

Australia and New Zealand Organ Donation Registry

(ANZOD Registry)

2012 Report

[Data collected to 31st December 2011]

Edited by

Mrs Leonie Excell
Ms Violet Marion
Ms Kylie Hurst
Professor Graeme Russ

Special Section

Liver Transplants from Donors After Cardiac Death

Ms Glenda Balderson,
Professor Jonathan Fawcett,
Professor Stephen Lynch

Australia and New Zealand Liver Transplant Registry

FUNDING

ANZOD Registry is funded by
Australian Organ and Tissue Authority
Kidney Health Australia
New Zealand Ministry of Health

COORDINATING CENTRE

ANZDATA Registry and ANZOD Registry
9th Floor - East Wing
The Royal Adelaide Hospital
North Terrace,
Adelaide, South Australia, 5000.

Prof G R Russ	Editor / Chair, ANZDATA
A/Prof S P McDonald	Executive Officer, ANZDATA
Dr P Clayton	Fellow in Epidemiology
Ms K Hurst	Registry Manager, ANZDATA / ANZOD
Mrs L R Excell	Consultant, ANZDATA / ANZOD
Mr B E R Livingston	Data Analyst, ANZDATA
Ms H Dent	Biostatistician, ANZDATA
Dr N Briggs	Biostatistician, ANZDATA
Dr B Grace	Research Fellow, ANZDATA
Ms C Leitch	Administrative Officer, ANZDATA
Ms K Textor	Administrative Assistant, ANZDATA
Ms V. Marion	Editor / ATCA Delegate for ANZOD

Phone (61-8) 8222.0941
Fax (61-8) 8222.0985
Email anzdata@anzdata.org.au
Web <http://www.anzdata.org.au>

SUGGESTED CITATION

The suggested citation for this report is as follows:

ANZOD Registry Report 2012
Australia and New Zealand Organ Donation Registry
Adelaide, South Australia.

Editors: Leonie Excell, Violet Marion, Graeme Russ

Publications based upon ANZOD Registry information reported here or supplied upon request, must include the citation as noted above and the following notice:

The data reported here have been supplied by the Australia and New Zealand Organ Donation Registry. The interpretation and reporting of these data are the responsibility of the Authors and in no way should be seen as an official policy or interpretation of the Australia and New Zealand Organ Donation Registry.

DATABASE

Data is stored on a relational database using ORACLE version 9i.

STATISTICAL METHODS

Statistical analyses were performed using STATA version 11.

Printed in Adelaide, South Australia
© Copyright 2012 by the ANZOD Registry
ISSN 1329-2889

ACKNOWLEDGMENTS

The Editors would like to thank the Donor and Recipient Coordinators whose reporting of data has made this 2012 Report possible.

TRANSPLANT REGIONS AND CENTRES

QUEENSLAND

ORGAN DONOR COORDINATORS

Megan Fletcher
Cheryl Fourie
Angela McInnes
Francesca Rourke
Bianca Topp

HEART AND LUNG TRANSPLANT CENTRE

Prince Charles Hospital, Rode Road, Chermside 4032

LIVER TRANSPLANT CENTRES

Princess Alexandra Hospital, Ipswich Road, Woolloongabba 4102
Royal Children's Hospital, Bowen Bridge Road, Herston 4029

RENAL TRANSPLANT CENTRE

Princess Alexandra Hospital, Ipswich Road, Woolloongabba 4102

NEW SOUTH WALES / AUSTRALIAN CAPITAL TERRITORY

ORGAN DONOR COORDINATORS

Carrie Alvaro
Hazel Christine
Alice Coulson
Malcolm Green
Adam Roshan
Nicola Seifert
Sandra Thompson

HEART AND LUNG TRANSPLANT CENTRE

St Vincent's Hospital, Victoria Street, Darlinghurst 2010

AUSTRALIAN NATIONAL LIVER TRANSPLANT CENTRES

The Children's Hospital at Westmead, Hawkesbury Road, Westmead 2145
Royal Prince Alfred Hospital, Missenden Road, Camperdown 2050

NATIONAL PANCREAS TRANSPLANT CENTRE

Dept. Renal Medicine, Westmead Hospital, Cnr Hawkesbury and Darcy Road, Westmead 2145

RENAL TRANSPLANT CENTRES

The Children's Hospital at Westmead, Hainsworth Street, Westmead 2145
John Hunter Hospital, Lookout Road, New Lambton Heights, Newcastle 2305
Prince of Wales Hospital, Barker Street, Randwick 2031
Sydney Children's Hospital, High Street, Randwick 2031
Royal North Shore Hospital, Pacific Highway, St Leonards 2065
Statewide Renal Services (Royal Prince Alfred Hospital), Missenden Road, Camperdown 2050
St Vincent's Hospital, Victoria Street, Darlinghurst 2010
Westmead Hospital, Cnr Hawkesbury and Darcy Road, Westmead 2145

TRANSPLANT REGIONS AND CENTRES

VICTORIA / TASMANIA

ORGAN DONOR COORDINATORS

Sarah Aranha
Bettina Clark
Victoria Dale
Espedito Faraone
Hayley Furniss
Nicole Gauthie
Nina Klein
Paula Lyons
Violet Marion
Nora O'Connor
Jo Sanders
Elizabeth Treasure
Andrew Young

HEART AND LUNG TRANSPLANT CENTRES

Royal Children's Hospital, Flemington Road, Parkville 3052
The Alfred Hospital, Commercial Road, Prahran 3181

LIVER TRANSPLANT CENTRES

Austin Hospital, Austin Health, 145 Studley Road, Heidelberg 3084
Royal Children's Hospital, Flemington Road, Parkville 3052

NATIONAL PANCREAS TRANSPLANT CENTRE (VICTORIA)

Monash Medical Centre, 246 Clayton Road, Clayton 3168

RENAL TRANSPLANT CENTRES

Alfred Hospital, Commercial Road, Prahran 3181
Austin Hospital, Austin Health, 145 Studley Road, Heidelberg 3084
Monash Medical Centre (Paediatric & Adult), 246 Clayton Road, Clayton 3168
Royal Children's Hospital, Flemington Road, Parkville 3052
The Royal Melbourne Hospital, Grattan Street, Parkville 3052
St Vincent's Hospital, 41 Victoria Parade, Fitzroy 3065

SOUTH AUSTRALIA

ORGAN DONOR COORDINATORS

Renee Chambers
Catherine Hannan
Kathy Hee
Philippa Jones
Heylen Laver
James McCance
Daniel Medicott
Stephen Orr
Nigel Palk
Danila Peake
Lesley Sheffield
Penny Wride

SOUTH AUSTRALIAN LIVER TRANSPLANT CENTRE

Flinders Medical Centre, Flinders Drive, Bedford Park 5042

RENAL TRANSPLANT CENTRES

Central Northern Adelaide Renal Transplant Service, Royal Adelaide Hospital,
North Terrace, Adelaide 5000
Women's and Children's Hospital, 72 King William Road, North Adelaide 5006

TRANSPLANT REGIONS AND CENTRES

NORTHERN TERRITORY

ORGAN DONOR COORDINATORS

Kelly Anstey
Justine Clarke
Andrea James
Deborah Josling
Michelle Thomas

WESTERN AUSTRALIA

ORGAN DONOR COORDINATORS

Monica de Caux
Susan Frew
Sarah Markham
Kylie Monk
Denyse Norman
Melissa Smith
Daniel Winters-McAppion

HEART TRANSPLANT CENTRE

Royal Perth Hospital, Wellington Street, Perth 6001

LUNG TRANSPLANT CENTRE

Royal Perth Hospital, Wellington Street, Perth 6001

WA LIVER TRANSPLANTATION CENTRE

Sir Charles Gairdner Hospital, Verdun Street, Nedlands WA 6009

RENAL TRANSPLANT CENTRES

Princess Margaret Hospital for Children, Roberts Road, Subiaco 6008
Royal Perth Hospital, Wellington Street, Perth 6001
Sir Charles Gairdner Hospital, Verdun Street, Nedlands 6009

NEW ZEALAND

ORGAN DONOR COORDINATORS

Rachel Josephson
Janice Langlands
Mary O'Donnell
Cecilia Westmacott

HEART AND LUNG TRANSPLANT CENTRE

Greenlane Clinical Centre, Greenlane, Auckland

NEW ZEALAND LIVER TRANSPLANT UNIT (NZLTU)

Level 15, Support Building, Auckland City Hospital, Auckland

PANCREAS TRANSPLANT CENTRE

Level 15, Support Building, Auckland City Hospital, Auckland

RENAL TRANSPLANT CENTRES

Auckland City Hospital, Grafton Road, Auckland
(Starship Children's Hospital, Auckland)
Christchurch Hospital, Riccarton Avenue, Christchurch
Wellington Hospital, Riddiford Street, Newtown, Wellington

TABLE OF CONTENTS

INTRODUCTION	PAGE
SUMMARY	
Australia and New Zealand	1
ORGAN DONORS IN AUSTRALIA AND NEW ZEALAND	
Number and Donors per Million of Population	2
International Donor Statistics	2
Waiting List by Transplant Region 01-Jan-2012	3
Transplanted Organs Donated in Australia and New Zealand by Transplanting State	3
Number of Deceased Donors and Solid Organ Transplants vs the Waiting List 2006-2011	3
DONORS PER THOUSAND DEATHS 2006-2010.	4
DONOR POSTCODES	4
DONOR PROFILE IN AUSTRALIA AND NEW ZEALAND	5
Donor Gender - States, Australia and New Zealand 1997-2001 2002-2006 2007-2011	5
Mean and Median Age by Gender - Australia, States and New Zealand	6
Age Group of Deceased Donors	7
CAUSE OF DONOR DEATH	8-11
DONOR OCCUPATION, ETHNIC ORIGIN AND RELIGIOUS DENOMINATION	12
INTENDED DONORS	13
DONATION AFTER CARDIAC DEATH (DCD) DONORS	14-16
CARDIOPULMONARY RESUSCITATION	17
DONOR WEIGHT	17
VIROLOGY SCREENING	
Cytomegalovirus Status of Donors	18
Epstein-Barr Virus Status of Donors	18
Hepatitis C Status of Donors	18
Hepatitis B Core Antibody Status and Hepatitis B Surface Antigen.	19
MEDICAL CONDITION OF DONORS	20-21
Expanded Criteria for Kidney Donors 2010-2011 States, Australia and New Zealand	21
DONOR INTENTION	
Driver's Licence and Enrolled in the Australian Organ Donor Registry.	22
AUTHORITY SOUGHT FOR ORGAN DONATION	23
DIRECT CONTACT WITH DONOR COORDINATOR	23
CORONER'S CASES	24
SUMMARY OF ORGANS REQUESTED, CONSENT GIVEN, RETRIEVED AND TRANSPLANTED	24
ORGANS REQUESTED	25
MULTIPLE ORGAN RETRIEVAL	25
ORGANS TRANSPLANTED	26
EXCHANGE OF ORGANS	
Exchange of Organs between States and New Zealand	27
Summary of Organs Transplanted in Australia from New Zealand Donors	27
KIDNEY DONATION	
Waiting List versus Deceased Donor Transplants	28
Outcome of Request for Kidney Donation	28
Age of Donors Providing Transplanted Kidneys	29
Deceased Donor Kidney Transplants - Australia and New Zealand	29
Regional Outcome of Requests for Kidney Donation	30
Donor Kidney Function	30
Reasons Kidneys were Unused.	31
Donor Age of Unused Kidneys.	31
Kidney Perfusion Method	32
Kidney Transplant Outcome	33
SPECIAL SECTION - Liver Transplants From Donors After Cardiac Death	34-36
By Ms Glenda Balderson, Professor Jonathan Fawcett and Professor Stephen Lynch	
LIVER DONATION	
Waiting List versus Deceased Donor Transplants - Outcome of Request for Liver Donation	37
Age of Donors Providing Transplanted Livers	38
Liver Transplants by Transplant State and Country	38
Perfusion of Livers	38
Regional Outcome of Requests for Liver Donation	39
Reasons Livers were Unused after Retrieval	39
Donor Age of Unused Livers	39
Donor Liver Function - Liver Transplant Outcome	40

TABLE OF CONTENTS

CARDIO-THORACIC ORGAN DONATION	PAGE
Waiting List versus Cadaver Transplants	41
Outcome of Request for Heart Donation	42
Age of Donors Providing Transplanted Hearts	42
Heart Transplants by State and Country	43
Heart and Lung Transplant Recipients by Transplant Country	43
Regional Outcome of Requests for Heart Donation	43
Outcome of Request for Heart Valve Donation - Age of Heart Valve Donors	44
Regional Outcome of Requests for Heart Valve Donation	44
Outcome of Request for Lung Donation	45
Age of Donors Providing Transplanted Lungs	45
Lung Transplant Recipients	46
Regional Outcome of Requests for Lung Donation	46
Donor Lung Function	46
PANCREAS DONATION	
Waiting List versus Deceased Door Transplant	47
Outcome of Request for Pancreas Donation	47
Age of Donors Providing Transplanted Pancreas and Islets	48
Regional Outcome of Requests for Pancreas Donation	48
CORNEAL DONATION	
Outcome of Request for Cornea Donation and Age Corneal Donors	49
Regional Outcome of Requests for Corneal Donation.	49
BONE DONATION	
Outcome of Request for Bone Donation and Age of Bone Donors	50
Regional Outcome of Bone Donation	50
TERMINAL MANAGEMENT	
Time from Admission to Brain Death	51
Time from Ventilation to Brain Death and Brain Death to Aortic Cross Clamp	52
DONOR MAINTENANCE	53
TERMINAL TREATMENT	54
APPENDIX I AUSTRALIA (ON CD) (and website www.anzdata.org.au)	<u>YELLOW PAGES</u>
Number of Donors for Each State by Year 1989-2011 and Donor Gender, Age Groups 2007-2011	3-4
Number of Donors from Each Hospital by State by Year 1989-2011	5-7
Cause of Donor Death in Each State and Australia in Detail 1989-2011	8-10
Cause of Donor Death Related to Australian States by Year 1989-2011	11
Cause of Donor Death Related to Australian States by Year (Males) (Females) 1989-2011	12-13
Organs Requested by Donor State by Year 2007-2011	14
Reason Organs not Requested by Donor State 1989-2011 and 2011 only	15-19
Organ Consent Obtained by Donor State by Year 2007-2011	20
Organ Consent not Obtained by Donor State by Year 2007-2011	21
Organ Consents by Donor State 1989-2011 and 2011 only	22-25
Solid Organs Retrieved by Donor State 1989-2011 and 2011 only	26-27
Organs Retrieved by Donor State by Year 2000-2011	28-29
Reason Organs not Retrieved by Donor State 1989-2011 and 2011 only	30-37
Organs Retrieved in Each Donor State by Retrieval State Team 1989-2011 and 2011 only	38-39
Donor Age Related to Transplanted Organs by Year 2003-2011	40-41
Outcome of Organs Retrieved in Australia by Year 1989-2011	42-43
Outcome of Organs Retrieved in Australia by Donor State 1989-2011 and 2011 only	44-46
Transplanted Solid Organs from Donor States - Australian Donors 2011	47
Transplanted Solid Organs from Donor States - Australian Donors 1989-2011	48-49
Transplanted Solid Organs by Transplanting State and Australia by Year 1989-2011	50-51
Transplanted Solid Organs by Transplanting Country - New Zealand 1993-2011	51
Organs Donated from each Australian State and Australia and Transplanted by Year 1989-2011	52-53
Transplanted Solid Organs - Donor State to Destination State 1989-2011 and 2011 only	54-57
APPENDIX II NEW ZEALAND (ON CD) (and website www.anzdata.org.au)	<u>GREEN PAGES</u>
Number of Donors from Each Hospital 1993-2011	2
Donor Gender Numbers and Age Group 1997-2011	3
Cause of Donor Death Related to Gender and Age Group 1993-2011	4
Cause of Donor Death by Year 1993-2011 and by Gender 1993-2011	5
Reason Organs not Requested 1993-2011	6
Organ Consents 1993-2011	7-8
Organ Consents 2011 - Solid Organs Retrieved 1993-2011 and 2011	8
Organs Retrieved in New Zealand by Retrieval State Team 2003-2011	9
Reasons Organs not Retrieved 1993-2011 and 2011 only	10
Donor Age Related to Transplanted Organs 1998-2011	12-13
Outcome of Organs Retrieved in New Zealand 1993-2011	14
Transplanted Solid Organs - New Zealand Donors 1993-2011 and 2011	15
Transplanted Solid Organs - Donor State to Destination State 1993-2011 and 2011 only	16-19
Transplanted Solid Organs in New Zealand - Donors from Australia or New Zealand 1993-2011	20
Solid Organs from New Zealand Donors - Transplanted in New Zealand or Australia 1993-2011	20

INTRODUCTION

We are pleased to present the 2012 report of the Australia and New Zealand Organ Donation Registry (ANZOD Registry). The Registry has been collecting and reporting on data for deceased organ donors since 1989 in Australia and 1993 in New Zealand. This report contains data for the year 2011 as well as cumulative data from each country since inception.

The Registry continues to be a collaborative effort of the Australasian Transplant Coordinators Association and the Australia and New Zealand Dialysis and Transplant Registry (ANZDATA). The Registry gratefully receives funding from the Australian Organ and Tissue Donation Authority, Kidney Health Australia and the New Zealand Ministry of Health.

It is usual for a Special Section to be included in the Report. This year the Special Section is Liver Transplants from Donors After Cardiac Death by Ms Glenda Balderson, Professor Jonathon Fawcett and Professor Stephen Lynch from the Australia and New Zealand Liver Transplant Registry.

We would like to thank Ms Kathy Hee, the Manager from Donate Life SA as the ATCA co-editor of previous reports for her expertise over the years and wish her well in her retirement. Ms Violet Marion from Donatelifelife - Victorian Organ Donation Agency has been appointed to become the new co-editor from 2012.

The report can be accessed via our website
<http://www.anzdata.org.au>.

Graeme Russ

Chair ANZOD Executive