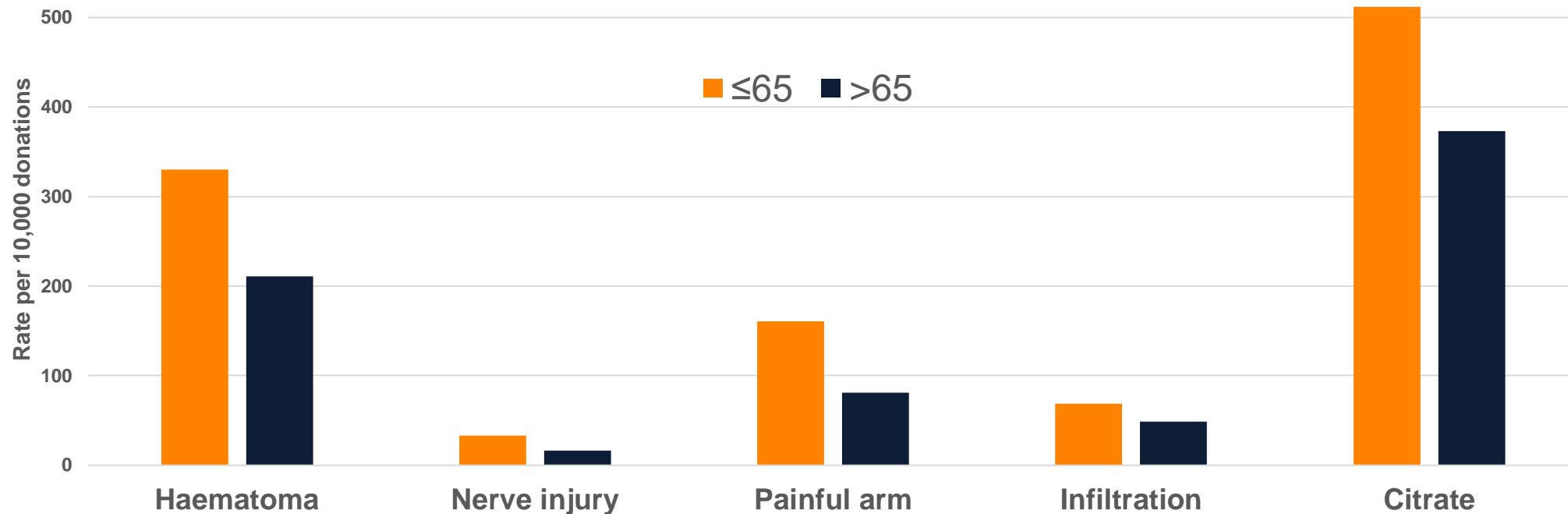


- No significant differences between age groups for any of the events
- No difference in the overall rate of events requiring outside medical care



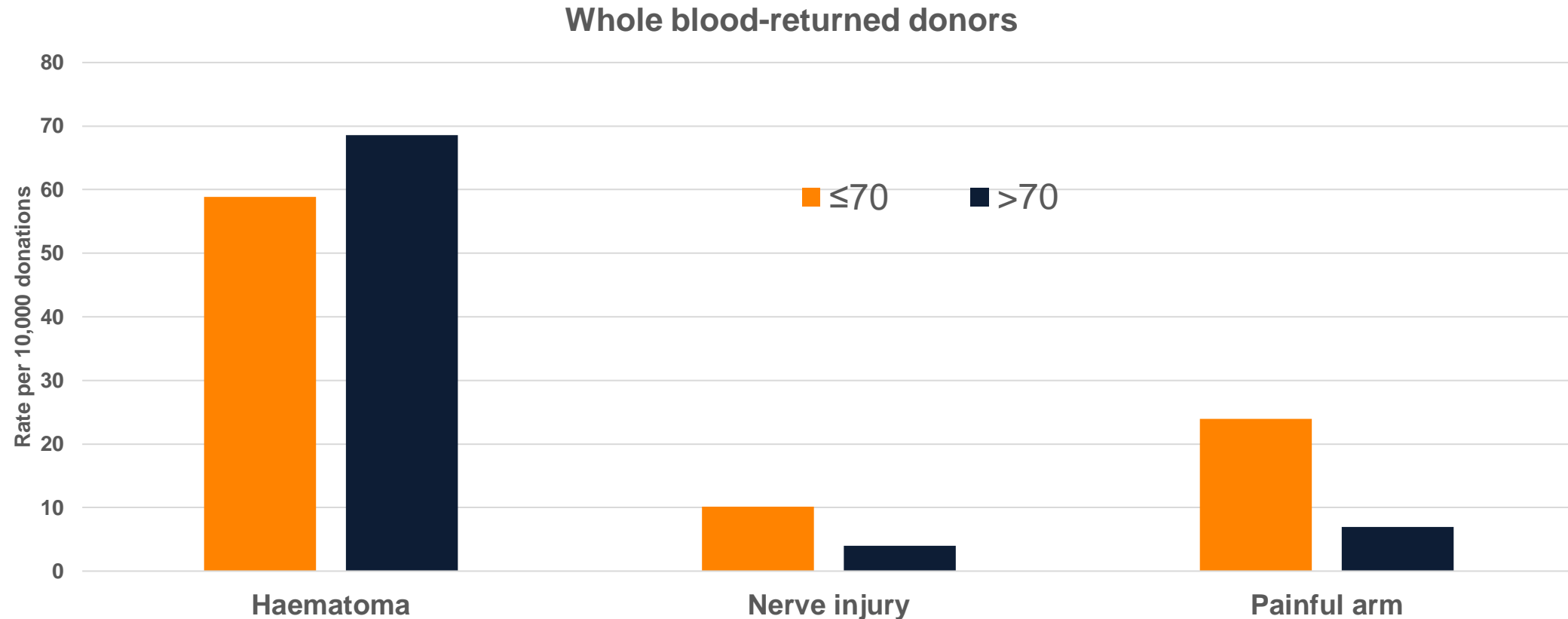
# Phlebotomy injuries – new donors

Plasmapheresis - New donors



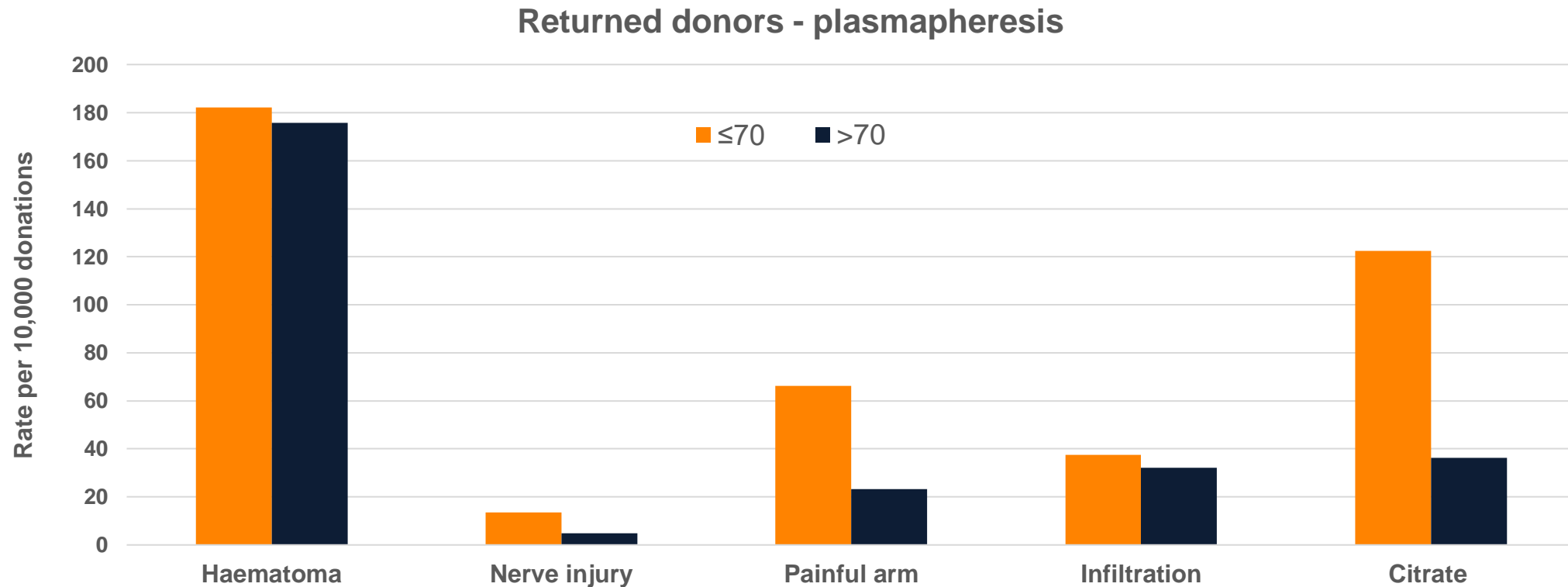
- No significant differences between age groups for any of the events
- No difference in the overall rate of events requiring external care
- No moderate or severe citrate reactions in donors >65

# Phlebotomy injuries – returned donors



- No significant difference in haematoma rate
- Significantly lower rate of nerve injury and painful arm in the >70 cohort
- Overall, no difference in rate of events requiring outside medical care

# Phlebotomy injuries – returned donors



- No difference in rates for haematoma or infiltration
- Significantly lower rates of nerve injury, painful arm and citrate reactions in the >70 cohort
- Overall, no difference in rate for events requiring outside medical care

# Data limitations

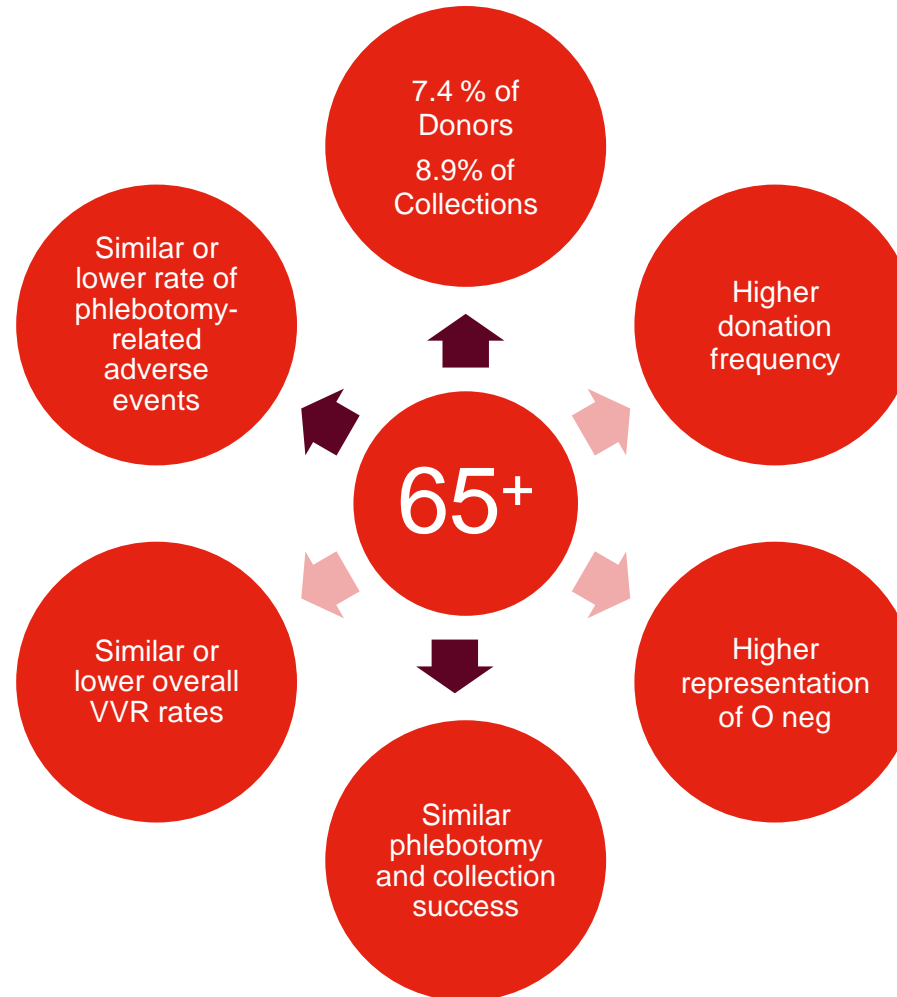
Sample sizes and low rates of severe events

Reporting bias

Older donors may be:

- Less likely to report issues that are mild
- More likely to seek outside medical care
- More likely to report delayed events

# Snapshot 65+



# Road ahead to unlocking the potential of our over 65 cohort



- Monitor and improve understanding of:
  - Donor adverse events:
    - severity
    - referral patterns
  - Frequency of coincidental major events and develop a best practice approach for assessment of imputability
  - Interview time requirements
- Pandemic management
- Longitudinal data capture

# Thank you

## Acknowledgements

- Veronica Hoad
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- Rodney Treble

“Australian Governments fund Australian Red Cross Lifeblood for the provision of blood, blood products and services to the Australian community”.