

ANZSBT Survey of Documentation of Consent for Transfusion

Australian and New Zealand Society of
Blood Transfusion (ANZSBT)
Clinical Practice Improvement
Committee (CPIC)

Introduction

ANZSBT Clinical Practice Improvement Committee

Aim: To help support transfusion practice
improvement at a national level

Documentation of consent for transfusion an important but
relatively straightforward starting point for national audit

Consent for transfusion

***Informed consent is a process not a piece of paper:**

- reason for the blood product
- nature of the proposed blood product transfusion
- risks and benefits of the blood product as well as the risks of not receiving the product
- availability and appropriateness of other treatments
- opportunity to ask questions
 - use of a competent interpreter when the patient is not fluent in English
 - use of written information or diagrams where appropriate

**Refer to relevant state or territory Department of Health (DOH) guidelines and local policies*

Consent for transfusion

- Informed consent for transfusion as per 2001 NHMRC/ASBT Blood Product guidelines
- Included as part of ACHS EQuIP
- Documentation requirements depend on state or territory DOH guidelines and local policy

AIMS of the survey

- Provide a framework for hospitals to collect meaningful data about their organisational practice with regard to documentation of consent for transfusion:
 - Practical, standardised tool for audit
 - Allow bench marking between hospitals
 - Support for meeting ACHS EQuIP standards
 - Inform local & national improvement strategies

Methods

- Audit developed as an anonymous online survey (survey monkey) with invitation for Australian and New Zealand hospitals to participate through ACHS and ANZSBT from April-August 2009
- Questions related to:
 - Hospital demographics
 - Hospital policy and procedures related to transfusion and consent documentation
 - Audit of medical records for around 25 red cell transfusions

Participating & Completion Rates

	Started Survey (Q1)	Completed General Questions (Q 2-13)	Entered Case note Data (Q 13-17)	Completed Full Survey
Overall	211	190 (90%)	*177 (83%)	177 (83%)

*26/177 (15%) case note audits had inconsistent data totals- unable to build in an automatic check within survey monkey when data entered

3702 of 4241 medical records assessed for consent documentation were included in the analysis

Results

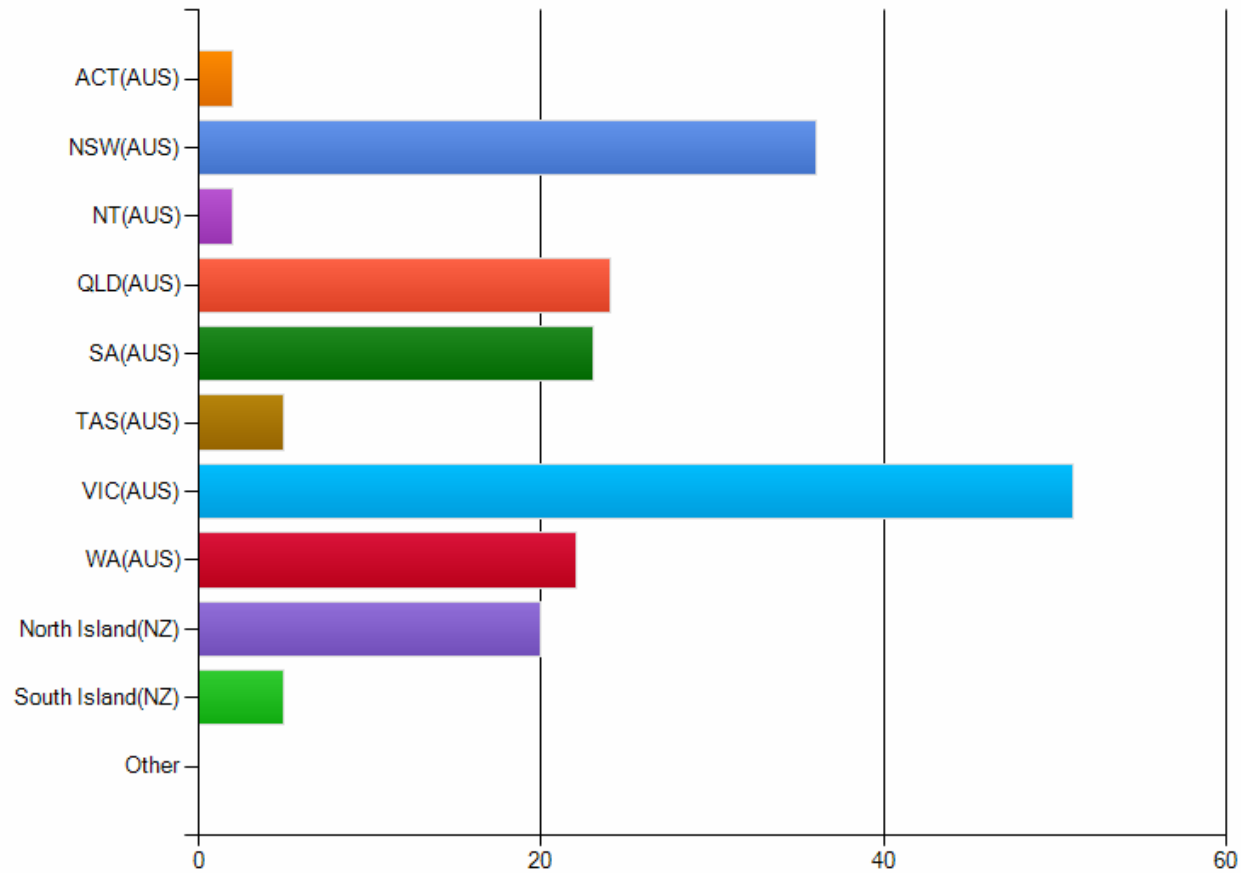
1. Participating hospitals' demographic data
2. Participating hospitals' transfusion consent policy & practice survey
3. Participating hospitals' audit results for documentation of transfusion consent in medical records

RESULTS

1. Participating hospitals' demographic data

Responses By Location

Where is your hospital located? (single answer).



Australian Responses



Australian & New Zealand
Society of Blood Transfusion Ltd

Location	Entered data into survey N / %	% of Aus Red Cell Issues 08/09*	State/territory as % of Aus Populatn#
VIC	51/ 31%	26%	24.7%
NSW	36/ 22%	31%	33.3%
QLD	24/ 15%	21%	19.6%
SA	23/ 14%	9%	7.6%
WA	22/ 13%	9%	9.5%
TAS	5/ 3%	2%	2.4%
NT	2 / 1%	1%	1.0%
ACT	2/ 1%	2%	1.6%

*2008-09 blood sector issue data
#Australian Bureau of statistics 2005

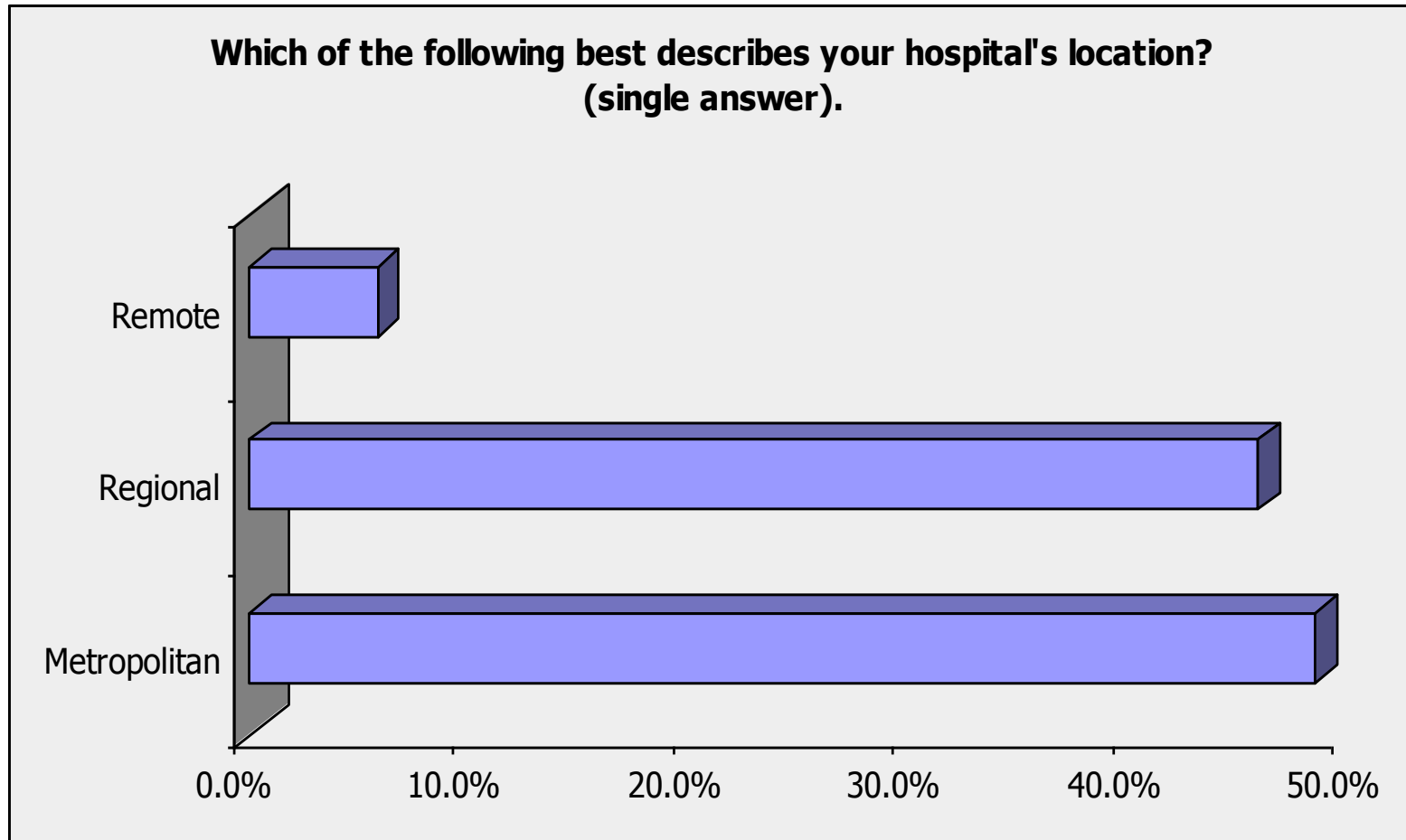
SA, Vic, WA had higher participation rates than NSW & Qld when taking into account population & red cell issues

New Zealand Responses

Location	Entered data into survey	% of NZ Red Cell issues 2008-09	Region as a % of NZ Population
NZ North Island	20 / 80%	77%	76%
NZ South Island	5 / 20%	23%	24%

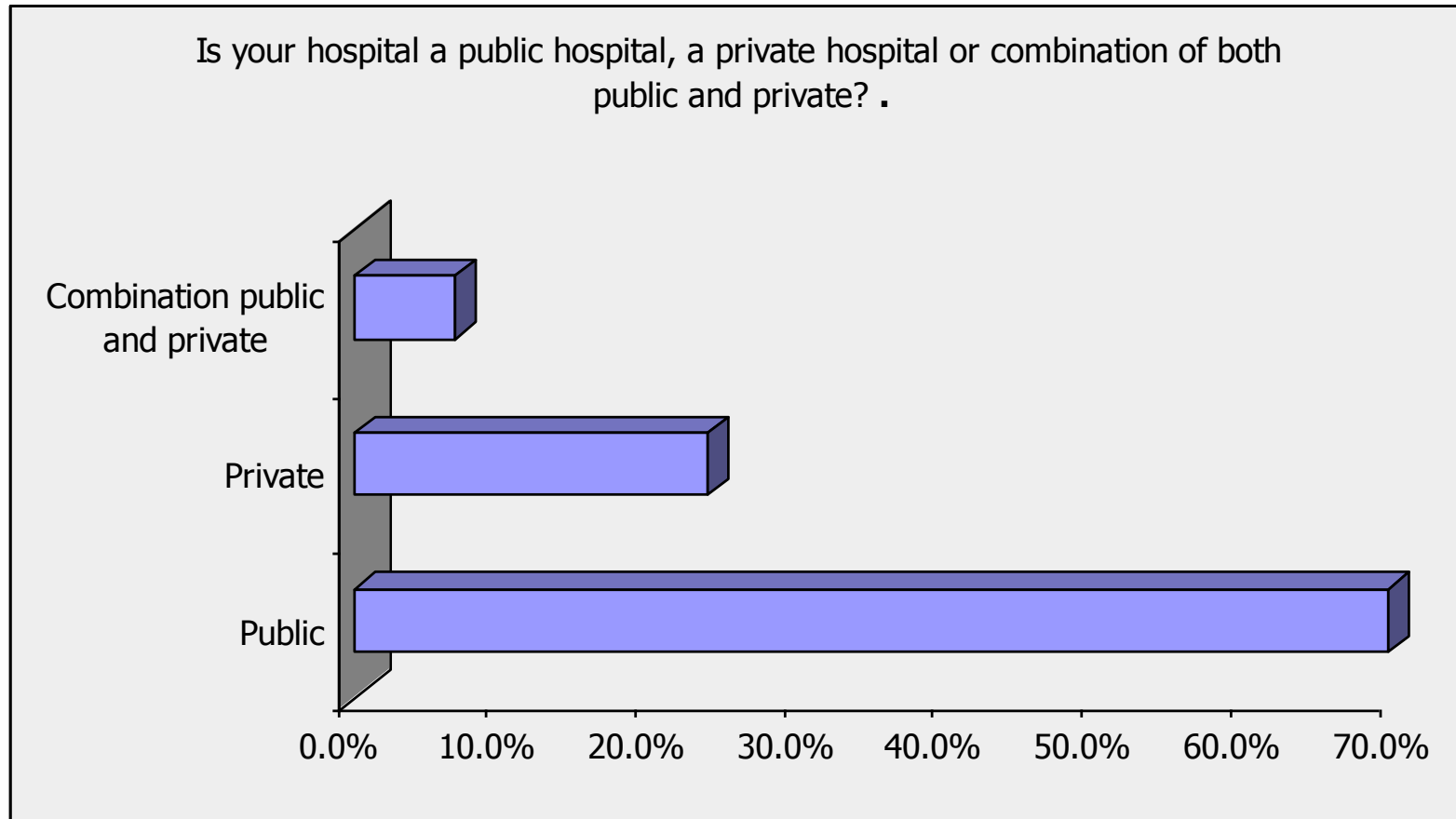
Participation rates were similar for the North & South Island when taking into account population & red cell issues

Location (Combined)

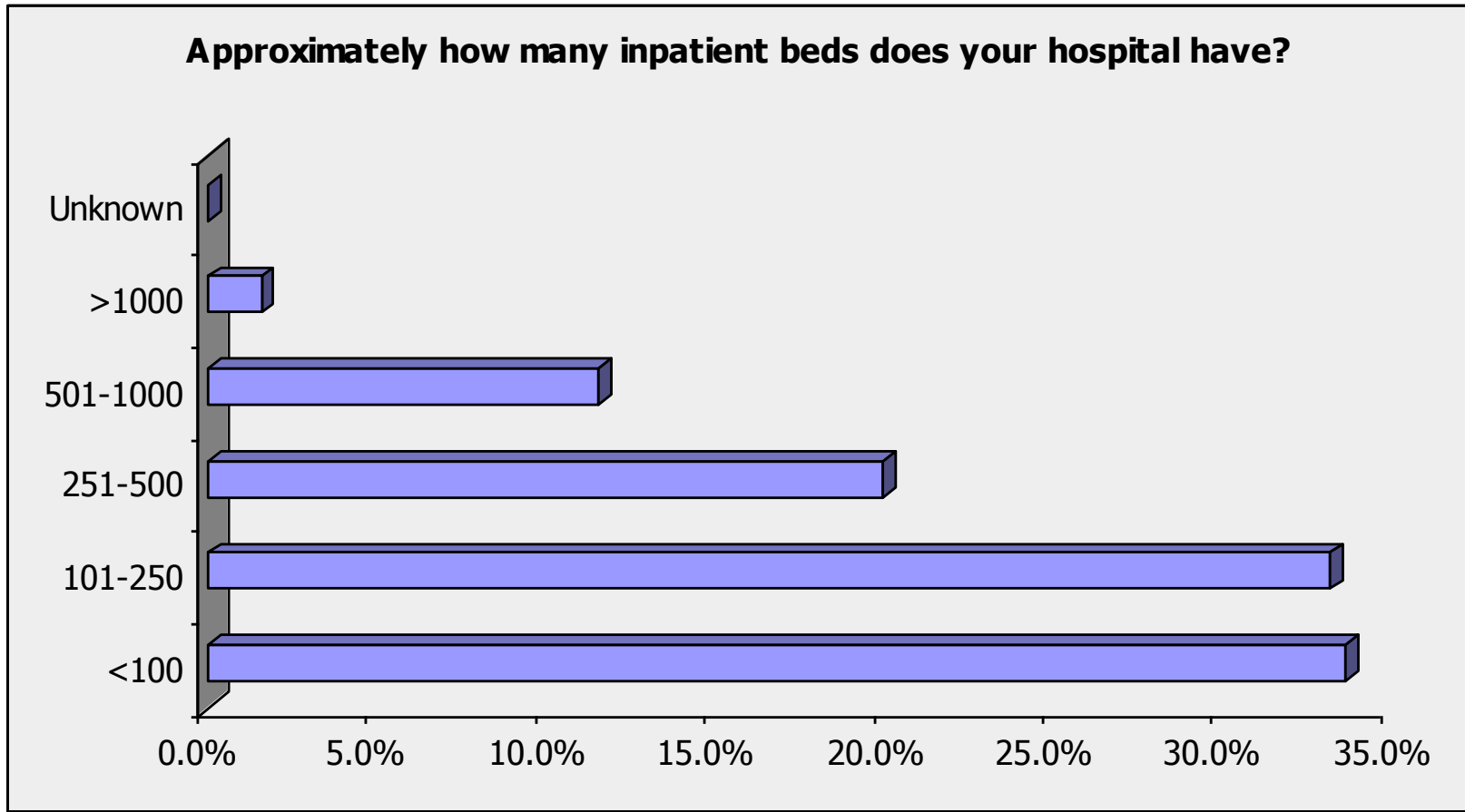


Note: the terms remote, regional and metropolitan do not have standard definitions and are not in common use in NZ

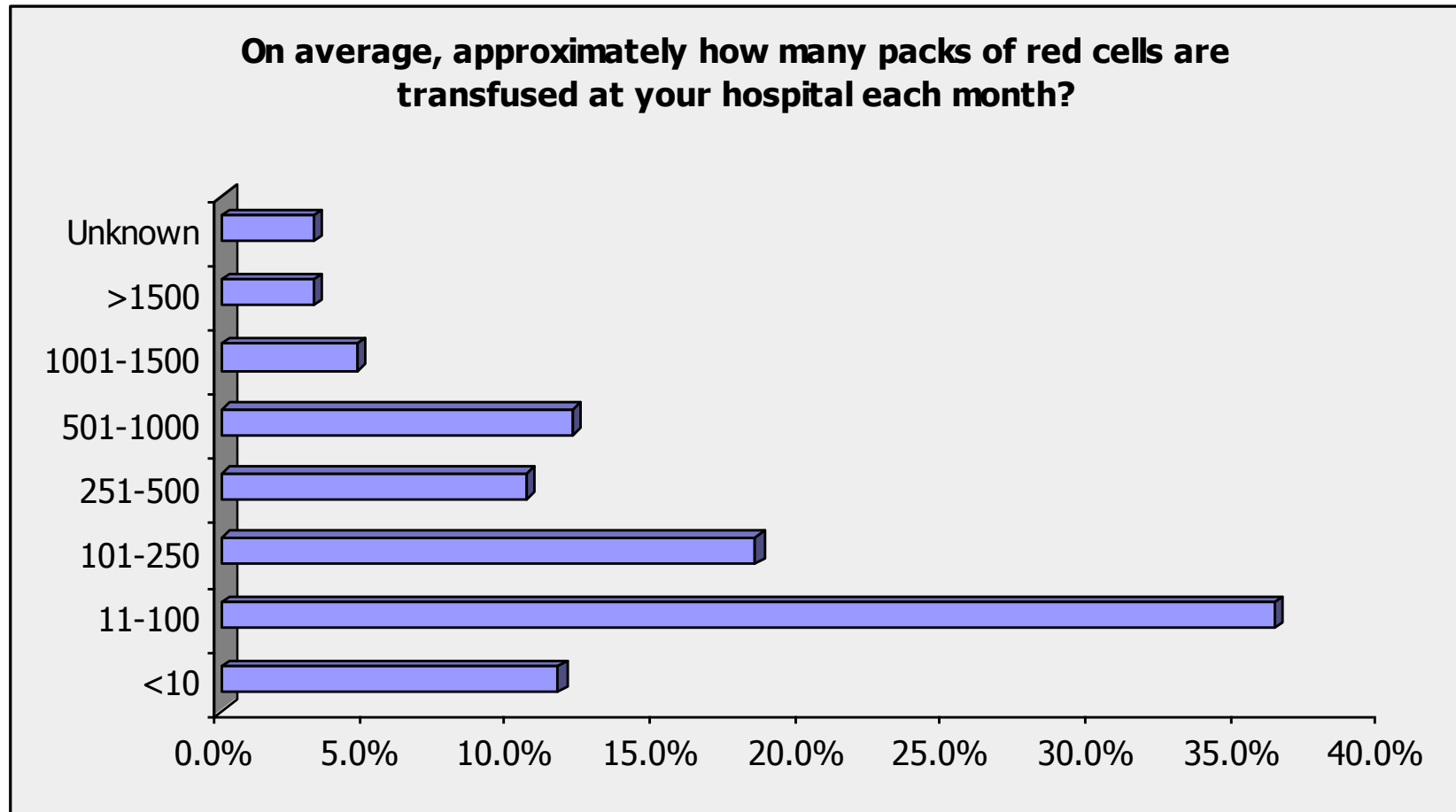
Public or Private (Combined)



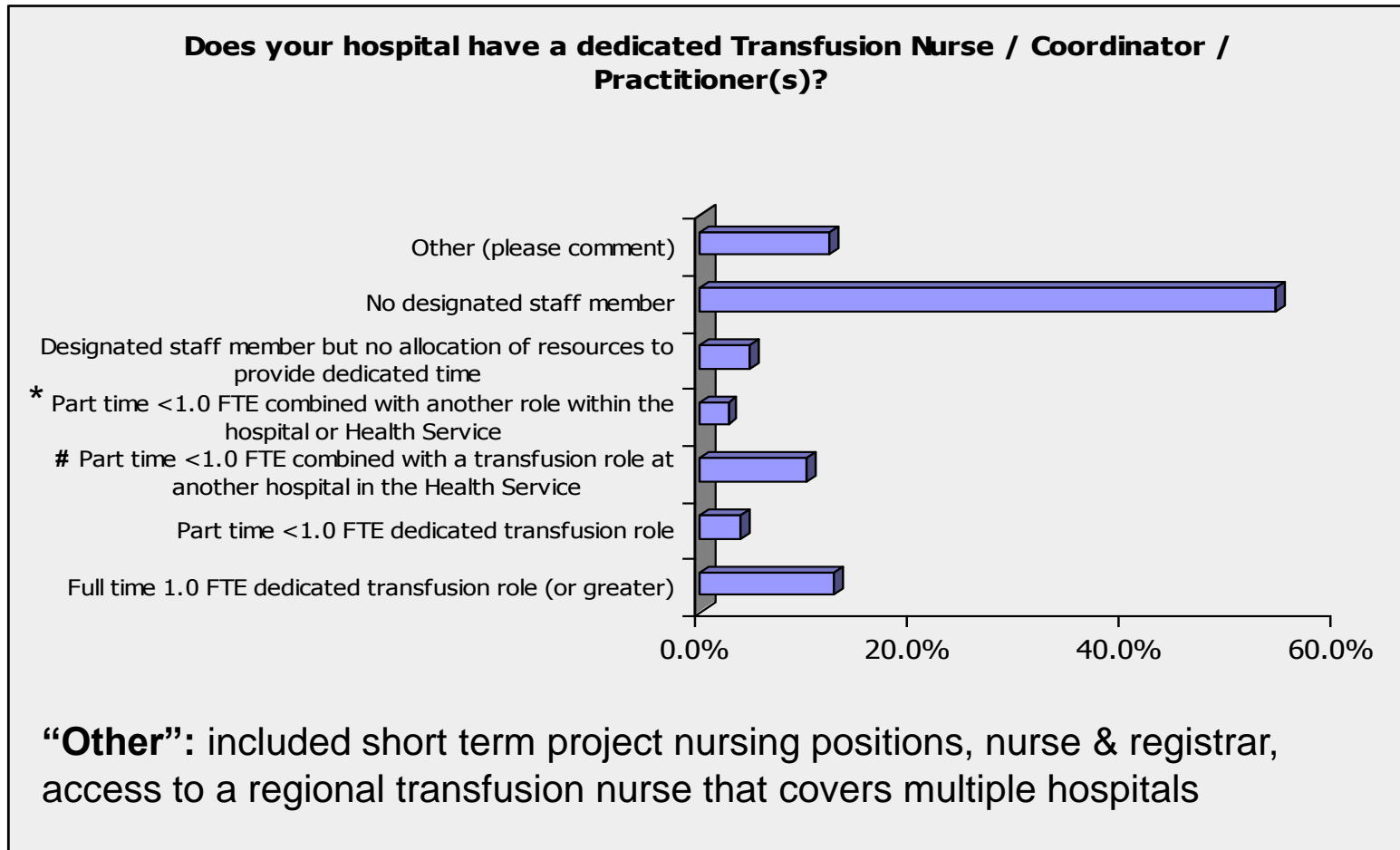
How Many Beds? (Combined)



How Many Units Per Month?



Designated staff Member?

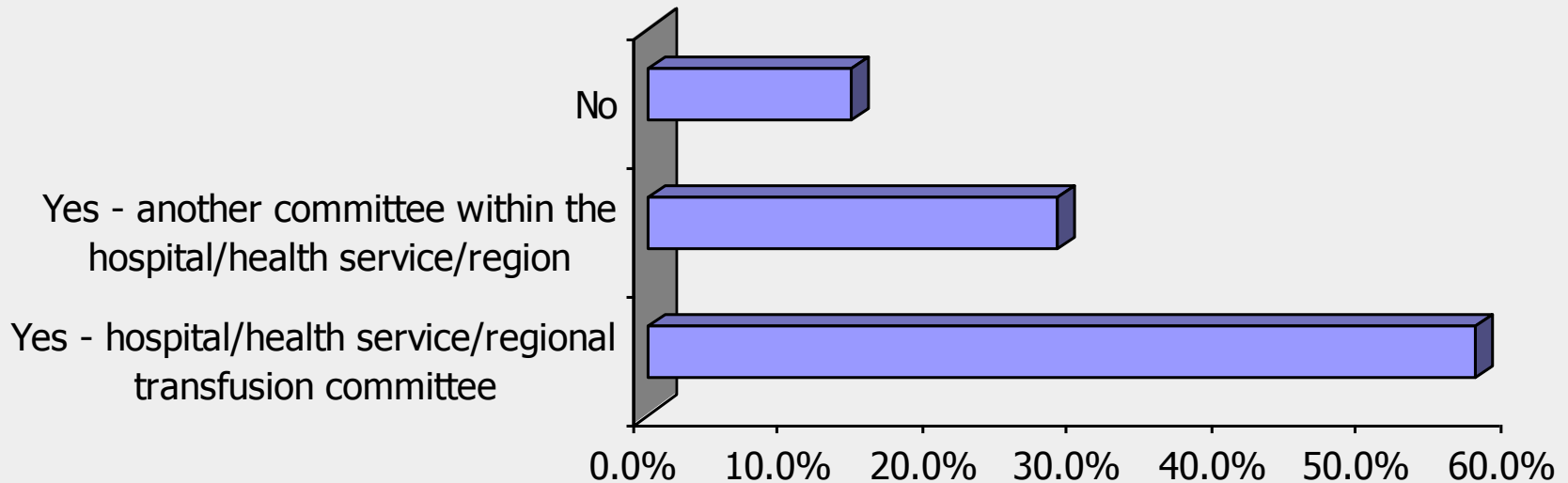


* Refers to a part time transfusion nurse role where the staff member has additional FTEs within the hospital / health service in another capacity eg Haematology day unit or safety and quality unit working on non-transfusion issues.

Refers to a part-time transfusion nurse role where the staff member works across more than one hospital in the health service / region

Transfusion Committee?

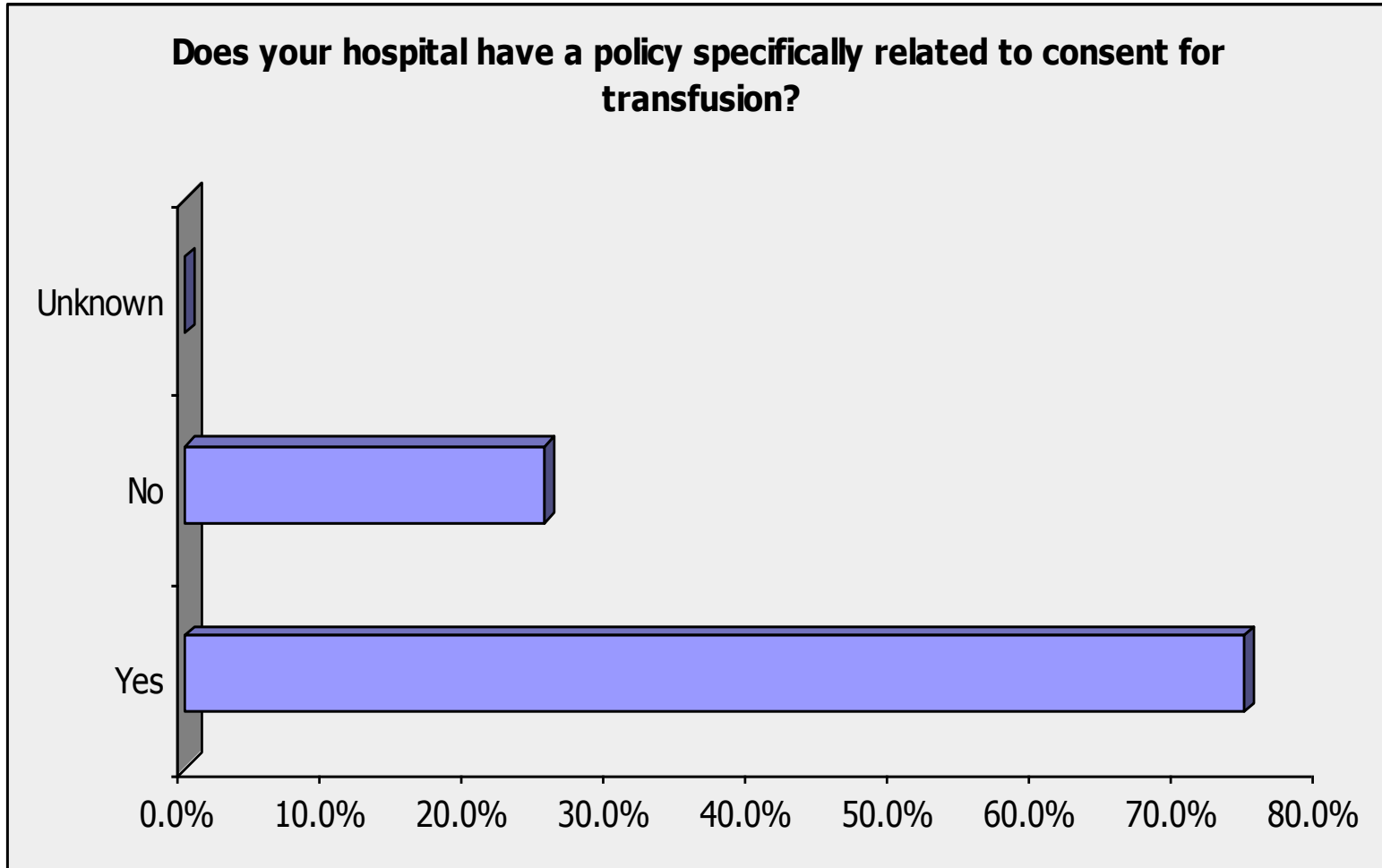
Does your hospital have a committee at which transfusion issues are reviewed? (single answer).



Results

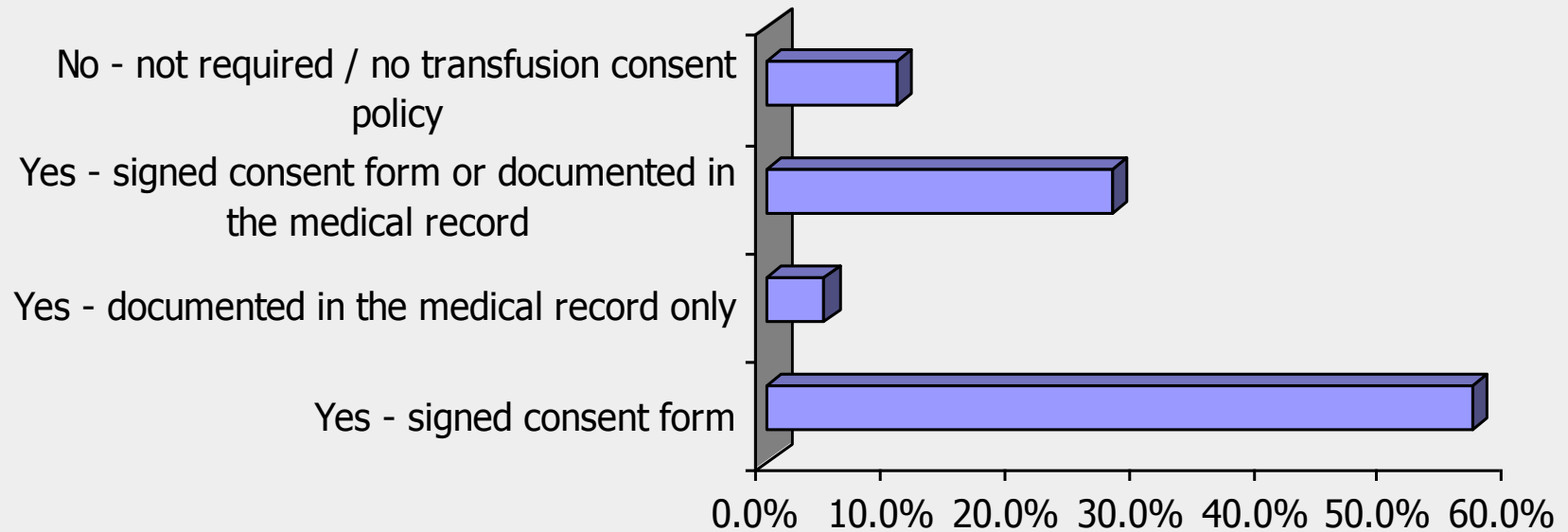
2. Participating hospitals' transfusion consent practice and policy survey

Consent Policy?



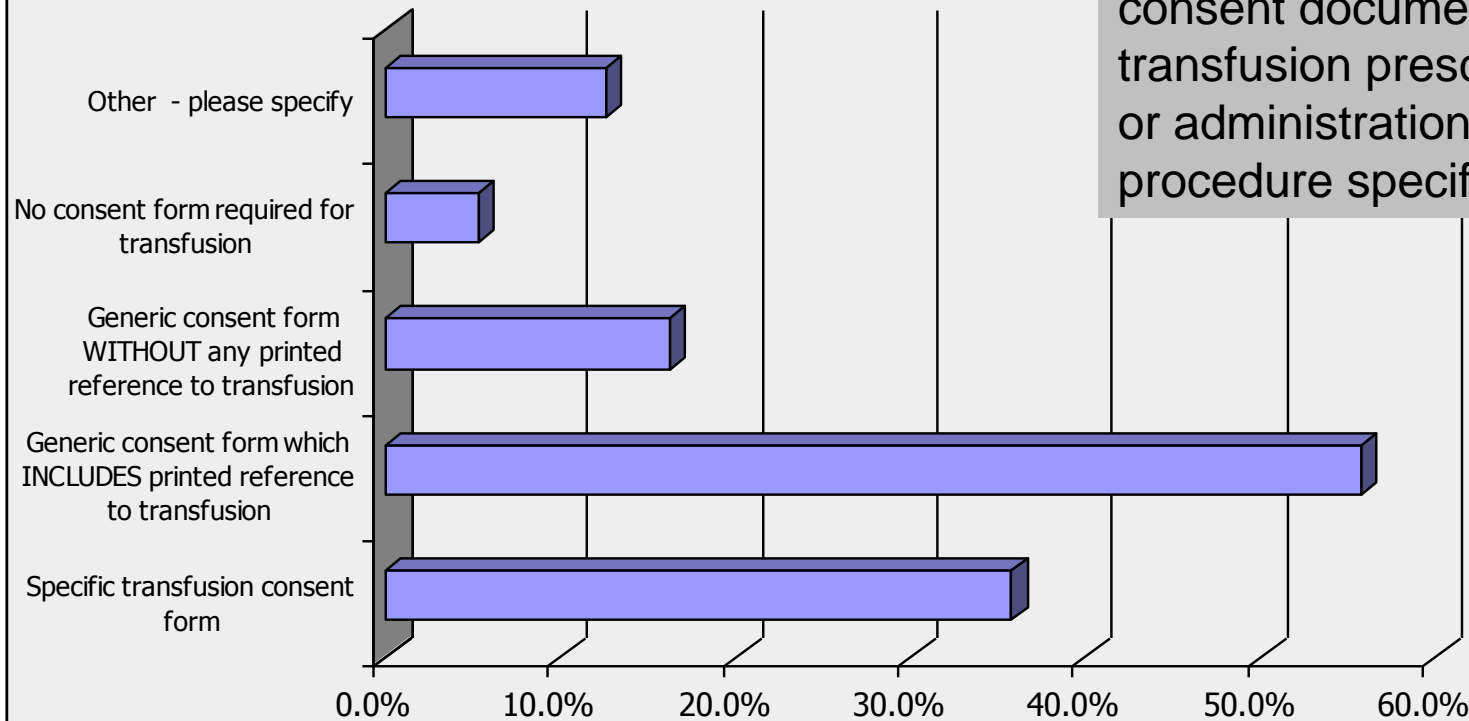
Consent documentation?

Does your hospital have a requirement to document informed consent for transfusion?



Consent form type?

**What type of consent form for transfusion is available in your hospital?
(multiple answers where applicable).**



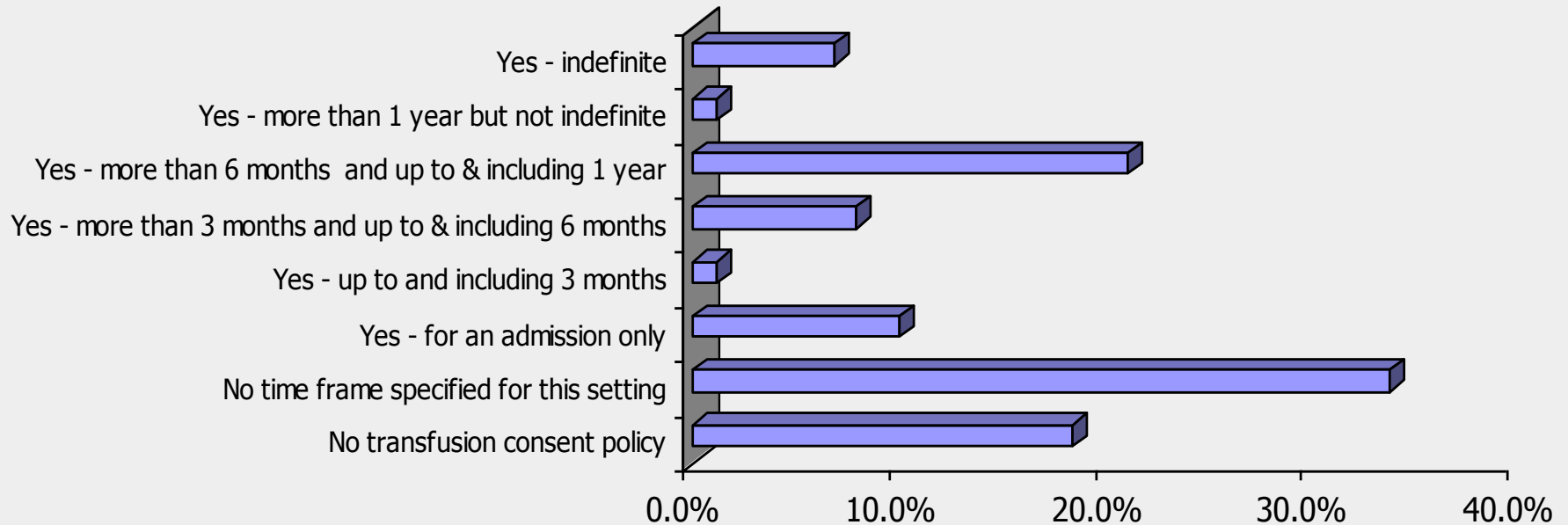
“Other”: included consent documented on transfusion prescription or administration form or procedure specific form

Consent time frame?



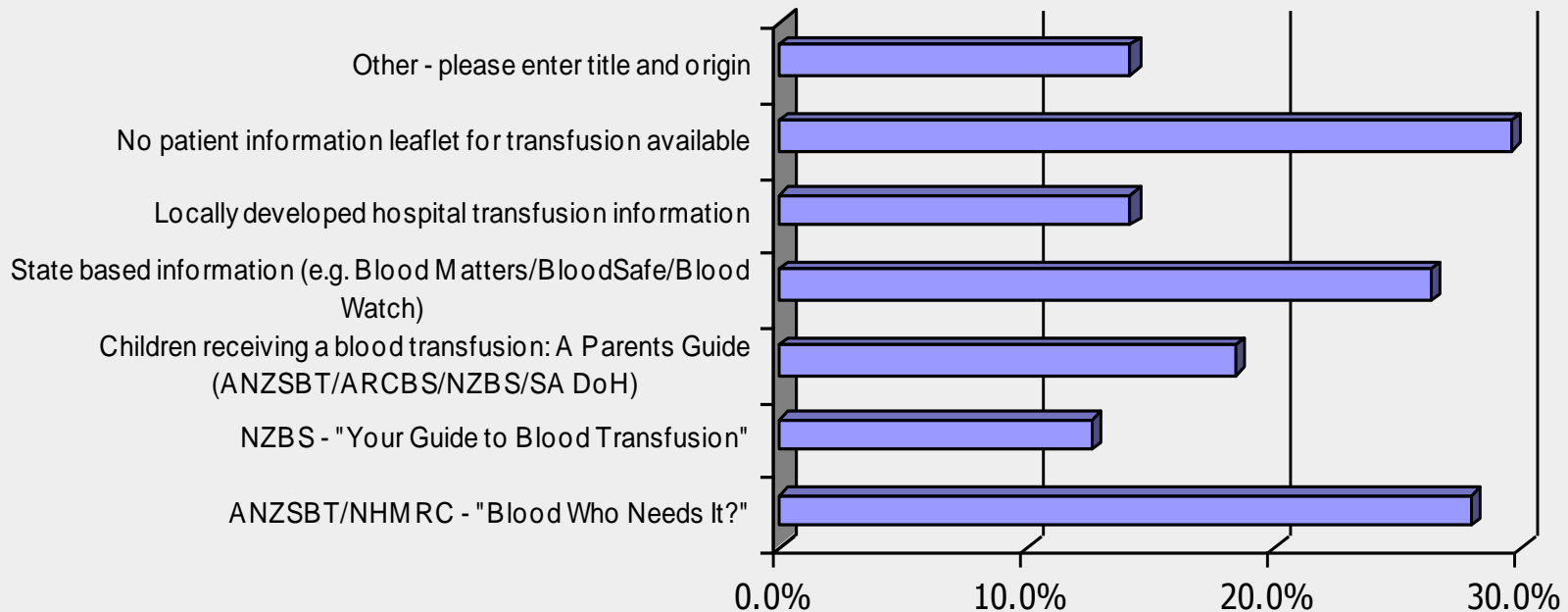
Australian & New Zealand
Society of Blood Transfusion Ltd

Does your hospital policy specify how long transfusion consent remains valid for patients requiring ongoing transfusions where circumstances have not changed (such as regular transfusion for a particular condition)? (single answer).



Consumer Information

**Which of the following transfusion information leaflets are provided for patients having or likely to have a transfusion at your hospital?
(multiple answers where applicable).**



“Other”: 17/19 responses to “other” could have been classified as “state based patient information”

Results

3. Participating hospitals' audit results for documentation of transfusion consent in medical records

Medical Record Audit

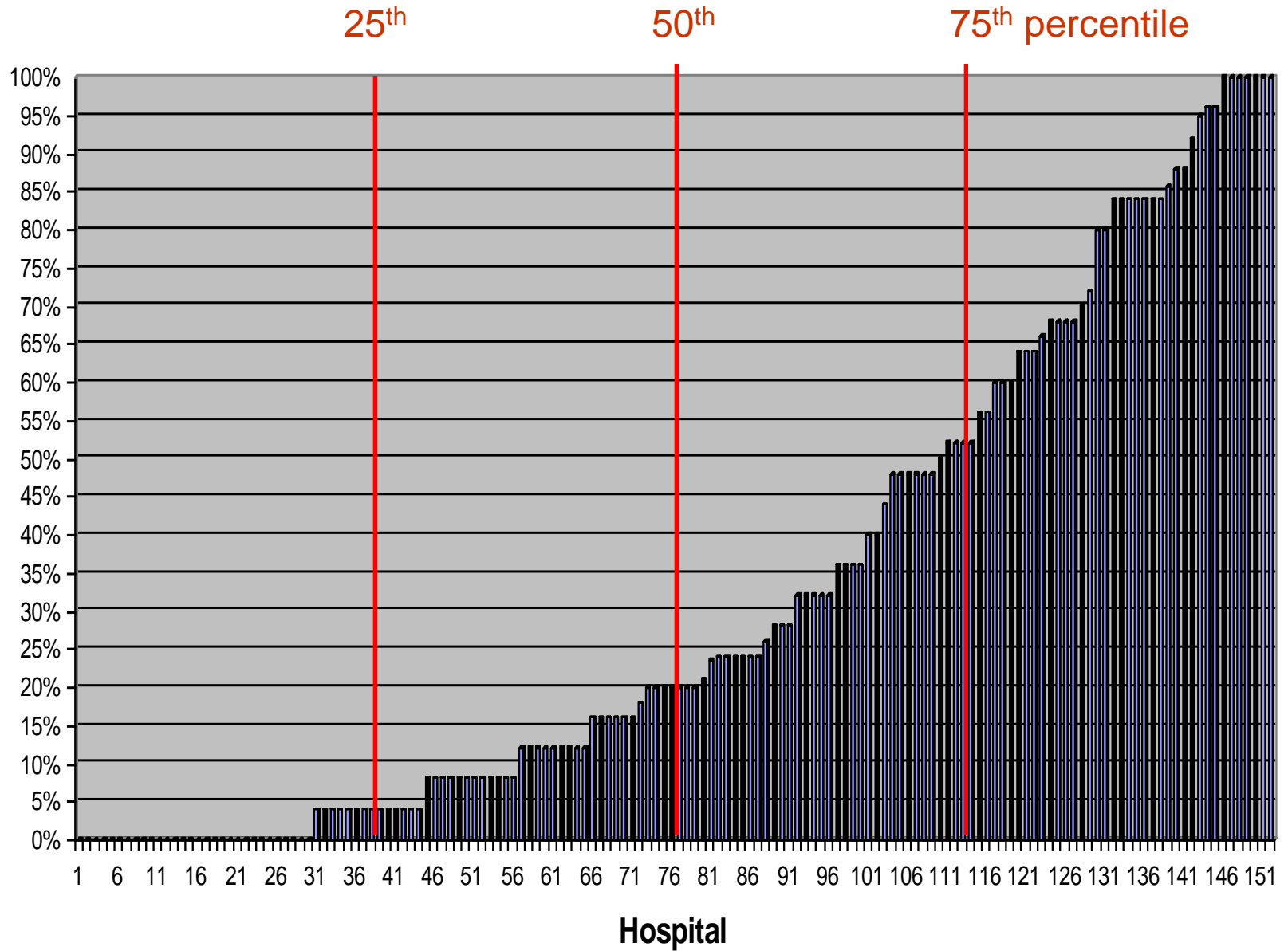
Inconsistent data excluded for 26/177 audits (inconsistent data totals)
3702 of the 4241 medical records assessed were included in the data analysis

- 23 hospitals audited less than 25 medical records

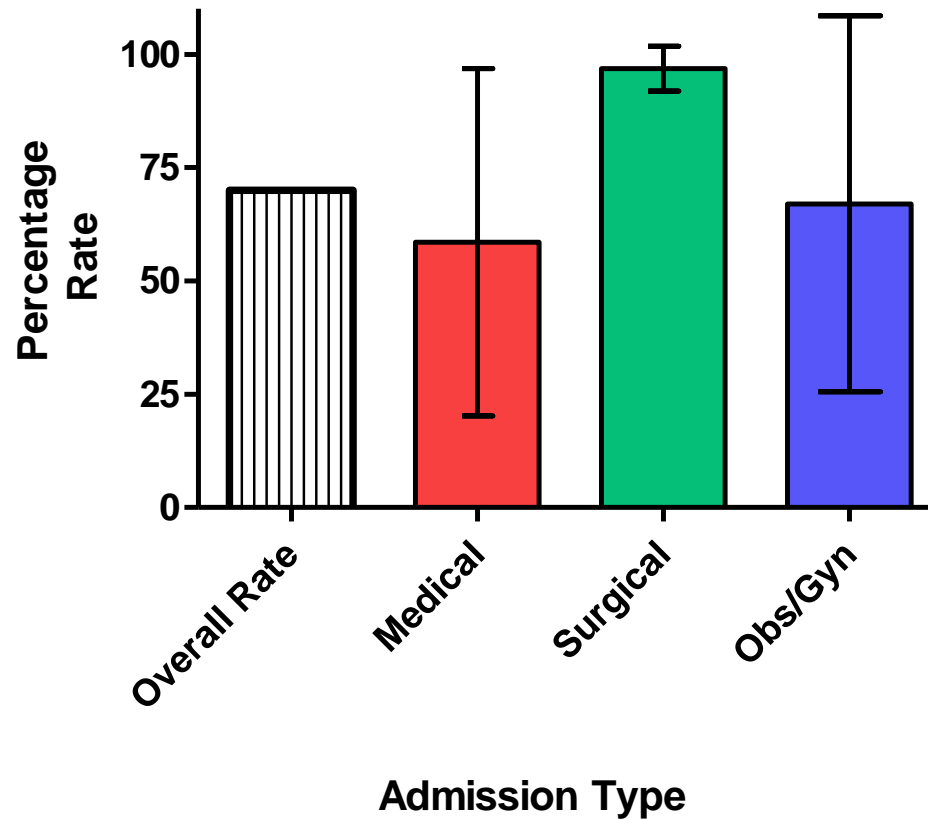
NOTE: Although the results are presented by state and hospital type they are subject to selection bias because they represent uneven participation of different types of hospitals (not comparing “apples” with “apples”)

- Variable participation rates for hospitals with low vs high rates of consent
- Public, private, country, metro sectors unevenly represented
- Different numbers of medical vs surgical transfusions
- Hospitals with visiting specialist/GPs vs staff medical officers
- Hospitals with and without transfusion nurses/dedicated resources

Participating Hospitals' Documented Transfusion Consent Audit Results

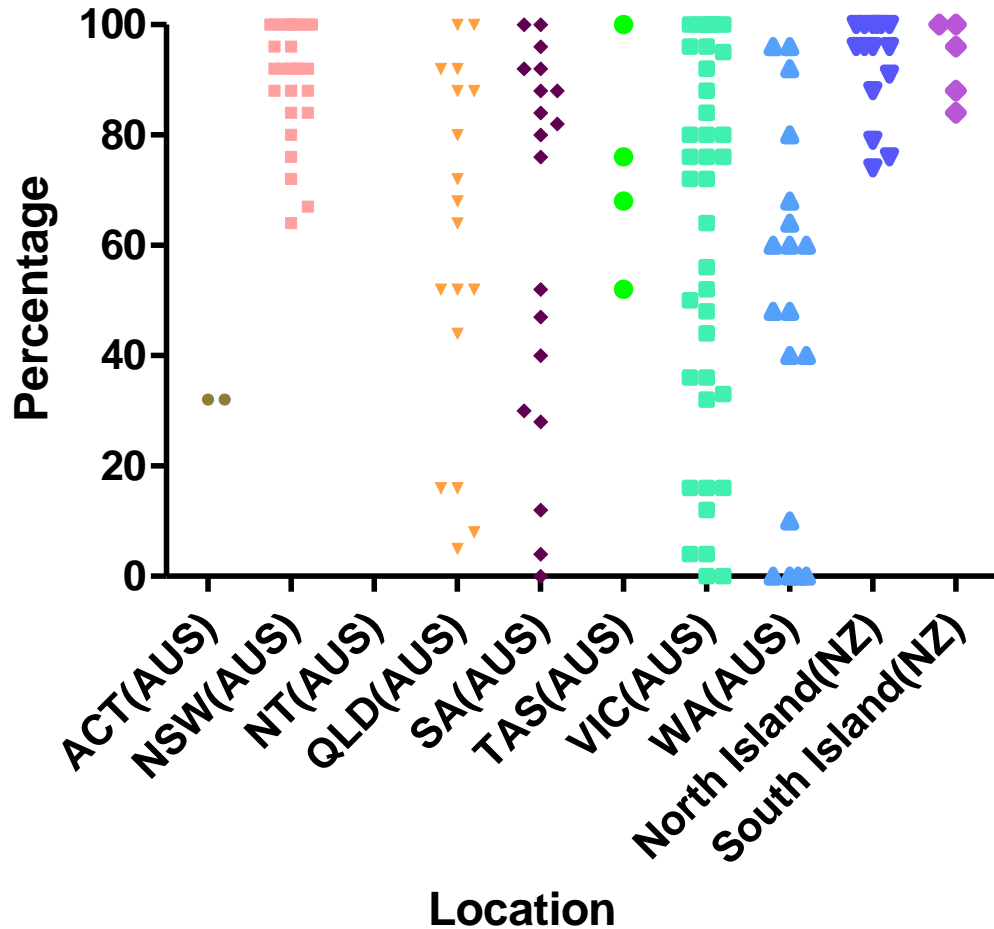


Documentation of Transfusion Consent by Admission Type



Mean with Standard Deviation

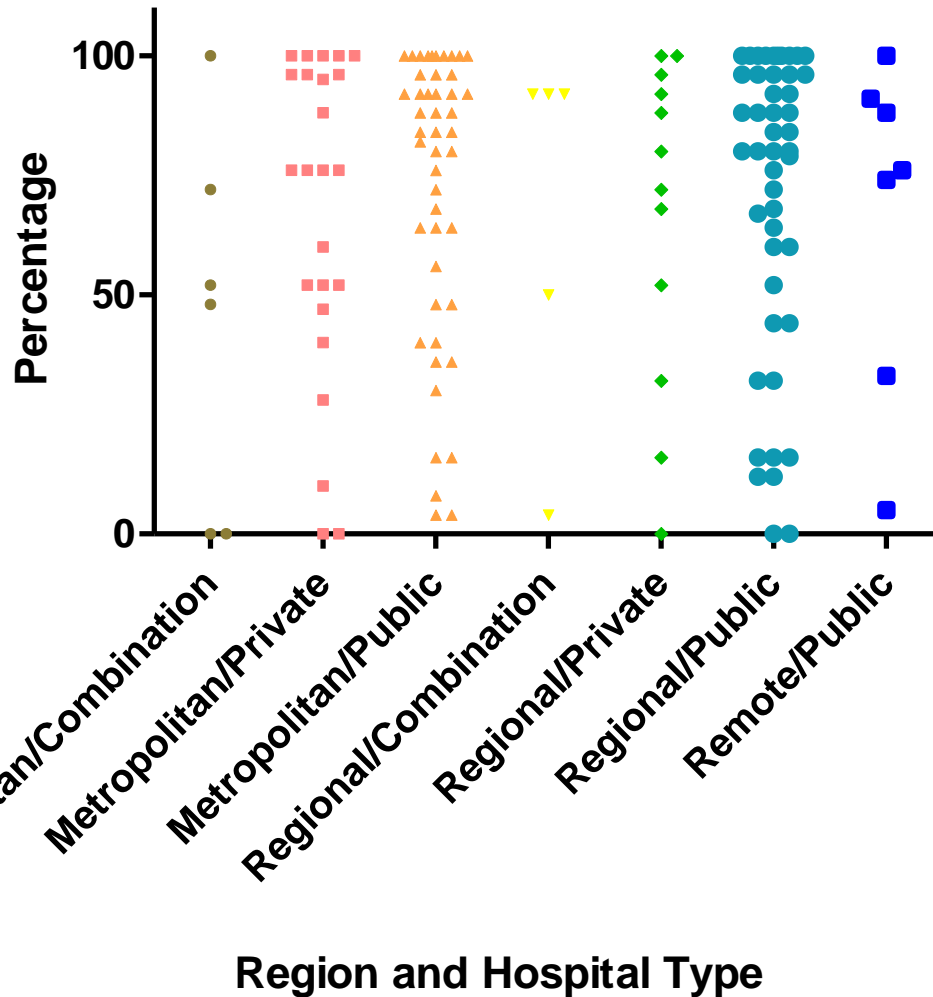
Rates of Documented Consent by Location



NOTE: Conclusions can not be made about consent practices in individual states/territories as the results are subject to selection bias because of uneven participation of different types of hospitals (not comparing “apples” with “apples”).

Single data points in any category have been deleted to ensure individual hospitals cannot be identified.

Documented Consent by Region and Hospital Type



NOTE: Conclusions can not be made about consent practices in different types of hospitals as the results are subject to selection bias because of uneven participation of hospitals with different characteristics (not comparing “apples” with “apples”).

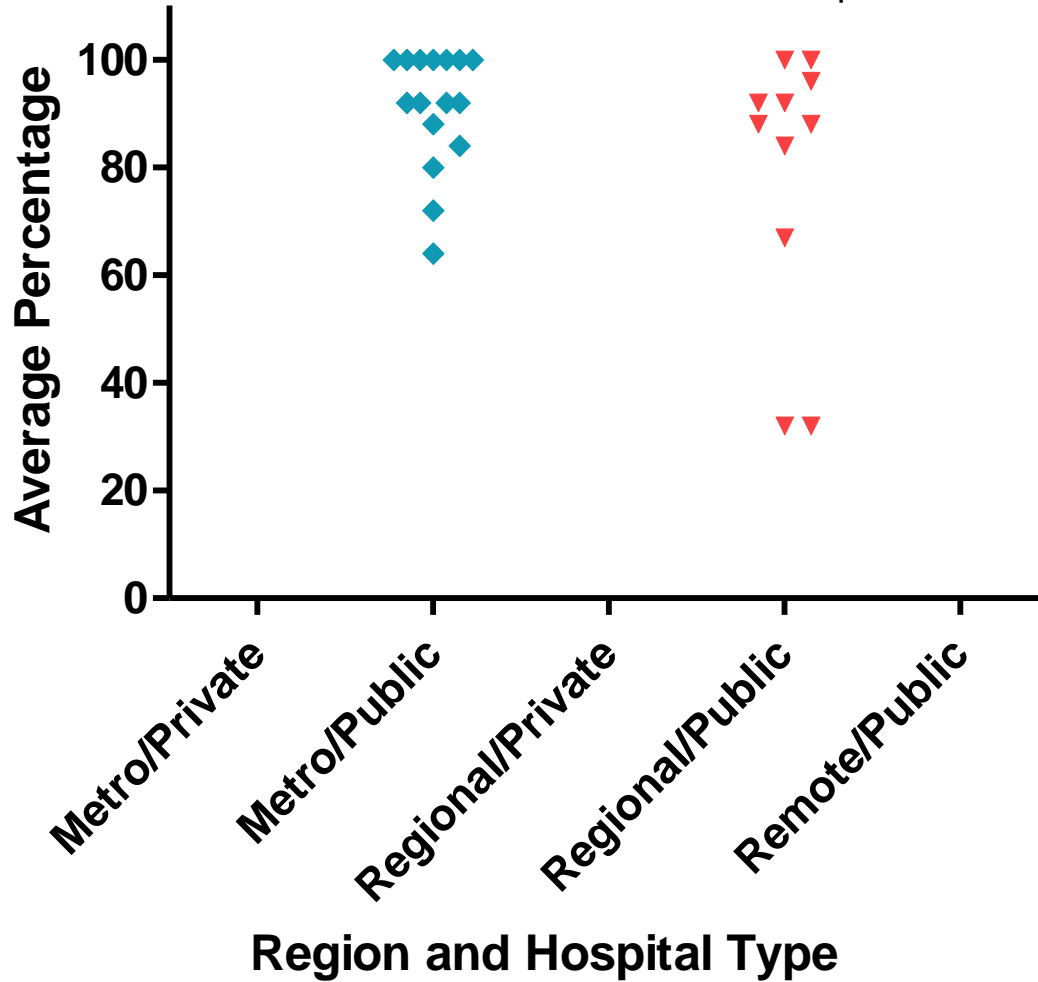
Single data points in any category have been deleted to ensure individual hospitals cannot be identified.

Rates of Documented Transfusion Consent Audit Result Graphs

- Results by state
- Results by bed number
- Results by red cell units transfused per month
- Results by type of consent policy & process

Rates of Documented Consent NSW

Includes data from 2 ACT Hospitals

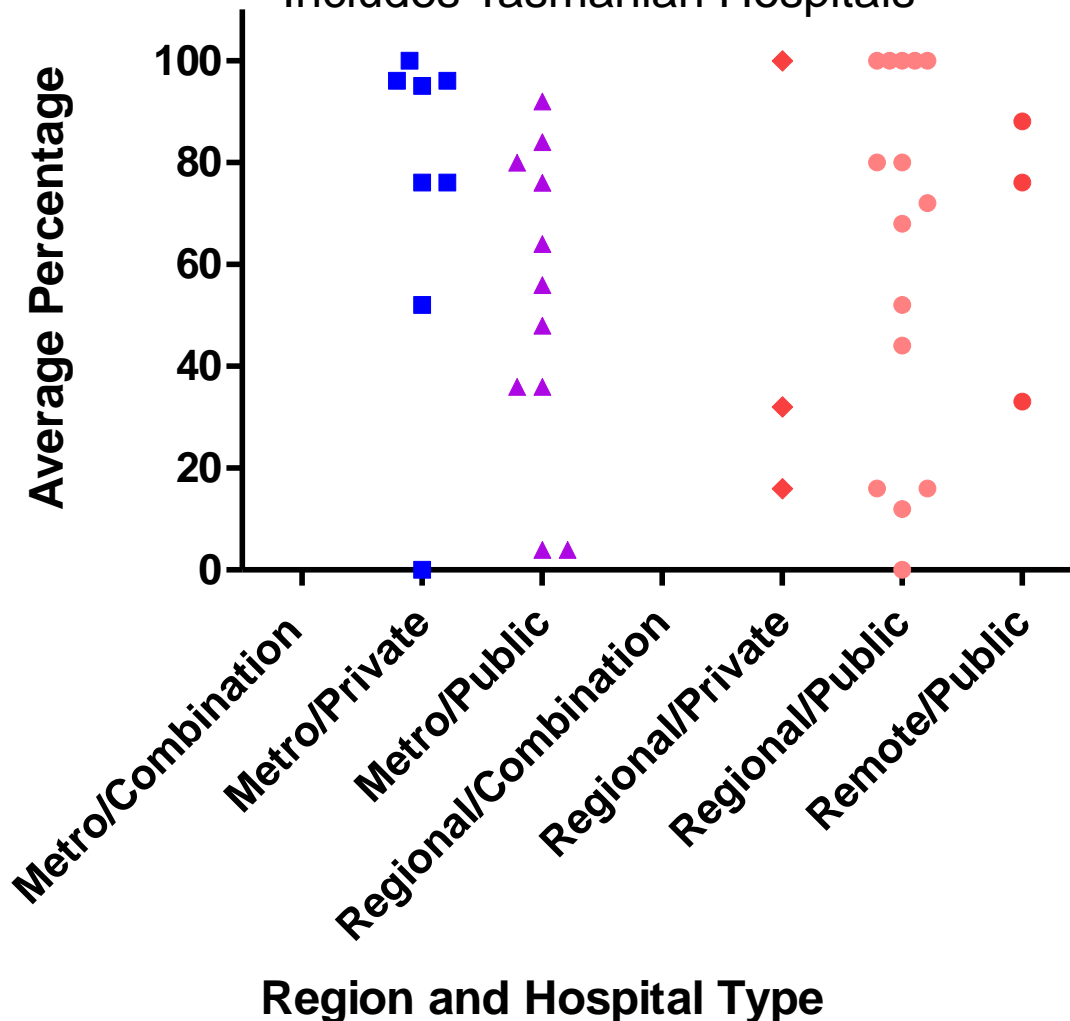


NOTE: Conclusions can not be made about consent practices in different types of hospitals as the results are subject to selection bias because of uneven participation of hospitals with different characteristics (not comparing “apples” with “apples”).

Single data points in any category have been deleted to ensure individual hospitals cannot be identified.

Rates of Documented Consent Victoria

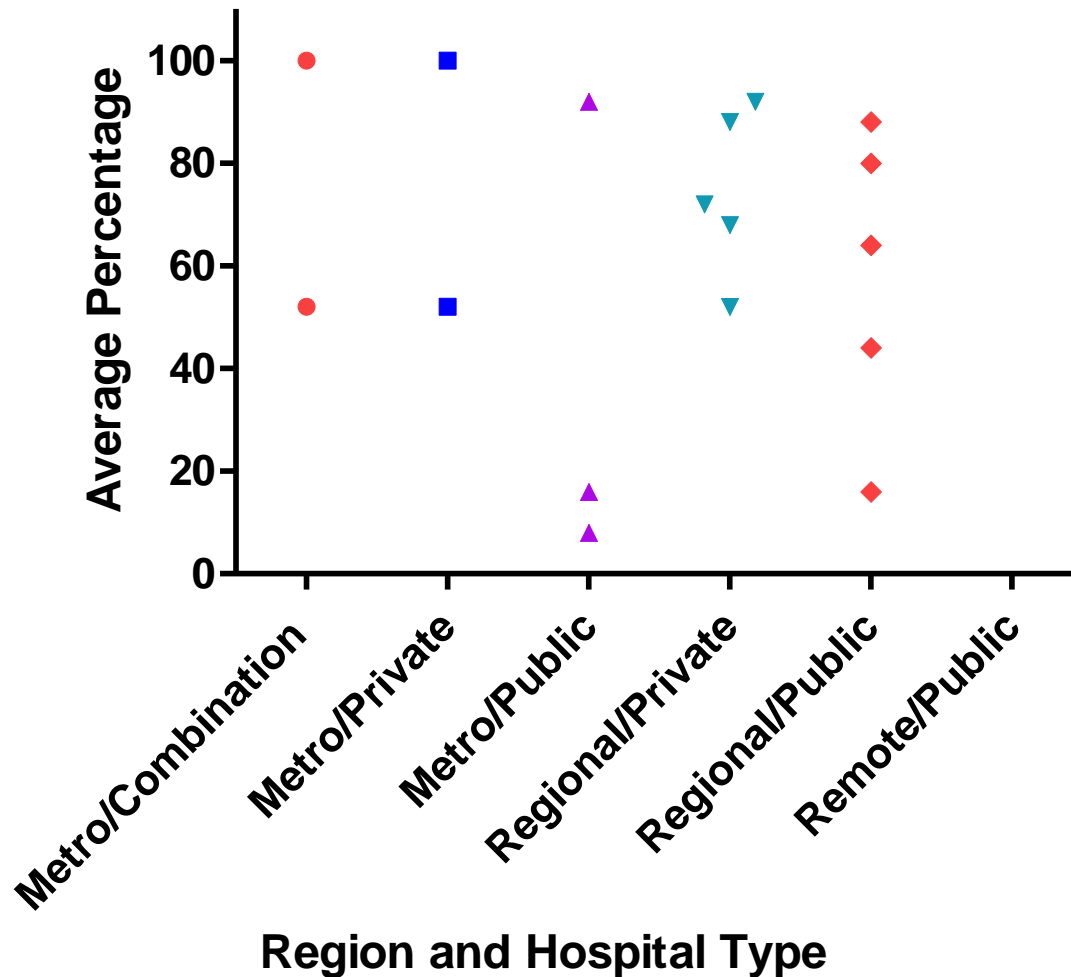
Includes Tasmanian Hospitals



NOTE: Conclusions can not be made about consent practices in different types of hospitals as the results are subject to selection bias because of uneven participation of hospitals with different characteristics (not comparing “apples” with “apples”).

Single data points in any category have been deleted to ensure individual hospitals cannot be identified.

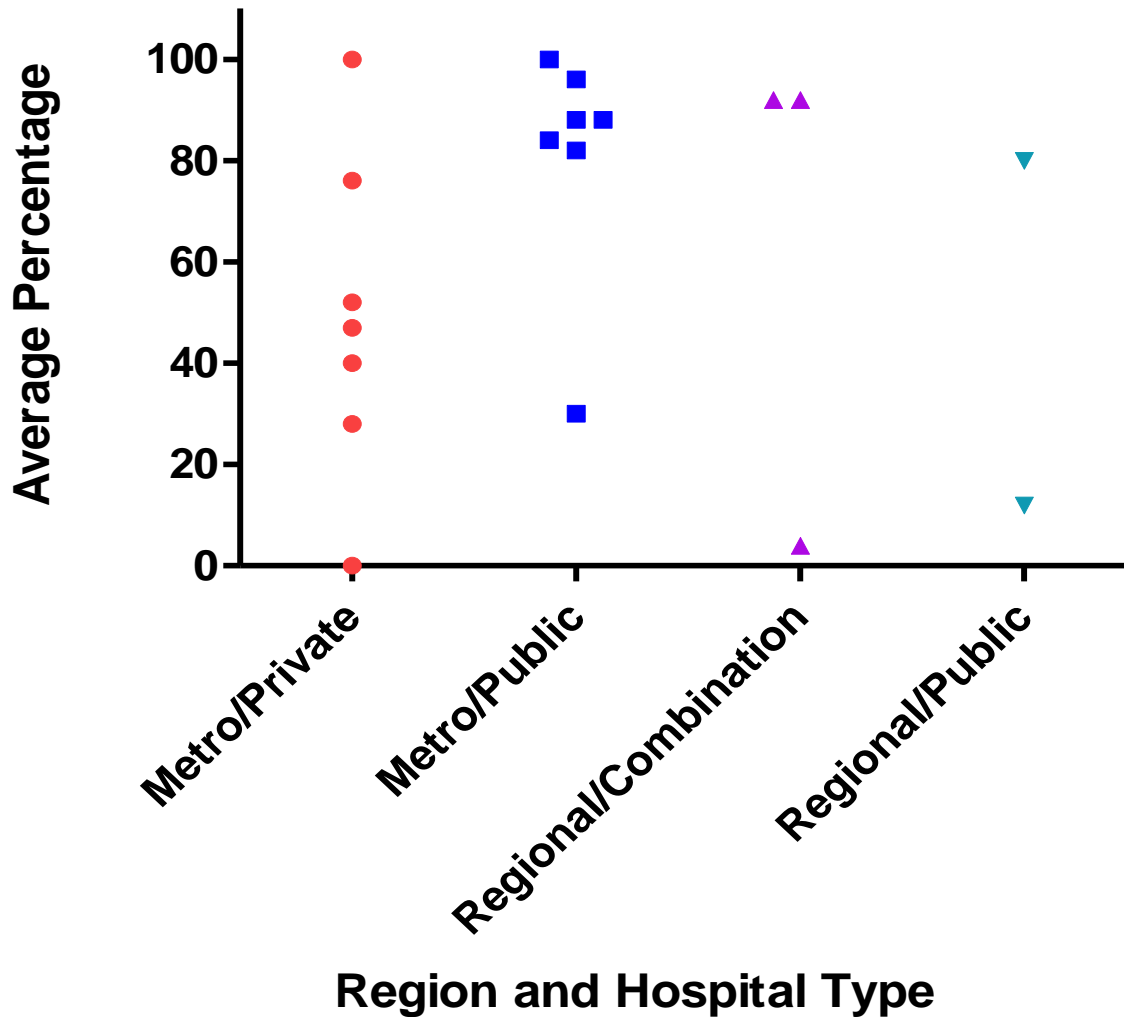
Rates of Documented Consent Queensland



NOTE: Conclusions can not be made about consent practices in different types of hospitals as the results are subject to selection bias because of uneven participation of hospitals with different characteristics (not comparing “apples” with “apples”).

Single data points in any category have been deleted to ensure individual hospitals cannot be identified.

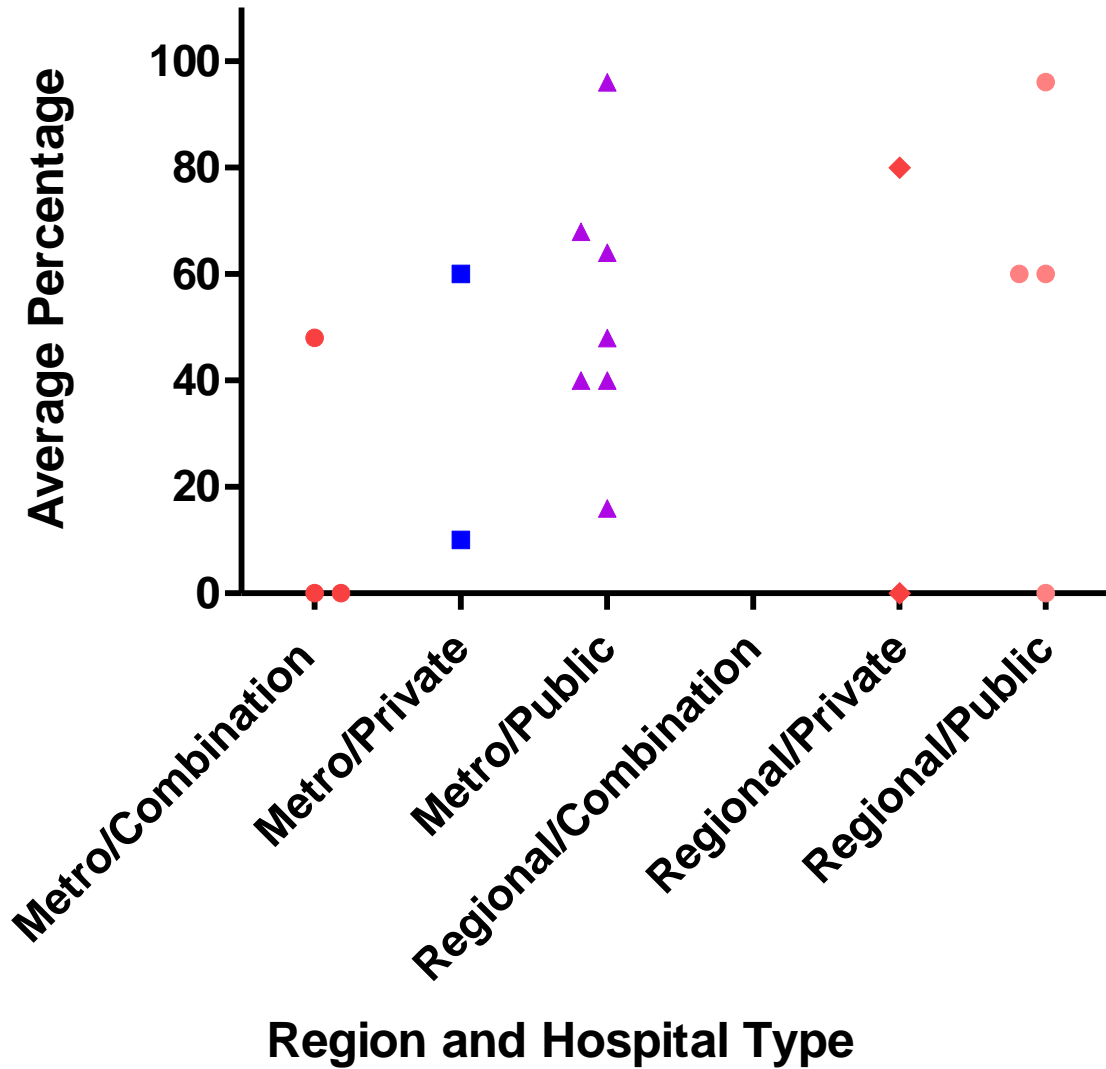
Rates of Documented Consent SA



NOTE: Conclusions can not be made about consent practices in different types of hospitals as the results are subject to selection bias because of uneven participation of hospitals with different characteristics (not comparing “apples” with “apples”).

Single data points in any category have been deleted to ensure individual hospitals cannot be identified.

Rates of Documented Consent WA

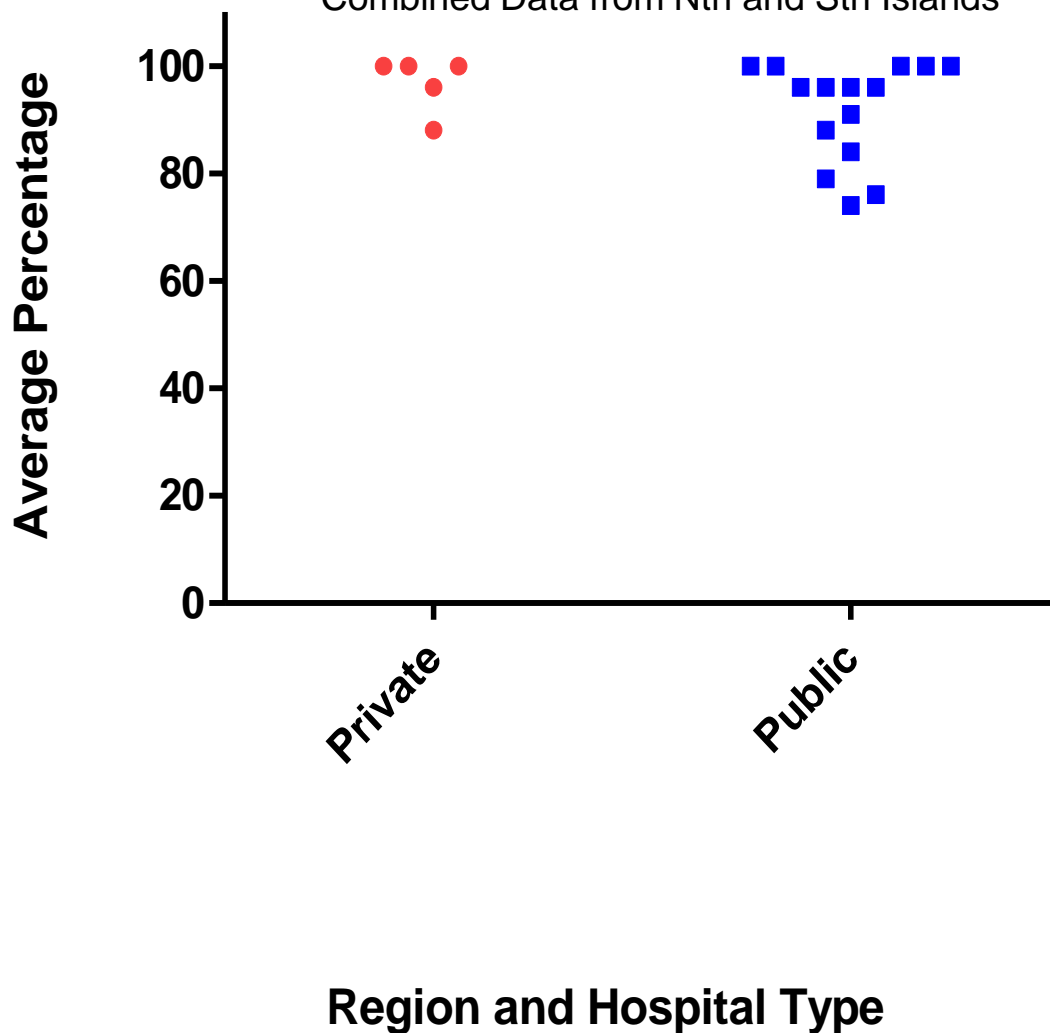


NOTE: Conclusions can not be made about consent practices in different types of hospitals as the results are subject to selection bias because of uneven participation of hospitals with different characteristics (not comparing “apples” with “apples”).

Single data points in any category have been deleted to ensure individual hospitals cannot be identified.

Rates of Documented Consent New Zealand

Combined Data from Nth and Sth Islands



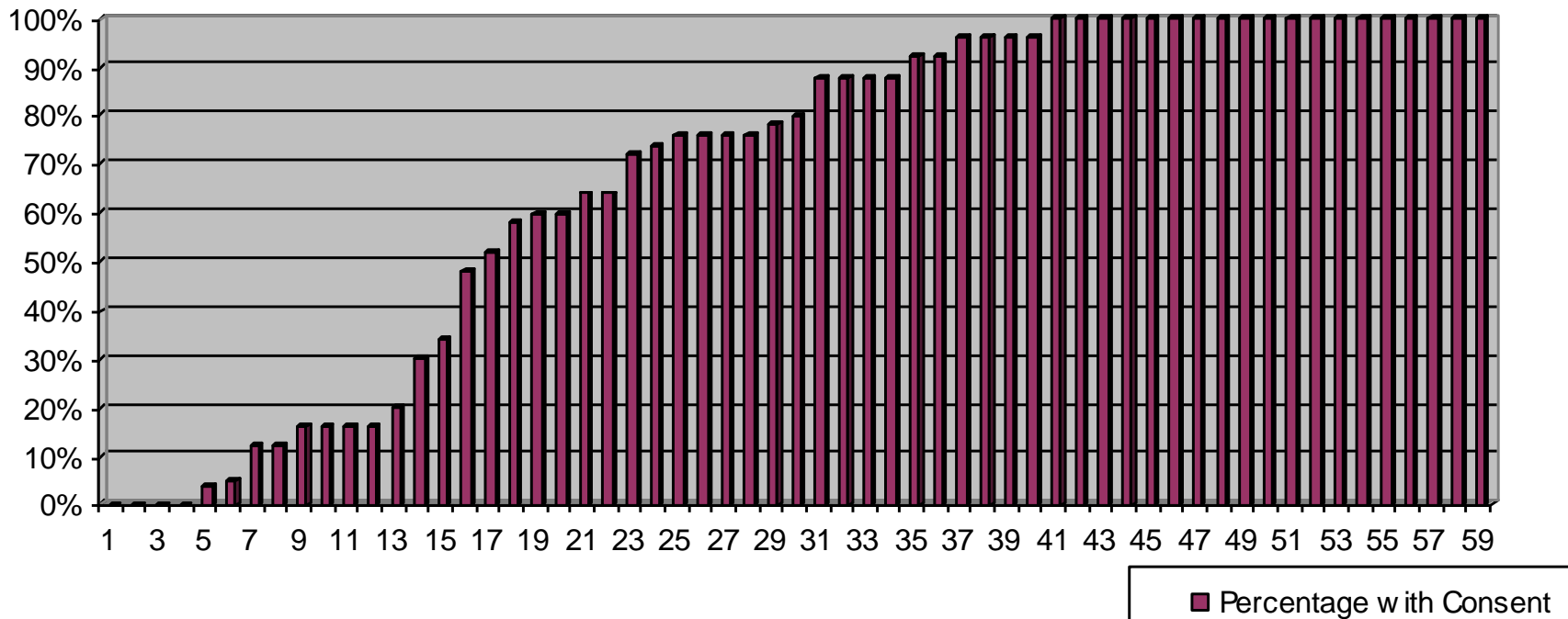
NOTE: Conclusions can not be made about consent practices in different types of hospitals as the results are subject to selection bias because of uneven participation of hospitals with different characteristics (not comparing “apples” with “apples”).

Single data points in any category have been deleted to ensure individual hospitals cannot be identified.

NOTE: The terms regional/remote are not widely used in NZ and the public/private classification alone was thought to be more meaningful.

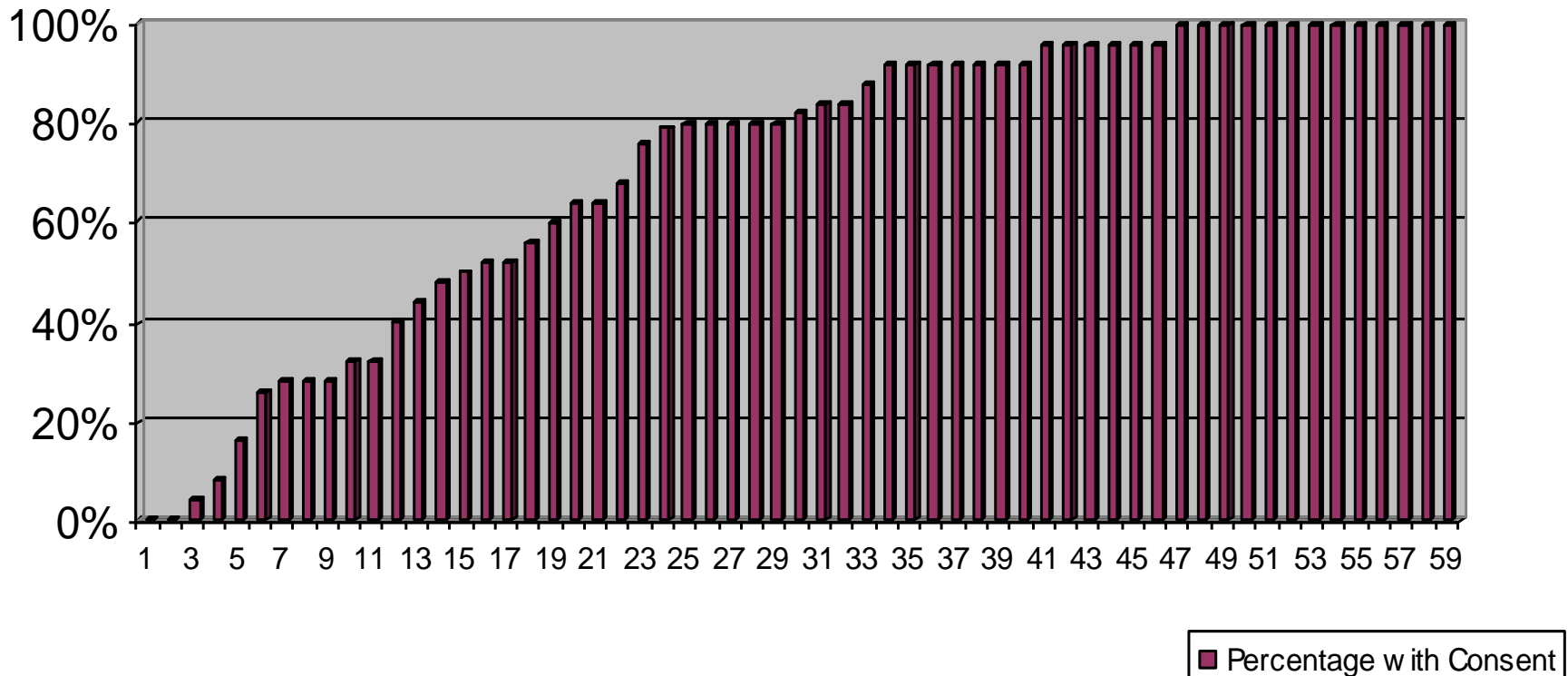
Documented Consent Rates by Hospital Bed Number

Consent Rates for Individual Hospitals with <100 Beds



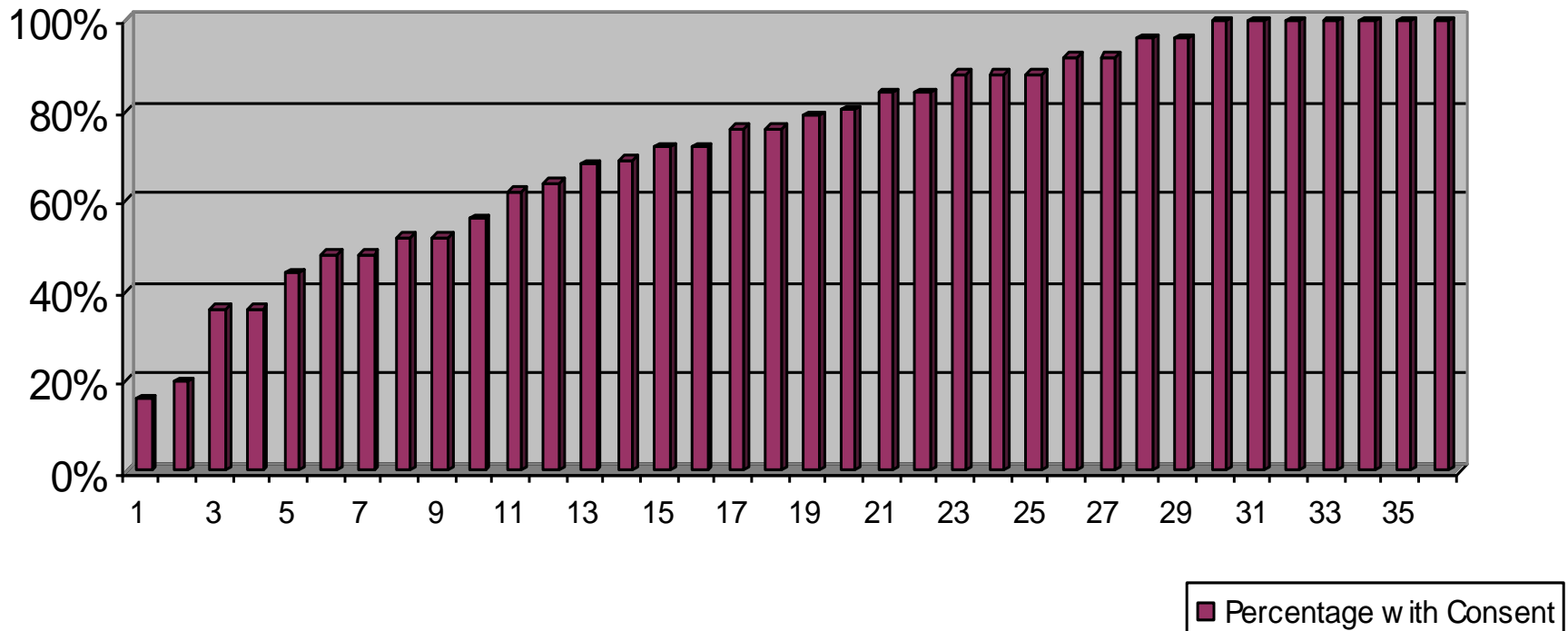
Documented Consent Rates by Hospital Bed Number

Consent Rates for Individual Hospitals with 101 - 250 Beds



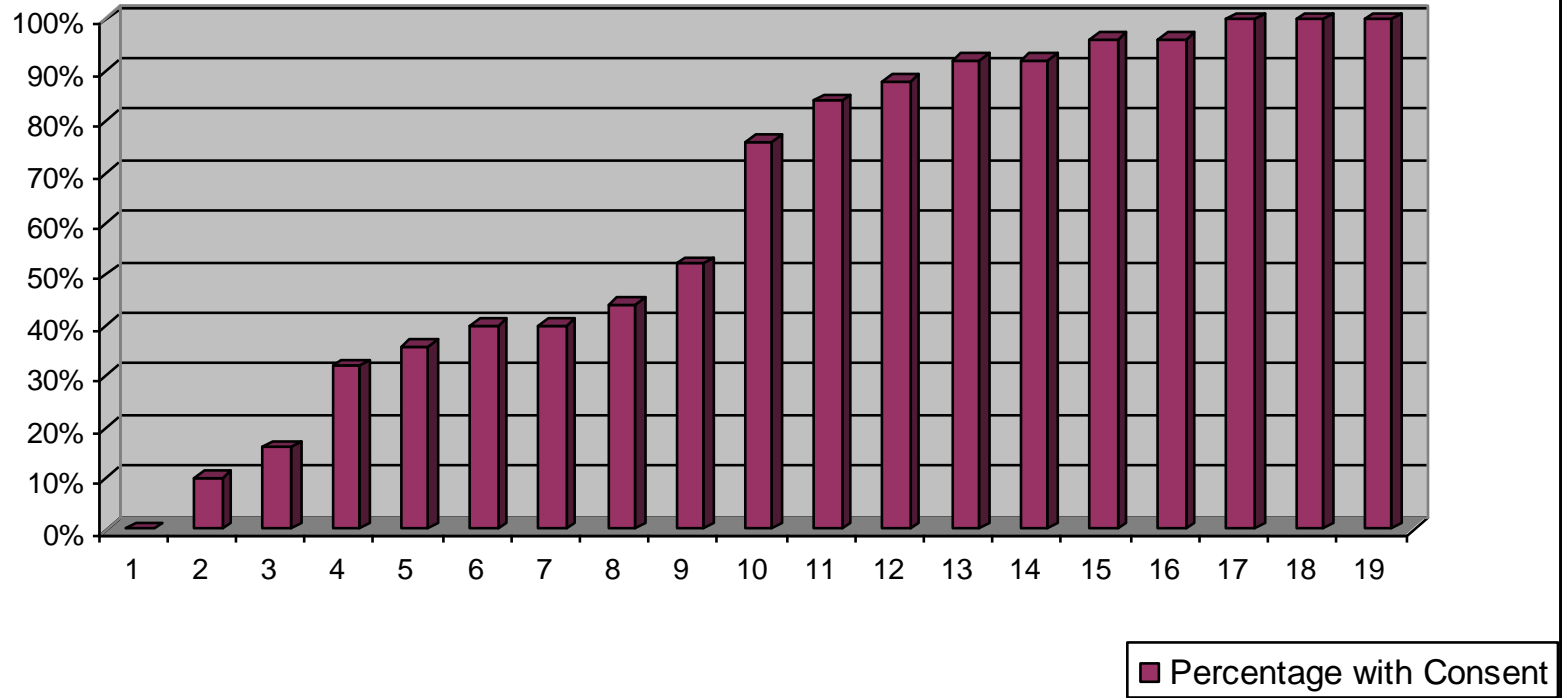
Documented Consent Rates by Hospital Bed Number

Consent Rates for Individual Hospitals with 251 - 500 Beds



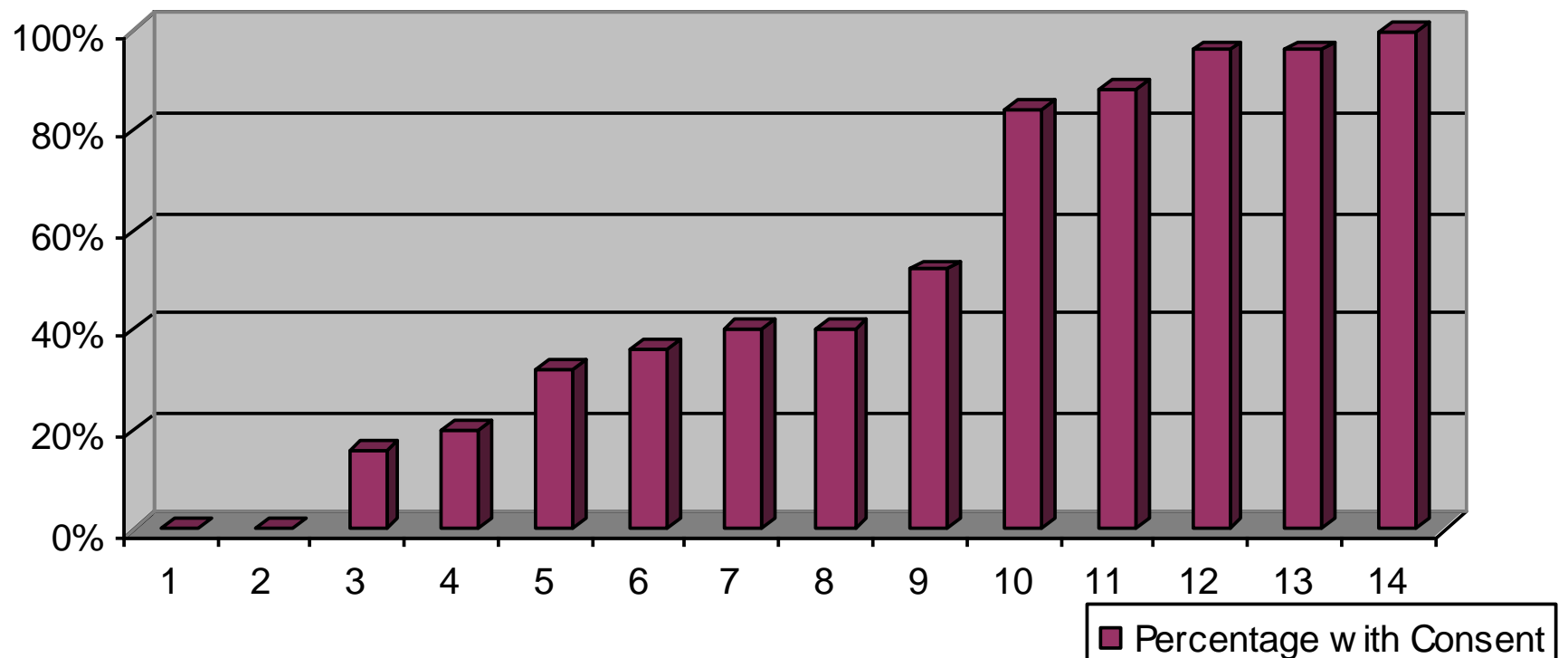
Documented Consent Rates by Hospital Bed Number

Consent Rates for Individual Hospitals with 501 - 1000 Beds



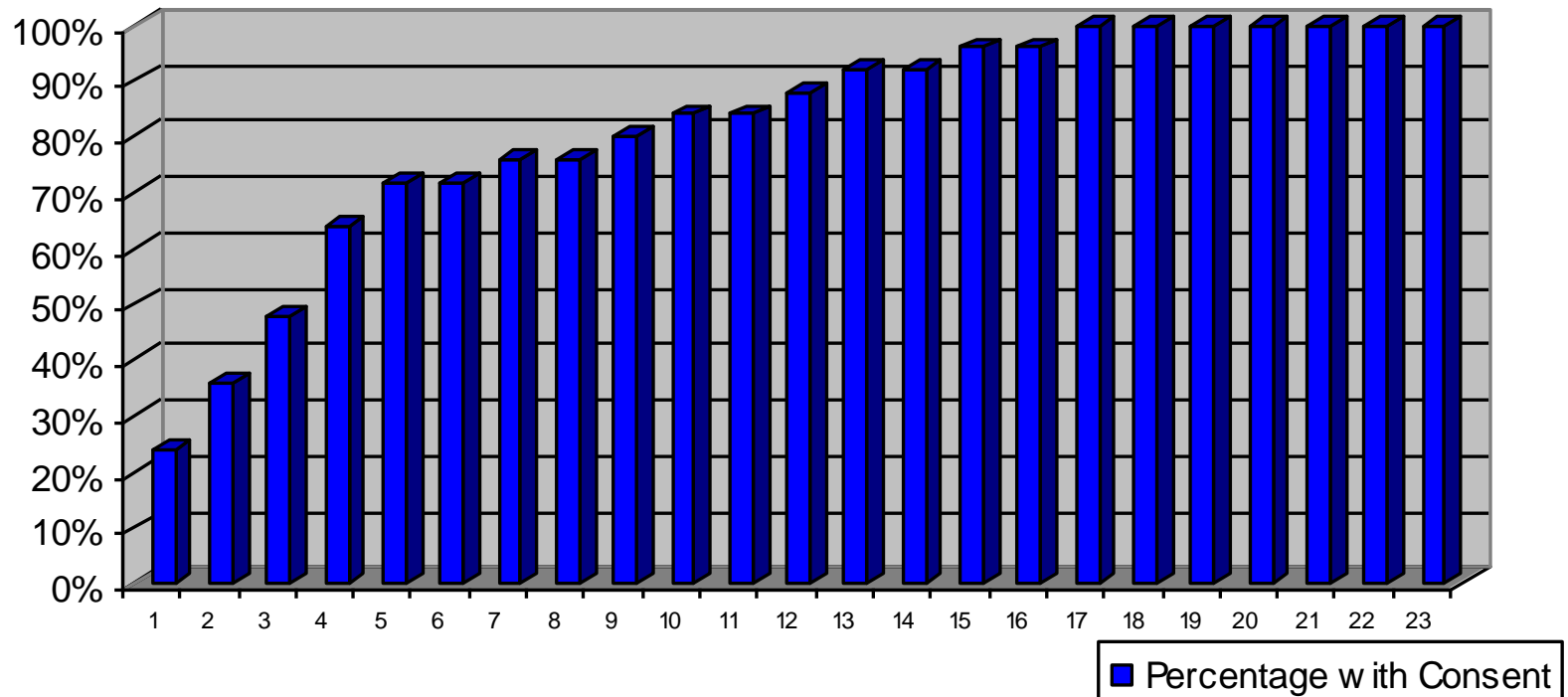
Documented Consent Rates by Red Cell Units Transfused Per Month

Consent Rate for Individual Hospitals Transfusing >1000 units / Month



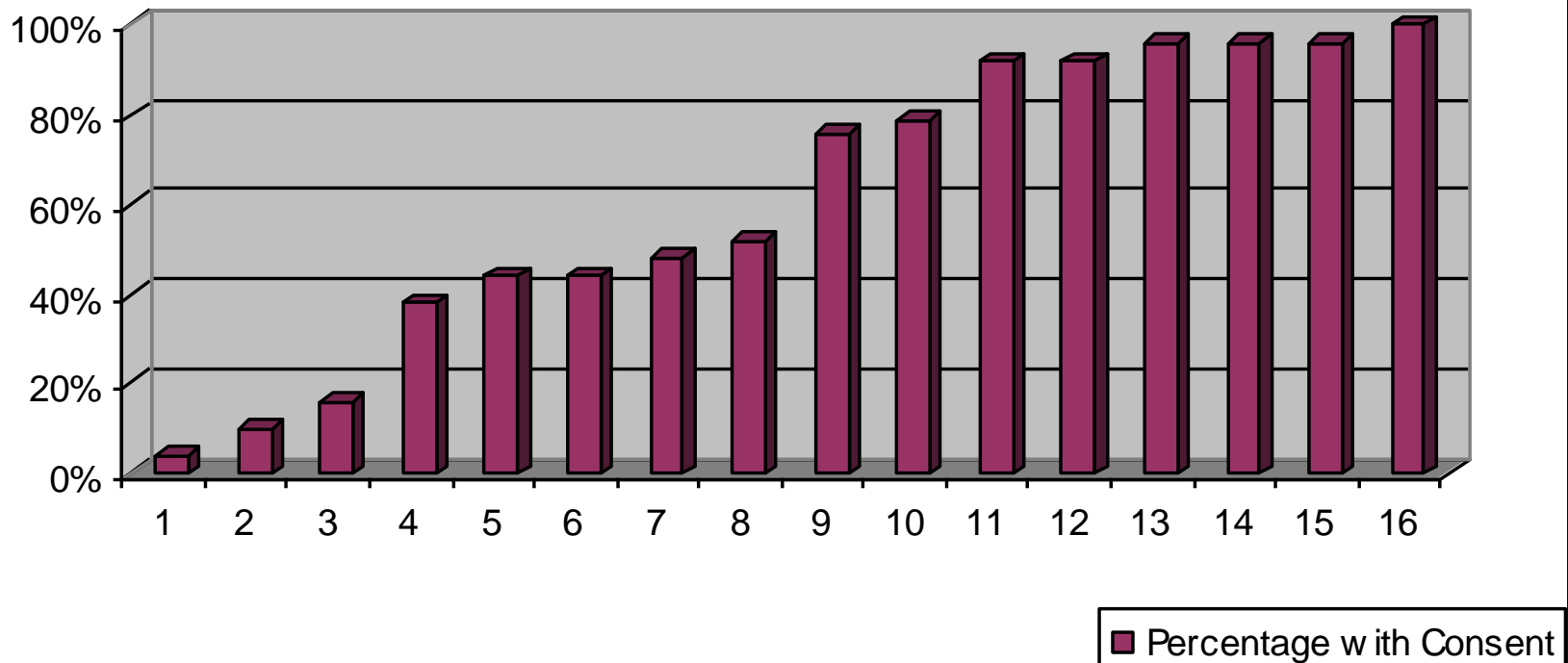
Documented Consent Rates by Red Cell Units Transfused Per Month

Consent Rate for Individual Hospitals Transfusing 501 - 1000 Units month



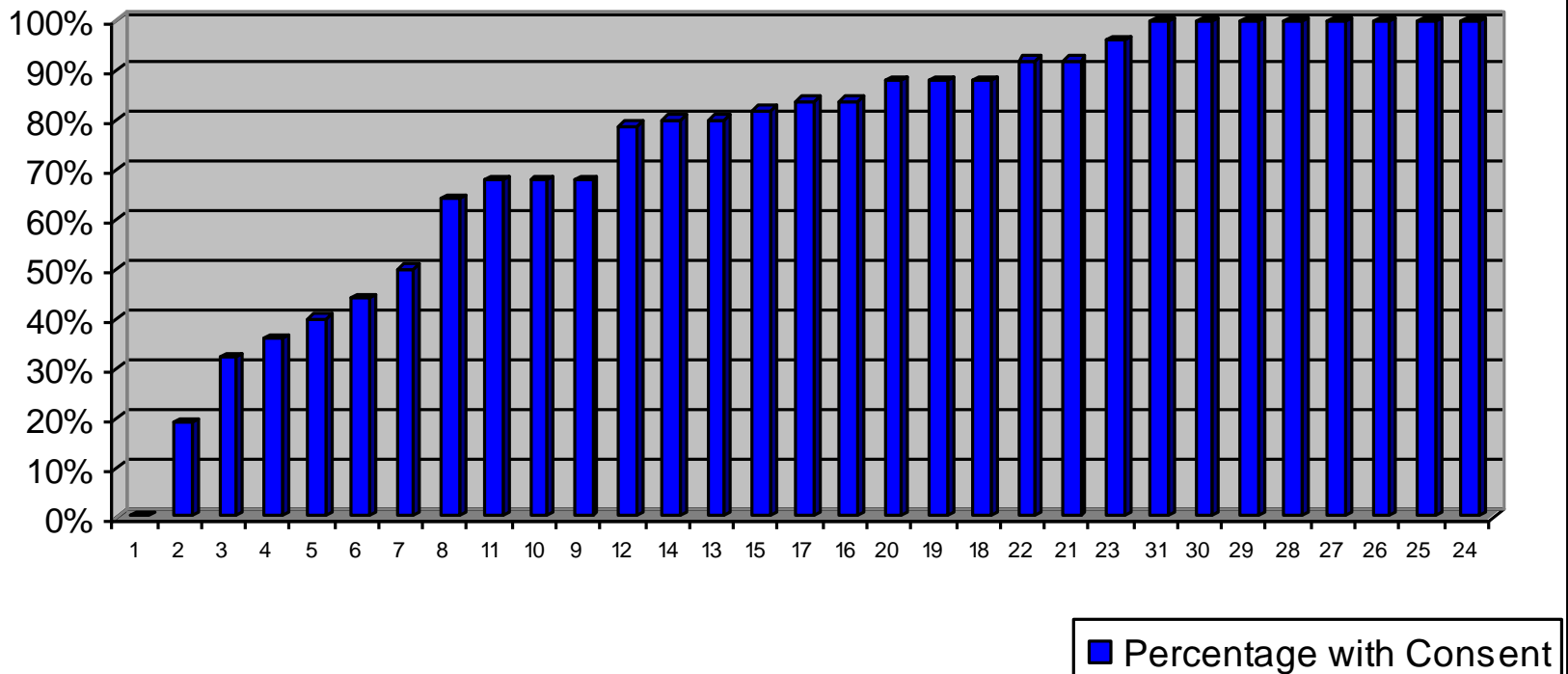
Documented Consent Rates by Red Cell Units Transfused Per Month

Consent Rate for Individual Hospitals Transfusing 251 - 500 units / month



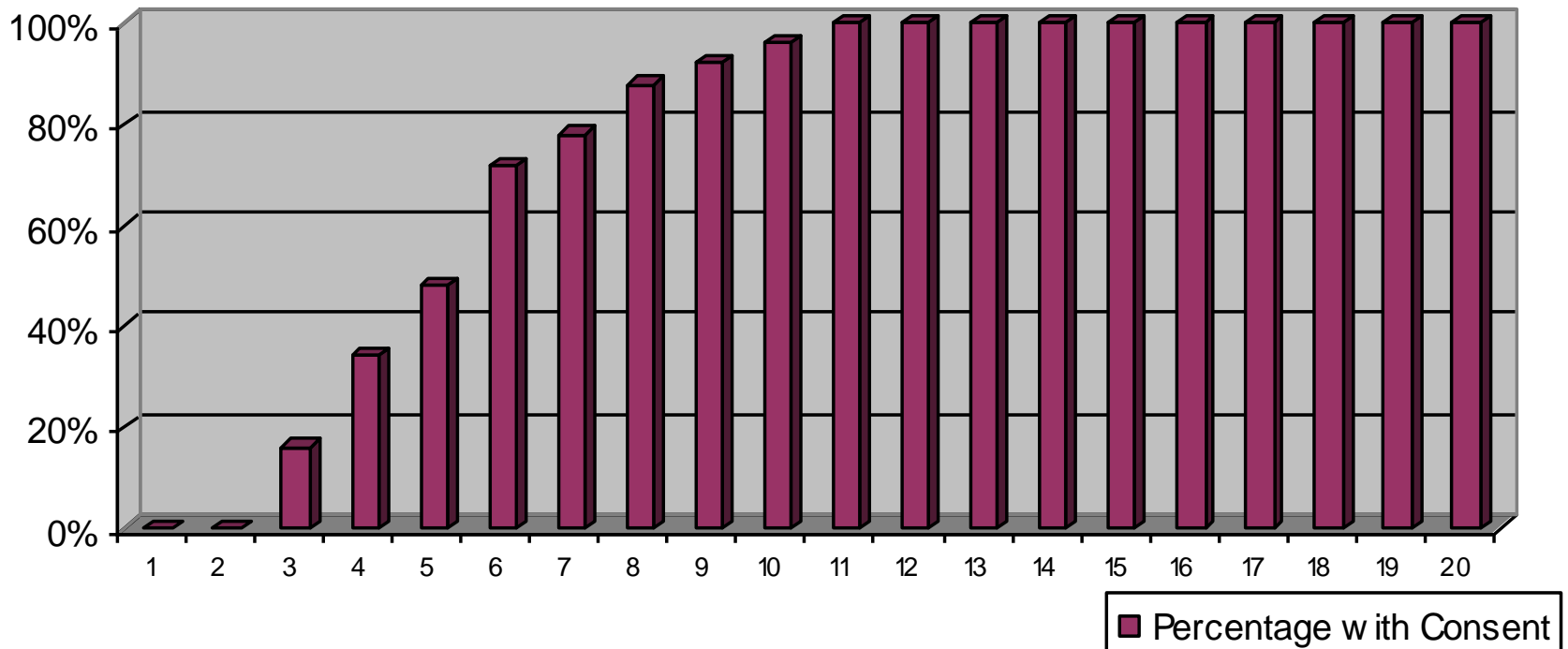
Documented Consent Rates by Red Cell Units Transfused Per Month

Consent Rate for Individual Hospitals Transfusing 101- 250 units / month



Documented Consent Rates by Red Cell Units Transfused Per Month

Consent Rate for Individual Hospitals Transfusing <100 units / month



Documented consent rate & transfusion policy

- Overall rate of documented consent was 70%
- The rate of documented consent was:
 - 74% in hospitals **with** a transfusion policy
 - 51% in hospitals **without** a transfusion policy

Type of consent process

Survey Question Response	Overall % with Consent Documented	Survey Question Response	Overall % with Consent Documented
1. All participating hospitals	70%	5. Consent Form - Specific transfusion Form	75%
2. Signed consent form required	82%	6. Consent Form - Generic with "transfusion" included	74%
3. Signed consent form or medical record entry	59%	7. Consent Form - Generic without "transfusion"	54%
4. Medical record entry only	52%	8. No Consent Required	17%

Discussion

- Excellent rate of participation including from smaller hospitals and those without specific resources for transfusion practice improvement
- Wide range of practice but high rates of documented consent can be achieved in all types of hospitals
- Documentation of consent in medical patients is a particular problem
- **Importance of the actual process of informed consent versus just the documentation of consent-** need to explore this further as part of ensuring quality care

Transfusion Practice Improvement Initiatives

Australian and New Zealand Transfusion Practice Improvement Program websites:

- Vic/Tas: **Blood Matters** better safer transfusion program <http://www.health.vic.gov.au/best/>
- SA: **BloodSafe** Program <http://www.health.sa.gov.au/bloodsafe/>
- NSW: **Blood Watch** Program <http://www.cec.health.nsw.gov.au/programs/blood-watch.html>
- WA: **WA Blood Management** Programme - WA Health Operational Plan –
http://www.health.wa.gov.au/hrit/docs/publications/2009-10_WA_Health_Op_Plan.pdf
- Qld: **Queensland Blood Management** Program-
<http://www.health.qld.gov.au/qhcss/qbmp/default.asp>
- NZ: **New Zealand Blood Service**- <http://www.nzblood.co.nz/?t=10>

For staff education the BloodSafe e-learning program has a module which includes consent for transfusion:

[http:// www.bloodsafelearning.org.au](http://www.bloodsafelearning.org.au)

Examples of Consumer Information

- 'Blood Who Needs It' NHMRC/ASBT available to download at <http://www.nhmrc.gov.au> or [http:// www.anzsbt.org.au](http://www.anzsbt.org.au)
- Transfusion Fact Sheet, BloodSafe
<http://www.health.sa.gov.au/bloodsafe/Default.aspx?tabid=52>
- 'Blood Transfusion have all of your questions been answered' Blood Matters program
<http://www.health.vic.gov.au/best/consumer.htm>
- 'Blood transfusion Answers to some common questions for your patients and their family' Blood Watch Program
<http://www.cec.health.nsw.gov.au/programs/blood-watch.html>
- Paediatric package and NHMRC Blood who needs it in a variety of languages
<http://www.anzsbt.org.au/publications/index.cfm>
- Queensland Government, Blood and Blood Products Consent Information:
http://www.health.qld.gov.au/consent/html/faq_clinician.asp

Acknowledgements

Current CPIC members:

Ellen Maxwell, Nicole Staples, Amanda Thomson, Madaleine Gallagher-Swann, Simon Brown, Robert Bird, Rachel Donegan, Dorothy Dinesh, Kathryn Robinson

Past CPIC members:

Erica Wood & Richard Charlewood

Russell Hunt- Transfusion nurse consultant, SA BloodSafe Program
Sue Heatley- Australian Red Cross Blood Service, South Australia

State transfusion practice improvement programs

ACHS

Survey participants!

A small selection of transfusion consent resources

Please refer to the relevant
websites for updated versions and
further information

Checklist for blood component therapy

The following list of questions will help you to make sure that you have received enough information about your treatment.

1. Do you understand why you may need blood component therapy?

Blood component therapy is used in many different situations. Your doctor or other health professional should explain why the therapy is needed and how it can be expected to improve your health.

2. Have the possible risks of blood component therapy been explained to you?

As part of the process of informed consent, the possible risks of blood component therapy in your situation should be clearly explained.

3. Has the use of alternatives to blood component therapy in your situation been discussed?

In some cases alternatives to blood component therapy may be appropriate treatment. You can discuss this with your doctor or other health professional.

4. Have all your questions been answered?

Remember that you have a right to ask questions and to expect answers that you can understand. It may help to have a family member or friend with you when you are talking to your doctor or other health professional.

Copies of this brochure are available in English from NHMRC Website at: <http://www.nhmrc.gov.au>

OR

ASBT Website at: <http://www.asbt.org.au>

Print copies of all documents can be obtained by emailing:

HEALTH ADVISORY CTTEE
NHMRC @ nhmrc.gov.au

OR

By telephoning (02) 6289 9520
(24 hour answering machine) or 1800 020 103

Alternatively you can contact the ASBT by telephoning (02) 9256 5456 or emailing to the secretariat@asbt.org.au

Copies of the NHMRC/ASBT Clinical Practice Guidelines for the Use of Blood Components available from the AusInfo Government Bookshops, telephone 132 447

Internet: www.ausinfo.gov.au
The guidelines are also available from www.nhmrc.gov.au

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BLOOD

Who needs it?

Consumer Brochure

October 2001

This brochure answers some common questions about blood component therapy (also called blood transfusion).



English

Children receiving a blood transfusion

A PARENTS' GUIDE

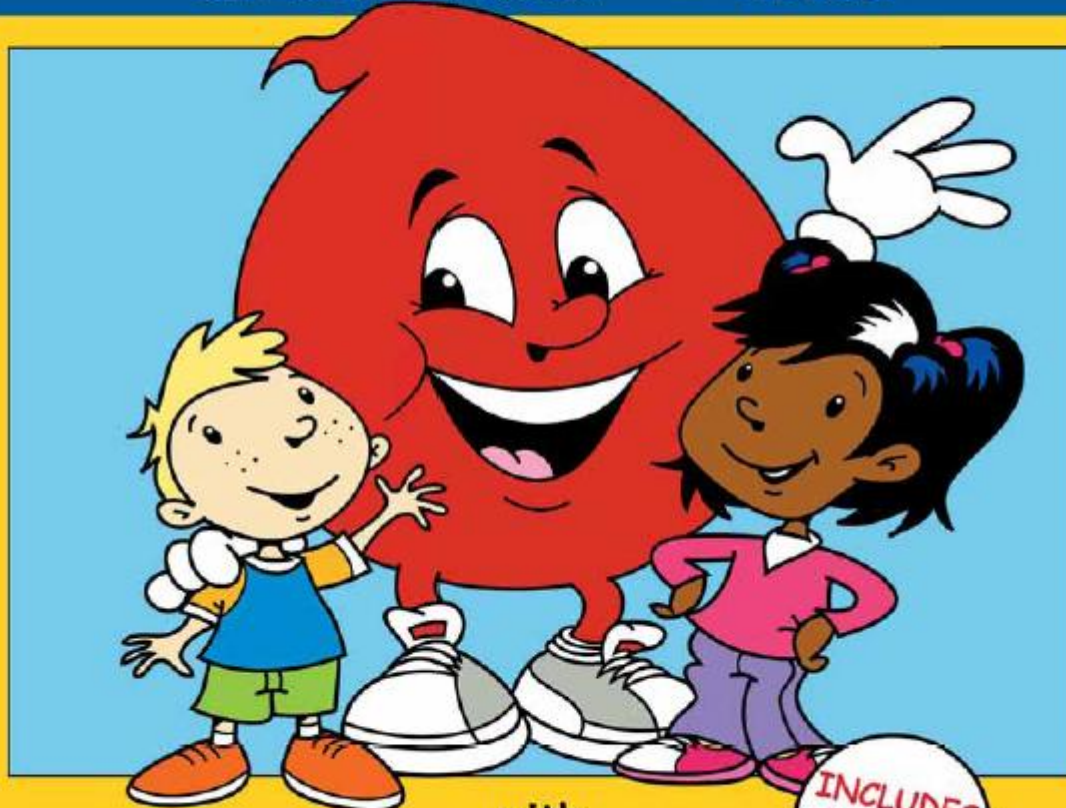
Dear Parent,

Having a child in hospital is a difficult time for everyone in the family. To try to help in a small way, these information booklets, originally created by the National Health Service in the UK, have been adapted for Australia and New Zealand. They aim to explain to both you and your child what to expect if your child needs to receive blood or blood products during their treatment.

This cover booklet 'Receiving a blood transfusion – A parents' guide', is for you and tells you in detail what is involved in receiving a blood transfusion.

Amazing You

LET'S LEARN ABOUT BLOOD.



with
Billy Blood Drop

INCLUDES
STICKERS



Australian & New Zealand
Society of Blood Transfusion Ltd

ANZSBT/ARCBS/BloodSafe/SA DOH Paediatric information
package available at

<http://www.anzsbt.org.au/publications/index.cfm>



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Society of Blood Transfusion Ltd

Blood management

Every drop of blood counts



Blood Management – Every drop of blood counts

Blood management is a process of using blood and blood products appropriately when required and strategies to reduce or minimise the need for a blood transfusion.

Why is this necessary?

Blood management improves patient outcomes by unwarranted exposure to possible side effects, faster recovery time and preserves a limited supply of a valuable resource.

How is blood management achieved?

Utilising a team approach to assess a patient's blood management needs and develop a plan of care using the latest technology and techniques to reduce blood loss and to enhance patient's own blood supply.

1. Build up patient's own blood

Pre-operative anaemia should be treated if possible. This may require iron replacement, synthetic erythropoietin (a hormone that stimulates red blood cell production), Vitamin B12 replacement , Vitamin C or folic acid replacement. All these factors are necessary for effective red blood cell production.

2. Reduce Blood loss

By utilising surgical methods, medications and special equipment, a patient's own blood can be conserved.

- Surgical instruments that minimise or prevents blood loss
- Minimally invasive surgery technique
- Medications applied to tissue surfaces that control bleeding, for example fibrin glue

3. Recycle patient's own blood

Cell salvage, where you can collect, wash and filter lost blood during and after the surgery and then return it to the patient as needed.

Blood dilution can also be used where blood is removed immediately prior to surgery and the blood volume is expanded with an intravenous fluid. Then the blood lost in the surgery is dilute and has fewer red cells and so fewer are lost. Blood can then be returned at the end of surgery.

Not all these options will be available or appropriate for every patient, consult your doctor for further information.

Transfusion options

Allogenic blood— blood from a voluntary donor.

- **Red Blood Cells (RBC's)** - carry haemoglobin that delivers oxygen to the tissues and organs. Red cells are usually given if the haemoglobin levels drops too low or a lot of blood is lost.
- **Platelets**—to prevent or stop bleeding.
- **Fresh Frozen plasma and Cryoprecipitate**- Contain clotting factors that work with platelets to seal wounds.

Autologous blood—your own blood.

- **Pre donation** –donating your own blood prior to surgery. There are guidelines for this procedure please discuss with your doctor.

Questions to review with your Doctor

1. Blood transfusion is used in a variety of settings, ask your doctor about the need for transfusion in your specific situation.
2. Have the possible risks been explained to you in your particular situation?
3. Have any alternatives been explained to you ?
4. Ask your doctor is there anything else you can do to prepare for surgery?
5. Have all your questions been answered?

This information is a guide only and you should discuss all your options with your doctor.

Further information also available:
Blood transfusion-have all your questions been answered?

Website for more information:

www.health.vic.gov.au/bloodmatters

Published by the Blood Matters—better safer transfusion program
Victorian Government Department of Human Services, Melbourne, Victoria
December 2008



Blood Matters Consumer Information Link
<http://www.health.vic.gov.au/best/consumer.htm>

Giving your consent

You should make sure you understand the reasons, risks and benefits when you are asked to give your consent for a transfusion. If you have any objections it is extremely important to discuss them with your doctor. In an emergency it may not be possible to obtain your consent for a transfusion, but the reasons should be explained to you when you are recovering.

When you have a blood transfusion

When you are ready to receive your blood transfusion you will be asked to confirm your identity. This is for your safety because if the wrong blood (meant for someone else) is given to you then this could cause serious medical problems. Staff will follow strict checking procedures before and during every transfusion. If you feel unwell during a transfusion, you should tell staff immediately.

What can we all do to make sure that a safe supply of blood is available?

It is important that healthy Australians donate blood. This helps ensure a safe and adequate blood supply, which saves many lives each year.

BLOOD TRANSFUSION checklist

- Do you understand why you need a blood transfusion?**
Your doctor should explain why a transfusion has been recommended.
You can ask about your haemoglobin level.
- Have the risks of transfusion been explained?**
The risks and benefits of transfusion for your condition should be clearly explained.
- Have alternatives been discussed?**
Alternatives to transfusion should always be considered and discussed with you by your doctor.
- Have all your questions been answered?**

Copies of this brochure are available from:
www.transfusion.com.au
www.cec.health.nsw.gov.au

Translated brochures available from:
www.mhcs.health.nsw.gov.au



NSW HEALTH



Disclaimer: This fact sheet is for your educational purposes only. It should not be used to guide and/or determine actual treatment choices or decisions. Any such decisions should be made in conjunction with advice from your treating practitioner. Please consult with your doctor or other health professionals to make sure this information is right for you.

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Blood transfusion

Answers to some common questions for you and your family.



Australian & New Zealand
Society of Blood Transfusion Ltd

Blood Watch Consumer Information Link

<http://www.cec.health.nsw.gov.au/programs/blood-watch.html>

Consent Information - Patient Copy Blood and Blood Products Transfusion Consent

1. Why am I having a blood and/or blood products transfusion?

Your doctor has recommended that you have a transfusion of blood or blood products, which are from volunteer donors. Blood is collected and screened by the Australian Red Cross service.

A transfusion is necessary to replace a part of your blood.

A transfusion is given to either;

- replace red blood cells to treat or prevent anaemia, improve oxygen transport and relieve symptoms of dizziness, tiredness or shortness of breath or
- to give you platelets to help stop or prevent bleeding or
- to give a plasma product to stop, treat or prevent bleeding.

Transfusions are given via a cannula (needle in your vein) or a central line into your vein. You will be closely watched for any reactions. You will also be regularly checked as to whether you need another blood transfusion.

2. What are the risks of having a blood or blood products (Fresh) transfusion?

Most common reactions to the blood or blood products that are being transfused are:

- high temperature
- rash, itching and hives
- feeling a bit unwell.

Rare risks are:

- having too much blood/fluids giving you shortness of breath.
- haemolysis, the abnormal breakdown of red blood cells.
- the development of antibodies which may complicate future transfusions. If these complications develop in women they can potentially cause problems for all current and future unborn babies.
- lung injury causing shortness of breath.
- the spread of viral or other infectious germs from the blood of the donors.
- very rarely, these above reactions can cause severe harm or possibly death.

There are specific complications for long term multiple transfusions that may be relevant to your medical condition. Please discuss these with your doctor.

3. What are the other relevant treatment options that you may have?

In some situations there maybe other choices to a blood transfusion and these include – fluid replacement with saline or other artificial compounds and/or iron supplements.

Please discuss these options with your doctor as they are not suitable for everybody.

Extra written information is available and may include:

Blood who needs it? – A consumer brochure (Australian Government - National Health Medical Research Council)

<http://www.nhmrc.gov.au/publications/subjects/blood.htm>

Blood Transfusion - Answers to some common questions for you and your family (Australian Red Cross Blood Service – Transfusion Medicine Service)

<http://www.transfusion.com.au/Consent-and-Risk/Consent-Checklist--Multicultural.aspx>

English and multicultural patient information leaflets are available.

More detailed information can be found at the following websites.

Blood Components: A Guide for Patients (National Health Medical Research Council)

<http://www.nhmrc.gov.au/publications/subjects/blood.htm>

Australian Red Cross Blood Service

<http://www.transfusion.com.au>

All sites provide excellent information, including statistical information.

Notes to talk to my doctor about:



Queensland Government:

http://www.health.qld.gov.au/consent/html/faq_clinician.asp

The Quick Reference Guide: December 2009 Obtaining Informed Consent for Blood and Blood Products

In terms of transfusion-transmitted infectious risks Australia has one of the safest blood supplies in the world:

- **Every blood donor:** is a volunteer (unpaid), must meet strict selection criteria, answers a comprehensive questionnaire about their health and lifestyle, undergoes a personal interview by trained staff and signs a declaration.
- **Every blood donation:** is screened for syphilis, hepatitis B (HBV) and hepatitis C (HCV), HIV and HTLV¹. In addition to antibody testing, nucleic acid testing (NAT) that detects viral material directly is used for HCV and HIV. Only blood that is negative for all these tests is released for use. (HBV NAT is to be implemented mid 2010 - for updates see Blood Service [medilink](#) newsletters).
- **All platelets:** are tested for the presence of bacteria (estimated risk overleaf). If the screening test becomes positive after release from Australian Red Cross Blood Service, the transfusion laboratory is notified immediately (if transfused, the recipient can then be followed up/managed).

Current risks of transfusion-transmitted infection in Australia:

For updates and more info on the derivation of the risks refer to current Blood Service [medilink](#) newsletters: www.transfusion.com.au/News-Conferences/Medilink.aspx

Agent	Australian residual risk estimates for transfusion-transmitted infections per unit
	HIV, HCV, HBV risks based on Australian Red Cross Blood Service data from 2007 and 2008 (HTLV1 2004-08) and calculated using mathematical models
HIV	Approximately 1 in 5.4 million
Hepatitis C	Approximately 1 in 2.7 million
Hepatitis B	Approximately 1 in 739,000
HTLV ¹	Approximately 1 in 17.5 million
Syphilis	Considerably less than 1 in 1 million
Malaria	1 in 4.9 million to 1 in 10.2 million
CMV ²	Important consideration in certain patient groups (see below)
variant vCJD	Possible. Not yet reported in Australia (see below)

- The viral risks above are very small compared to risks of everyday living (see below): Chance of dying in a road accident in Australia is about 1 in 10,000 per year.
- **Variant Creutzfeldt-Jacob disease (vCJD):** To date there have been no reported cases of vCJD in Australia. In the UK there have been a small number of reported cases of putative/possible transfusion transmission since 2004. In Australia, as a precaution, people who have spent > 6 months in the UK between 1/1/80 and 31/12/96 and/or had a transfusion in the UK since 1/1/80 are not able to donate.
- **Transfusion-transmitted CMV infection²** may lead to severe or fatal disease in immunocompromised patients. CMV seronegative units are indicated for certain patient groups (including neonates and pregnant women) and may be dependent on the patient's CMV status (past infection) - consult your transfusion service provider.
- **Fractionated plasma-derived products:** the manufacturing process includes dedicated pathogen inactivation steps and therefore the infectious risks are much lower.

The CALMAN Chart (Calman 1996) for explaining risk (UK risk per 1 year):

Negligible	< 1,000,000 eg death from a lightning strike
Minimal	1:100,000 - 1:1,000,000 eg death from a train accident
Very low	1:10,000 - 1:100,000 eg death from an accident at work
Low	1:1,000 - 1:10,000 eg death from a road accident
Moderate	1:100 - 1: 1,000 eg death from smoking 10 cigarettes per day
High	> 1:100 eg transmission of chickenpox to susceptible household contacts

¹HTLV: Human T-cell lymphotropic virus - an uncommon virus, which may in a small % of cases cause blood or nervous system problems.

²CMV: Cytomegalovirus - a common virus typically carried by leucocytes.

See table over leaf for other serious risks of transfusion.

Non-viral risks associated with blood and blood products

- The most common non-serious reactions include headache, mild fever, itching / hives.
- The most frequently reported causes of serious / fatal transfusion reactions are TRALI[†], bacterial sepsis, and ABO incompatibility (the later mostly due to preventable errors linked to patient / specimen ID).
- The following table gives estimates of risk based on reports from a number of countries and are subject to the problem of under-estimation due to lack of reporting and recognition of transfusion reactions (hence the broad ranges).
- A national reporting system for reactions and near misses (haemovigilance) is in development and will help provide Australian risk estimates in the future.
- Remember to report all transfusion related events (including suspected and near miss events) to the transfusion service provider.
- The transfusion of autologous blood is not without risk and the same indications for the use of homologous blood apply.

Reported Non-Viral Serious Risks of Blood Transfusion (International Data)

Adverse Reaction		Risk per unit transfused (unless specified)
Bacterial sepsis: (Clinically apparent reactions)	Red Cells	1: 75,000
	Platelets	1: 500,000
Haemolytic reactions:	Acute	1: 12,000 to 77,000
	Delayed	1: 4,000 to 9,000
Anaphylaxis - IgA deficiency		1: 20,000 to 50,000
Fluid overload / cardiac failure		Up to 1% of patients receiving transfusions
Transfusion-related acute lung injury [†]		1: 5,000 to 190,000
Transfusion-associated graft versus host disease ^{**}		Rare

Above table from Blood Service [medilink](#) Newsletter Aug 2009 with updates available at: www.transfusion.com.au/News-conferences/Medilink.aspx

[†]TRALI - Transfusion Related Acute Lung Injury is characterised by acute respiratory distress (within hours of transfusion) with non-cardiogenic pulmonary oedema - full recovery in 48 hours is usual if the patient is well resuscitated/supported. TRALI is likely to be significantly under reported.

^{**}TA-GVHD - Transfusion Associated Graft Versus Host Disease is due to viable engraftment of T lymphocytes and usually affects severely immunocompromised patients or recipients that share an HLA haplotype with a specific donor. Gamma irradiation of blood products for specific at risk groups of patients (refer to hospital guidelines) prevent this rare but usually fatal event.

Checklist for Consent - Blood and Blood Products:

Consent is a process - not a piece of paper

Explain:

Cause/likelihood of bleeding/low blood count (including any uncertainty)?

Nature of the proposed transfusion therapy - what is involved?

Benefits expected?

Risks - common and rare but serious?

Alternatives - including the risk of doing nothing?

Ask:

Is there anything else you would like to know?

Is there anything you do not understand?

Document the consent process - as per hospital/health service policy

Give written information or use diagrams where appropriate.

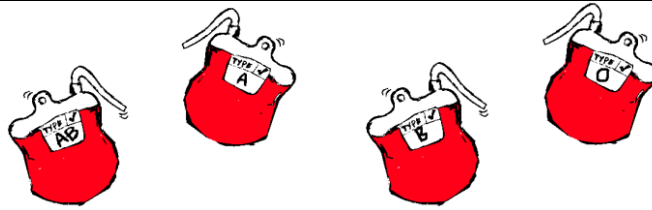
Use a competent interpreter when the patient is not fluent in English.

More Info? Ask your transfusion service provider or visit:

www.health.sa.gov.au/bloodsafe or www.transfusion.com.au (Blood Service clinical website) or for interactive and free online transfusion education: www.bloodsafelearning.org.au



Government of South Australia
SA Health



Blood Transfusion?

Questions to Ask Your Doctor

- *Why do I (or might I) need a blood transfusion?*
- *What are the
Benefits?
Risks and side effects?
Alternatives including the risk of doing nothing?*

For people having planned surgery:

- *Do I need my blood counts checked before hand?*
- and when the test results are through:
- *Am I starting with normal blood counts?*

**Ask anything else you would like to know or
don't understand about Blood Transfusion**

These same questions can be used if you are asked
to give consent for family members

BloodSafe wallet card for consumers

Estimates of the risks from transfusions

- A minor allergic reaction or rash occurs in 1% to 2% of transfusions.
- A major incompatibility reaction: 1 case in every 100,000 transfusions (1 case per year in NZ).
- The risks of acquiring HCV and HIV from a blood transfusion is much less than 1 case in every 1,000,000 transfusions in New Zealand. No cases have been reported in NZ since testing for transmission of these viruses was introduced.
- For hepatitis B the risk is estimated as 1 in 100,000 transfusions (approximately 1 case per year).
- HTLV-1 virus: less than 1 case in 100,000 transfusions (less than 1 case per year in NZ).
- Serious Bacterial Infection: less than 1 case in 100,000 transfusions (less than 1 case per year in New Zealand).

Blood and blood products have a high level of safety. Refusing a blood transfusion when it is needed may lead to serious health problems.

What alternatives are there to blood transfusion?

No Transfusion

The health risks from *not* having a transfusion when needed are much greater than from having a transfusion.

Many types of surgery and treatments for cancer are simply not possible without transfusions of blood products.

Providing Blood for Yourself

People who are healthy and planning a non urgent operation and may need a transfusion, can ask to have blood collected for their own use.

This is called *autologous blood collection*.

Your Doctor can help you assess the risks and benefits of having your blood collected. Further information is available in the leaflet - "Providing Blood for Yourself". A charge may be made for collecting, handling and testing your blood if you request this service.

Directed Donations

Blood collected from relatives or friends has been shown to be no safer than blood from healthy, unpaid, voluntary donors. For this reason, directed donations are discouraged by the New Zealand Blood Service.

Blood Substitutes

So far, no substitutes for red cells, platelets or plasma are available for routine use.

Remember that:

- A transfusion of blood or blood products is only given when the benefits outweigh the risks.
- If you refuse to have a transfusion when needed, the risks to your health are likely to increase.
- You can ask as many questions as you need to ensure you are making the right choice.

If you have any more questions after reading this document, please discuss them with your Doctor or a member of your local Transfusion Medicine Department.

Leaflet prepared and provided by New Zealand Blood Service.
Private Bag 92071, Victoria Street West, Auckland 1142.
71 Great South Road, Epsom, Auckland.
Telephone: 09 523 5733 Fax: 09 523 5754

www.nzblood.co.nz

1111 01105

Trio: NZBCL105 08/08

Fresh Blood Components



Your guide to blood transfusion

You have been given this leaflet because your Doctor considers you may need or you will need, a blood transfusion.

As with any treatment you have the right to decide whether you want to have the treatment or not. You will be asked to sign a Consent Form to show that:

- the benefits, risks and alternatives for your treatment, including transfusion of blood products, have been explained to you.
- you have been able to ask any questions about the treatment, and
- you agree to receive the treatment.

This leaflet answers common questions about blood transfusions. It may help you discuss any concerns you have.

What is a blood transfusion?

A blood transfusion is a treatment arranged by your doctor. It involves giving blood, or a product made from blood, into a vein.

Where does blood come from?

In New Zealand, blood is obtained only from unpaid and voluntary donors.

Blood is collected with sterile equipment that is used only once.

The standards of the New Zealand Blood Service meet or exceed internationally recognised standards for:

- selecting blood donors, and for
- collecting, testing, processing and storing blood products for transfusion.

What types of blood components are used for transfusions?

Fresh blood products given in blood transfusions are:

Red cells

- Used to treat anaemia that is causing a moderate or severe health problem, or
- Severe bleeding (e.g. during or after surgery, or following an accident).

Platelets

- Platelets are tiny blood cells that are needed to stop bleeding. They are sometimes transfused during treatment in Intensive Care Units and as part of cancer treatment.

Fresh frozen plasma and Cryoprecipitate

- Used for replacing clotting factors and rarely other blood proteins (sometimes used during treatment in Intensive Care Units or for people with liver disease).

What tests are done on blood?

Blood donations are always tested for:

Infections

- Hepatitis B and C
- HIV/AIDS
- Syphilis

Blood groups

- ABO group
- Rh type
- Blood group antibodies

Red Cells are carefully checked to minimise the chance for an incompatibility reaction during a transfusion. The checks may include a special test, called a crossmatch, that uses a sample of your own blood and the blood selected for transfusion.

How safe is a blood transfusion?

The main risks from blood products are described below. They are no greater than the risks people experience in every day life and from other health treatment procedures.

Blood transfusions are an extremely safe and effective form of treatment. They save many lives. Some complex surgical operations cannot be performed without giving a blood transfusion.

The risks from a transfusion must be weighed up against the risks from not having a transfusion. If your doctor considers you need a transfusion, the doctor believes the benefits for you are greater than the risks.

What are some of the risks from blood transfusions?

- Temporary reactions including a mild fever or skin rash may occur.
- A major incompatibility reaction from a transfusion is rare. It may cause kidney failure, breathing difficulties, and sometimes other life threatening complications.
- Rarely, the treatment may not produce the desired result.
- Transfusion of blood components may occasionally cause an infection:
 - Minor virus infections that are common in the community may be passed on occasionally.
 - Hepatitis B and C, Yersinia, HIV/AIDS virus and HTLV-1 virus are very unlikely, but these infections can be severe and in some cases life threatening. Tests and checks on blood donations minimise the risk for these infections.
- The risk of acquiring CJD/vCJD from transfusion remains very low and has never been reported in New Zealand. Rare cases have been reported in the UK.

New Zealand Blood Service Patient
Guide to Blood Transfusion
<http://www.nzblood.co.nz/?t=116>

NHMRC/ASBT Clinical Practice Guidelines on the Use of Blood Components, 2001

(currently being revised)

4.2 - CONSUMERS

- “Change at clinical and organisational levels within hospitals will help to standardise the use of blood. Consumers can also be important drivers of change to transfusion practice, if they are aware of the issues surrounding blood component therapy and know about the risks and benefits of its use in their own situation”.
- “Blood component therapy should be seen as a possible component of a patient’s overall management. As such therapy may be associated with immunological reactions, technical errors and other complications, clear explanation of the potential risks and benefits should be part of the overall process for informed consent”.

From 2001 NHMRC/ASBT Clinical Practice Guidelines on the Use of Blood Components (red blood cells, platelets, fresh frozen plasma, cryoprecipitate) Page 34, available at <http://www.nhmrc.gov.au/files/nhmrc/file/publications/synopses/cp78.pdf>

For information on revision of the guidelines see <http://www.nba.gov.au/guidelines/review.html>