



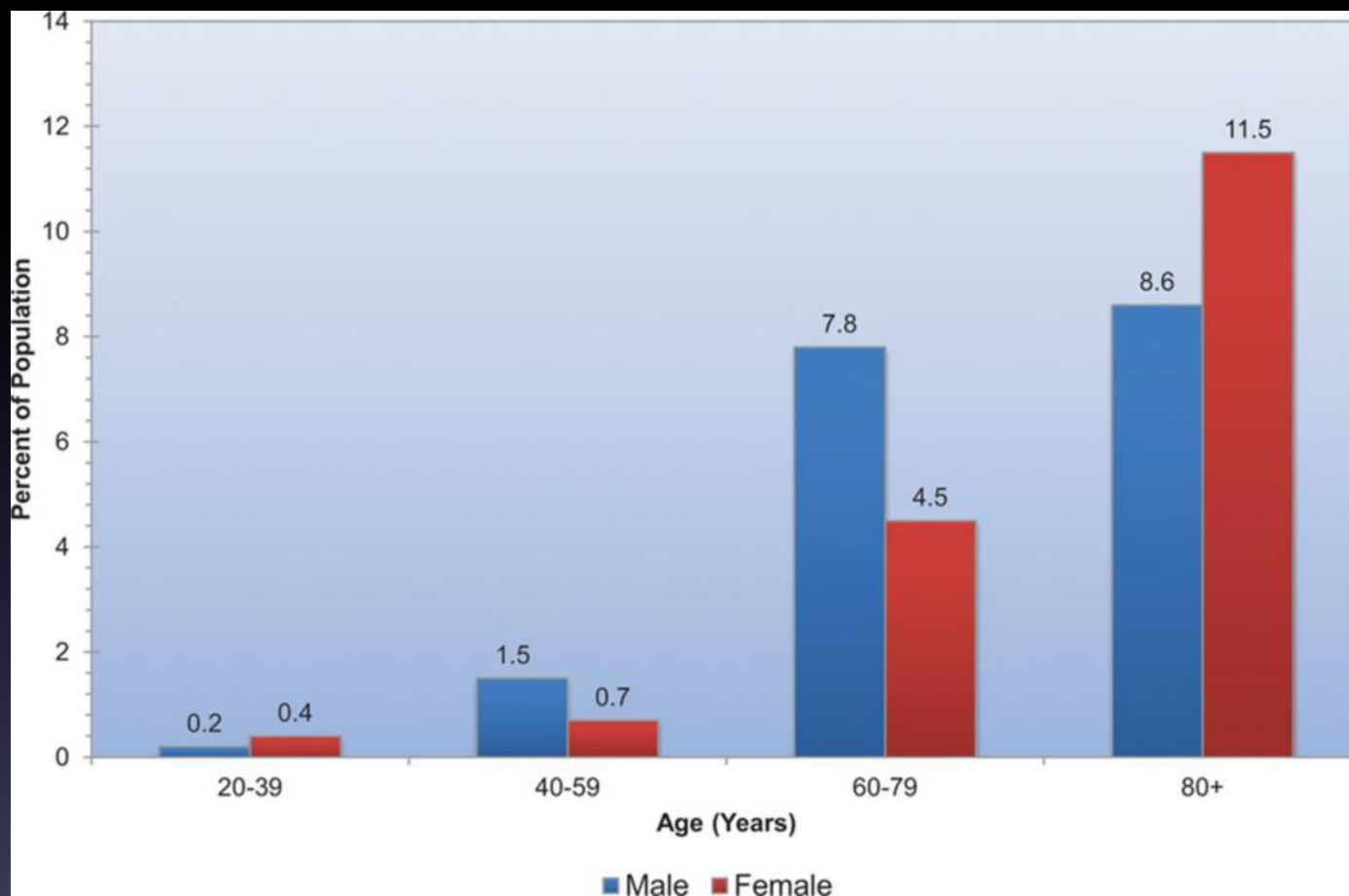
Donor Utilization: Making Use of a Precious Resource in Cardiac Transplant

Jason W. Smith, MD

Assistant Professor of Surgery

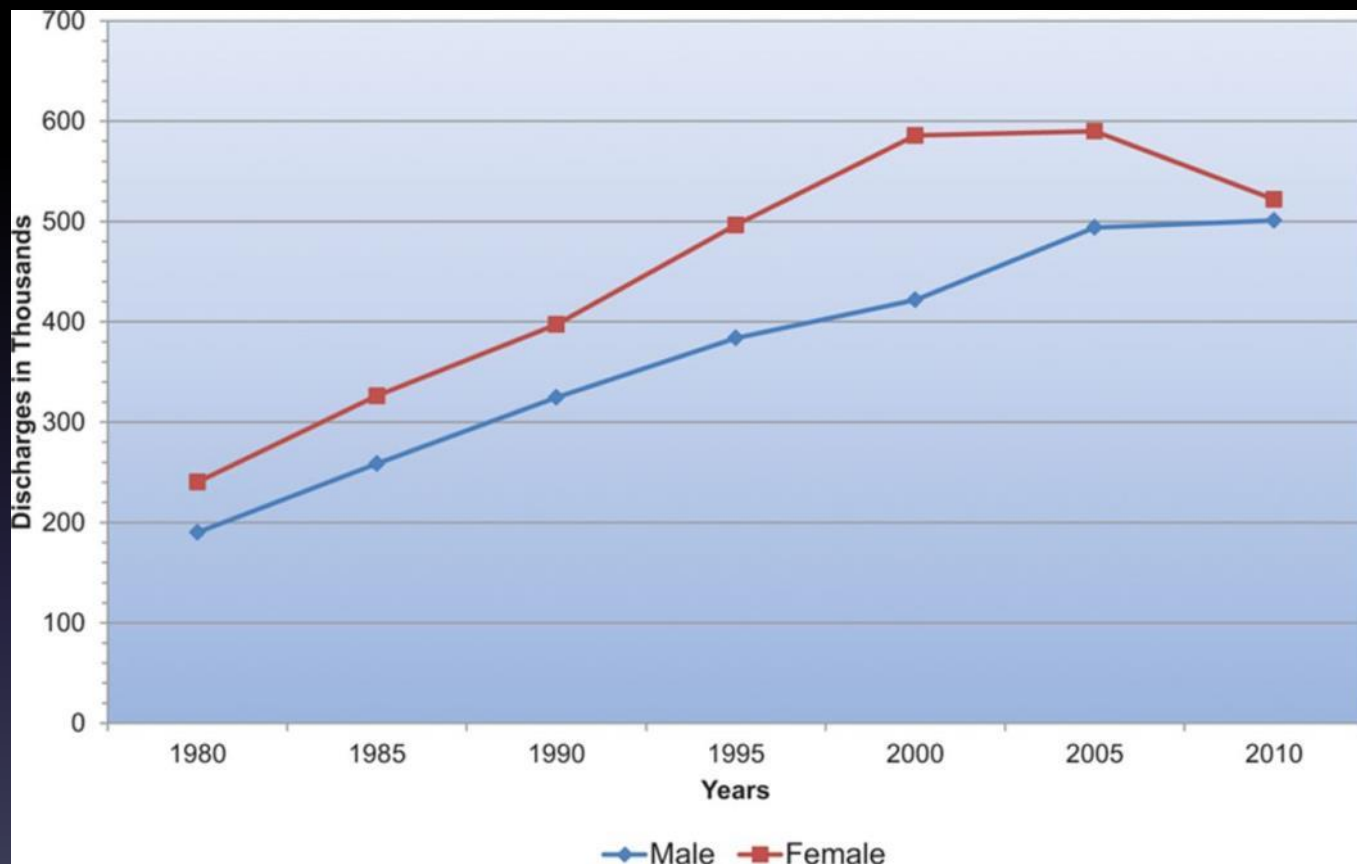
The University of Washington

March 5, 2015



Go A S et al. *Circulation*. 2014;129:e28-e292





Go A S et al. *Circulation*. 2014;129:e28-e292





Heart Failure Statistics

<u>US Population</u> [1]	301,000,000
<u>Target Population – 35-74 Age Cohort</u> [1]	139,100,000
<u>Diagnosed CHF Population</u> [2]	
All ages	5,520,000
35 to 74 years	3,744,000
NYHA Class IIIB and IV [3] in 35 – 74 Age Cohort	374,400 (75%)
Co-morbidities estimated in this Cohort	(280,800)
Potential Patients – 35 to 74 years	93,600
Simple Math: Patients per 100,000 Population	30

[1] US Census Bureau Statistics (2008)

[2] Heart and Stroke Statistics, American Heart Association (2008)

[3] Cardiovascular Roundtable research and analysis, The Advisory Board Company (2008)



Our Population

Washington state: 6,724,540

= 2017 pts

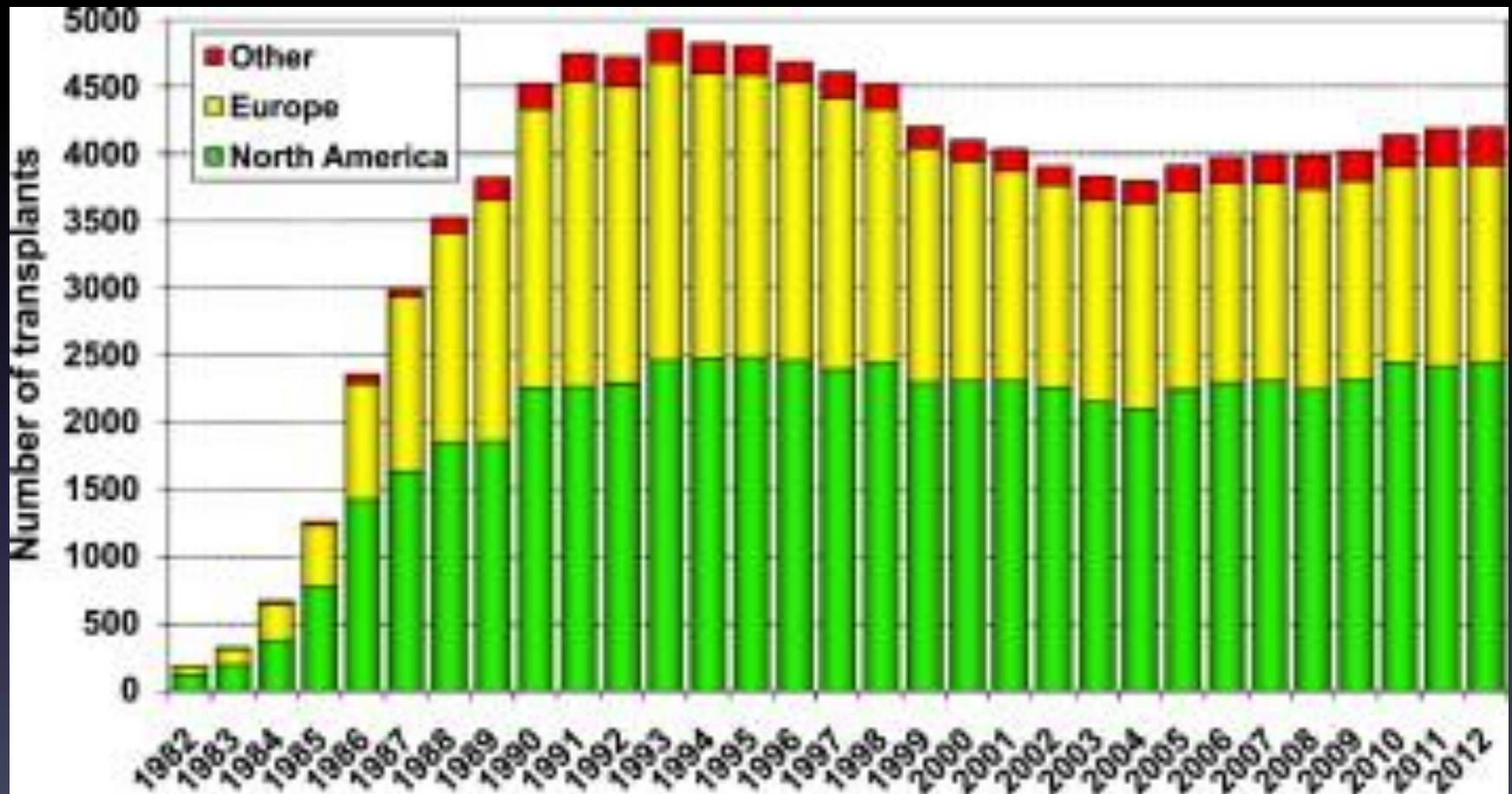


Orthotopic Heart Transplant



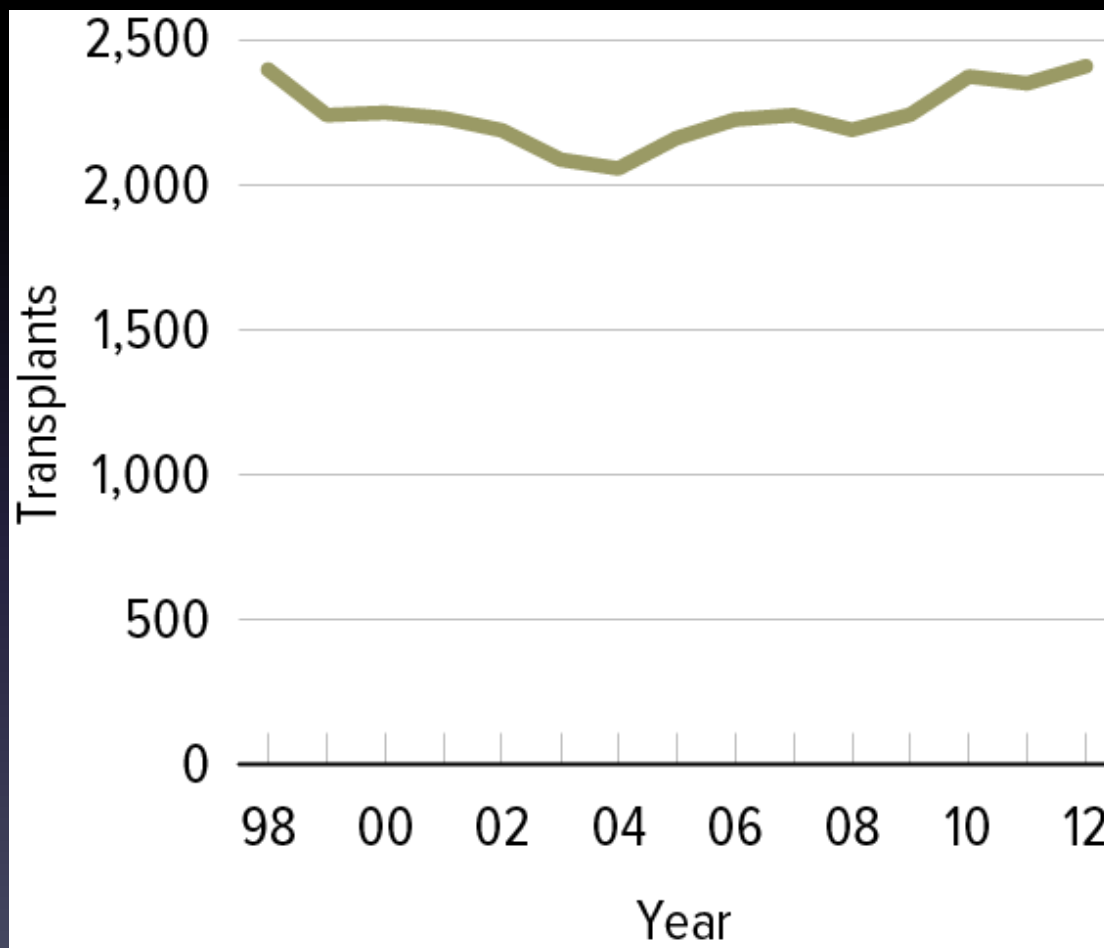


Two Decades of Stability



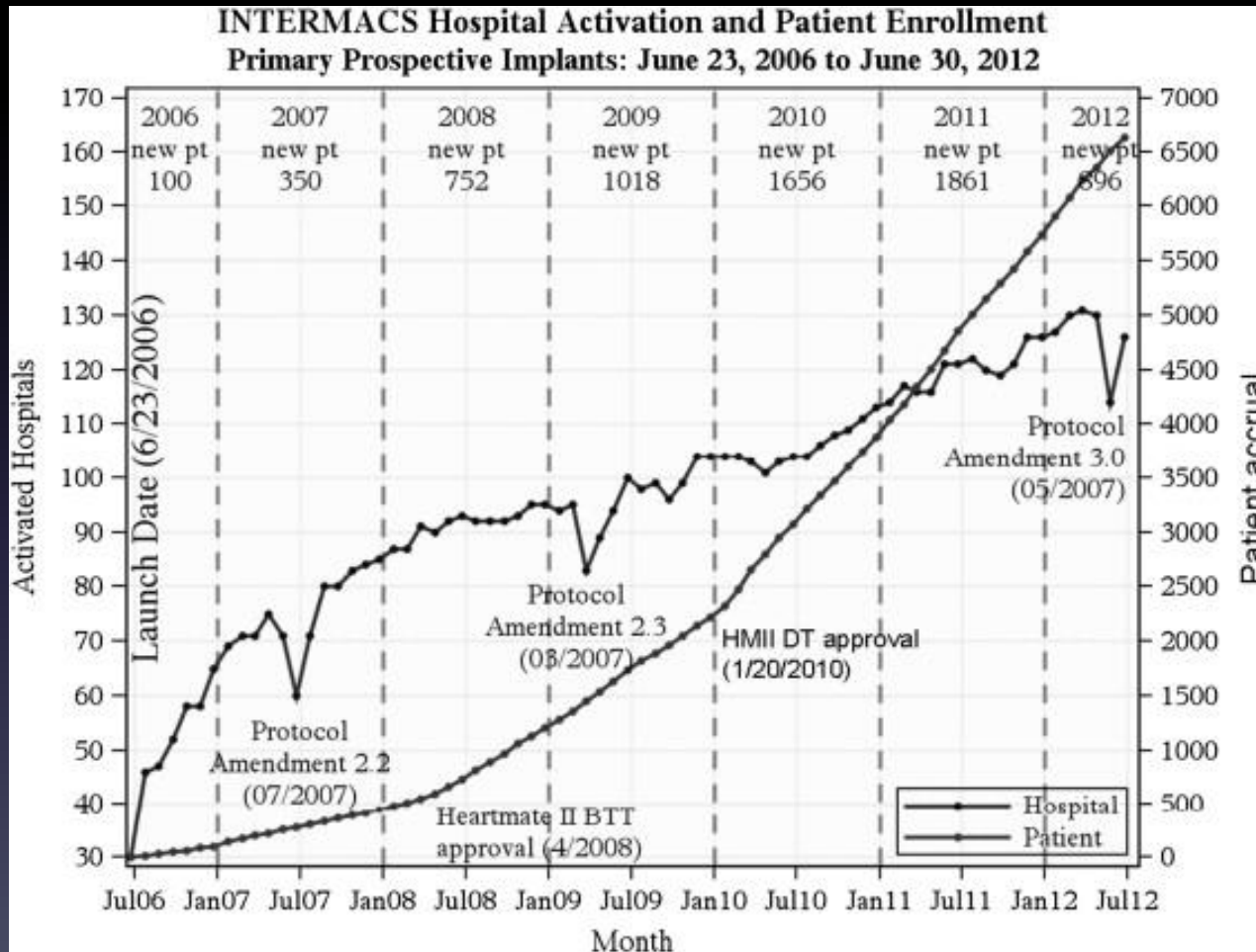


Total heart transplants





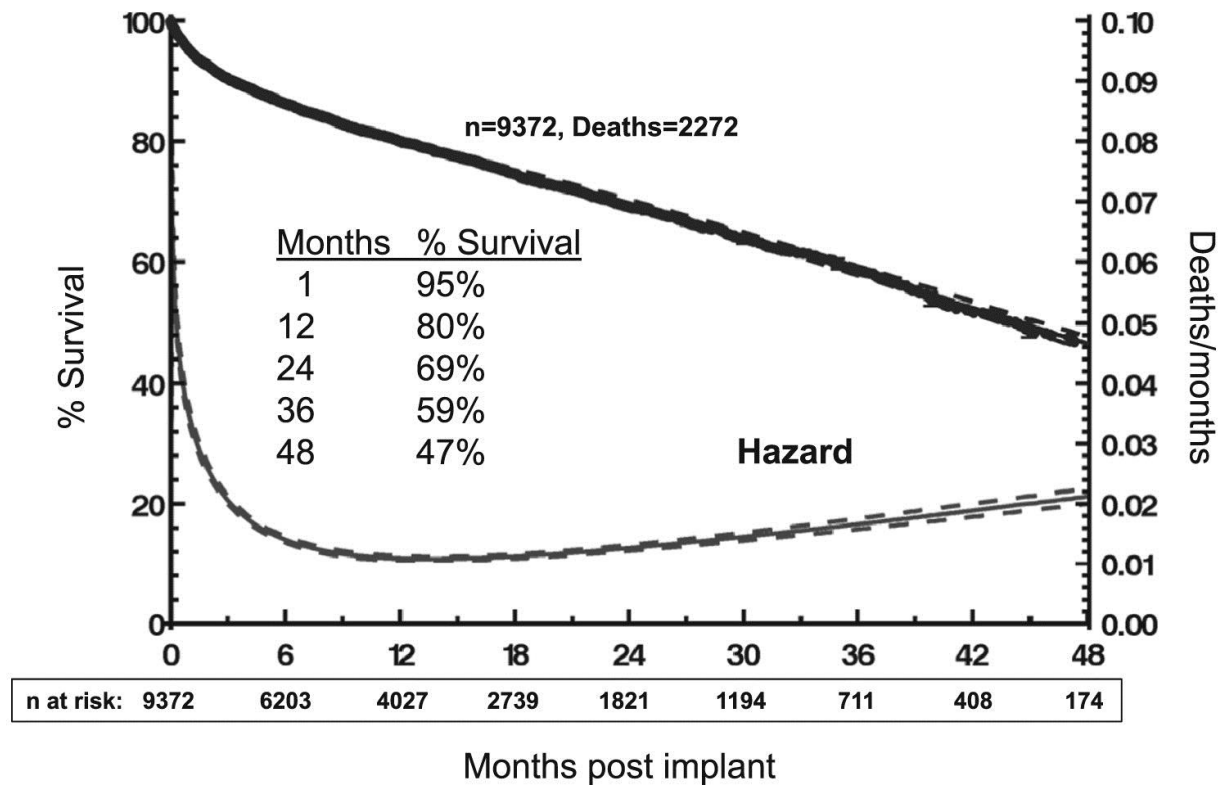
Increasing MCS use





LVAD Survival

Interm@cs Continuous Flow LVAD/BiVAD Implants: 2008 – 2013, n = 9372

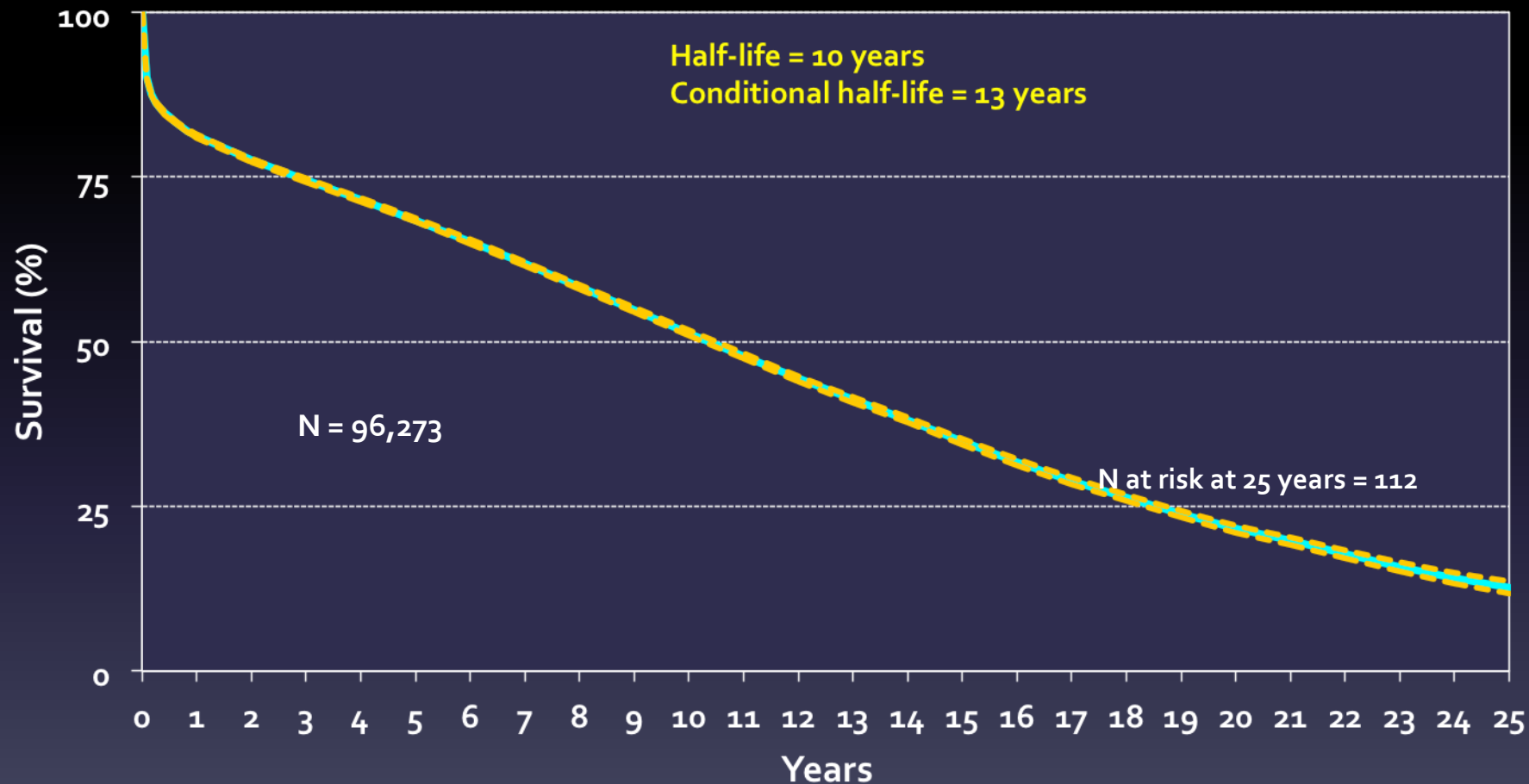




HEART TRANSPLANTS

Kaplan-Meier Survival

(Transplants: January 1982 - June 2010)



ISHLT

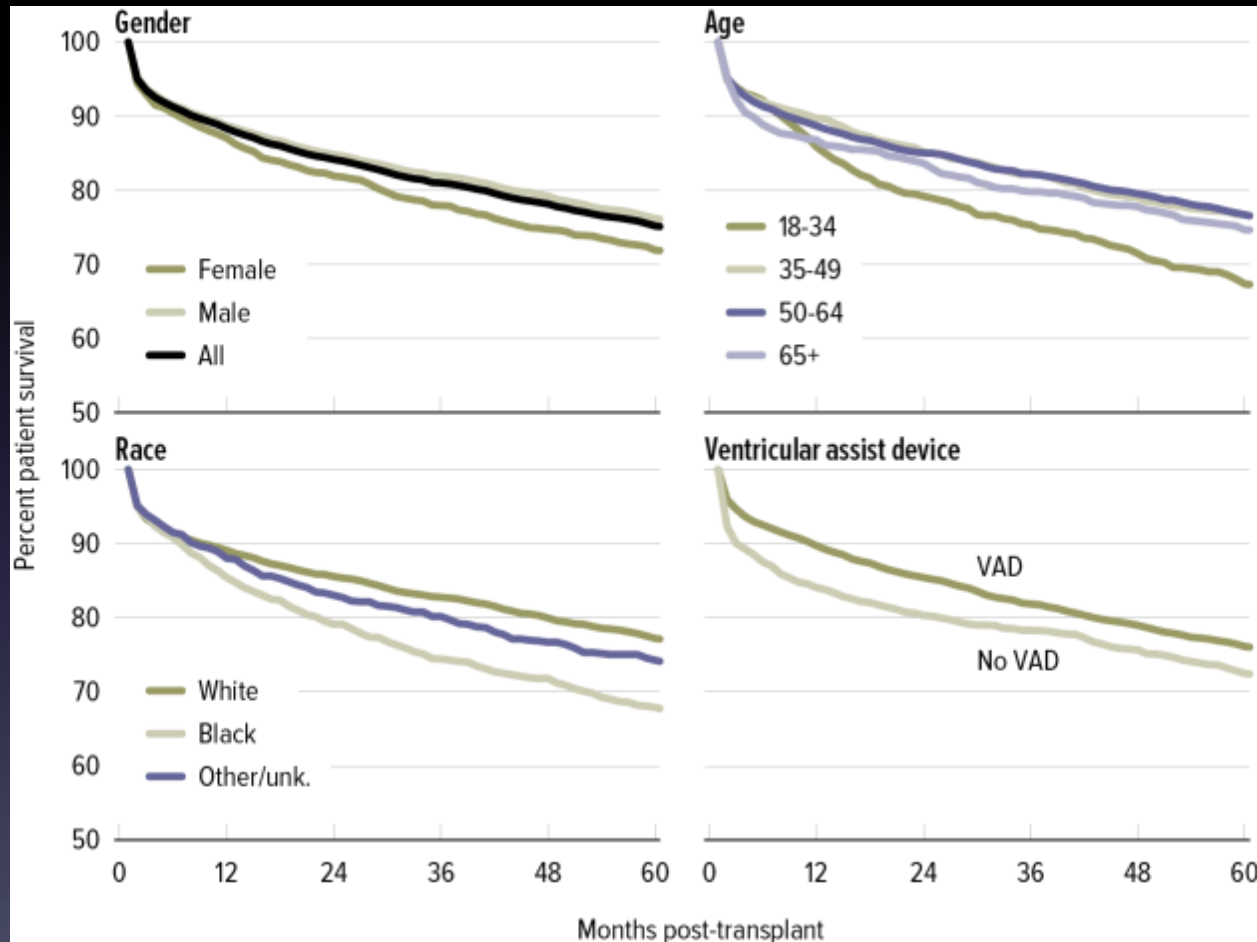
2012

J Heart Lung Transplant. 2012 Oct; 31(10): 1045-1095

Survival is based on adult and pediatric
transplant recipients

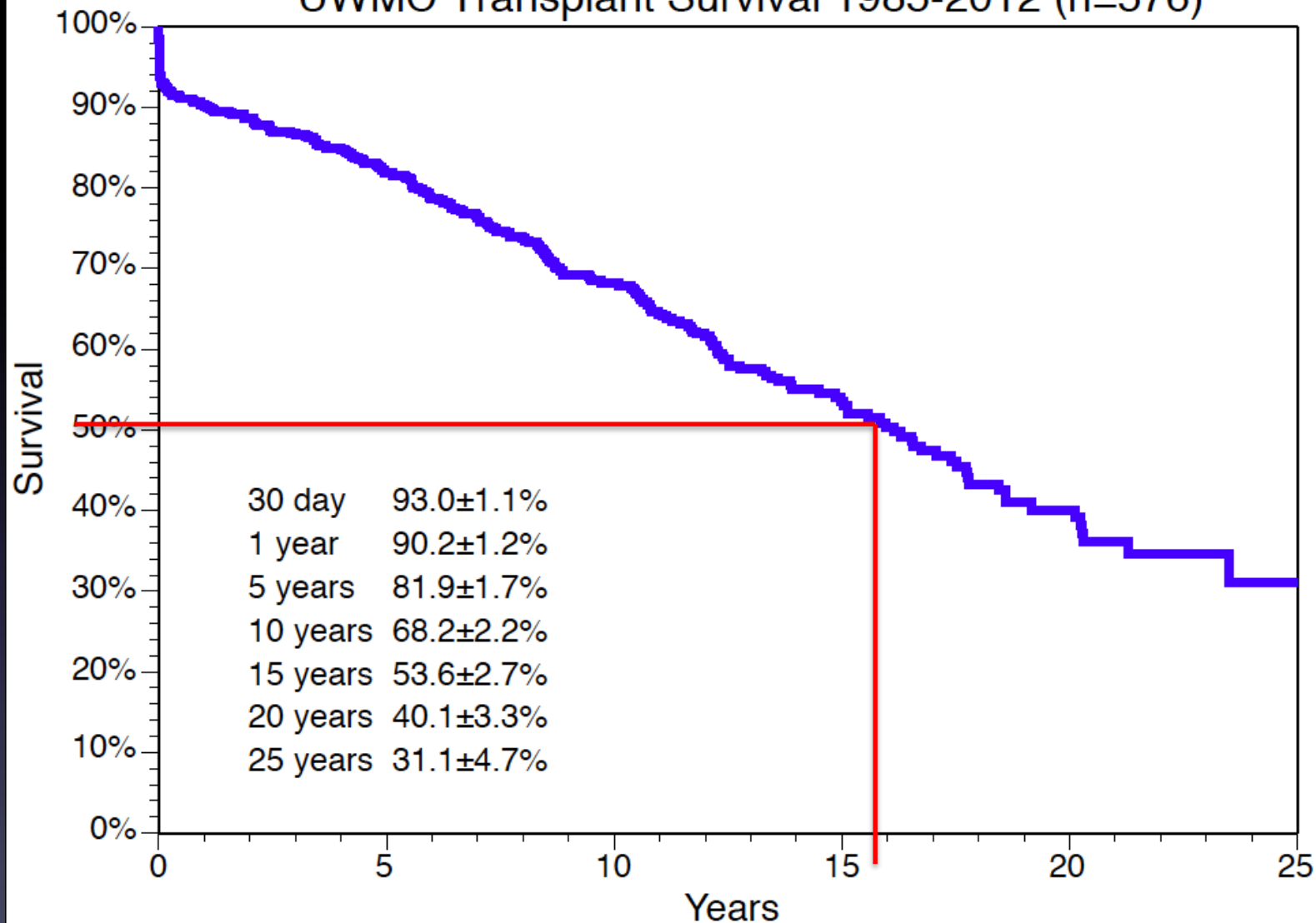


Patient survival among adult heart transplant recipients, 2005–2007



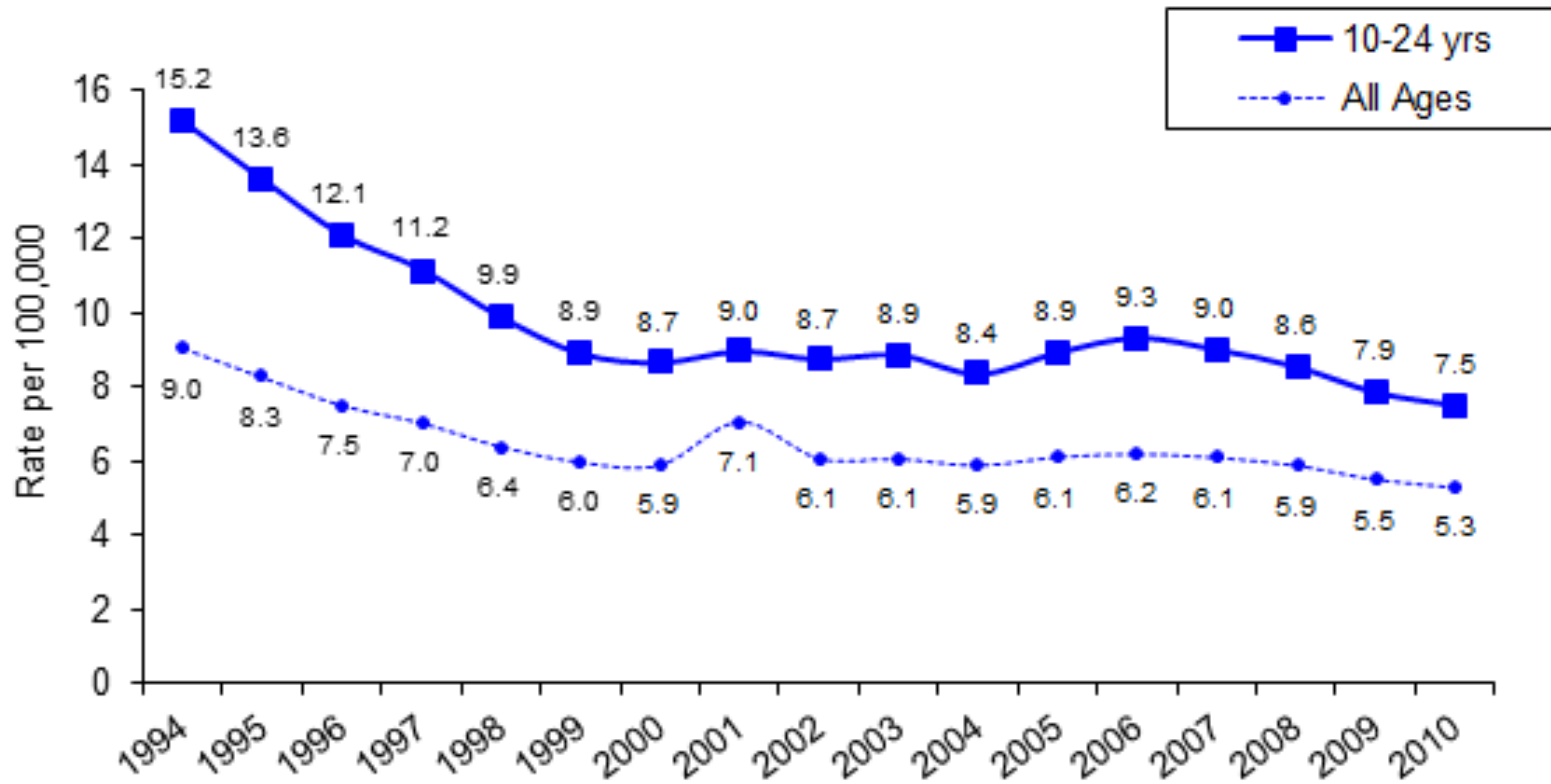


UWMC Transplant Survival 1985-2012 (n=576)





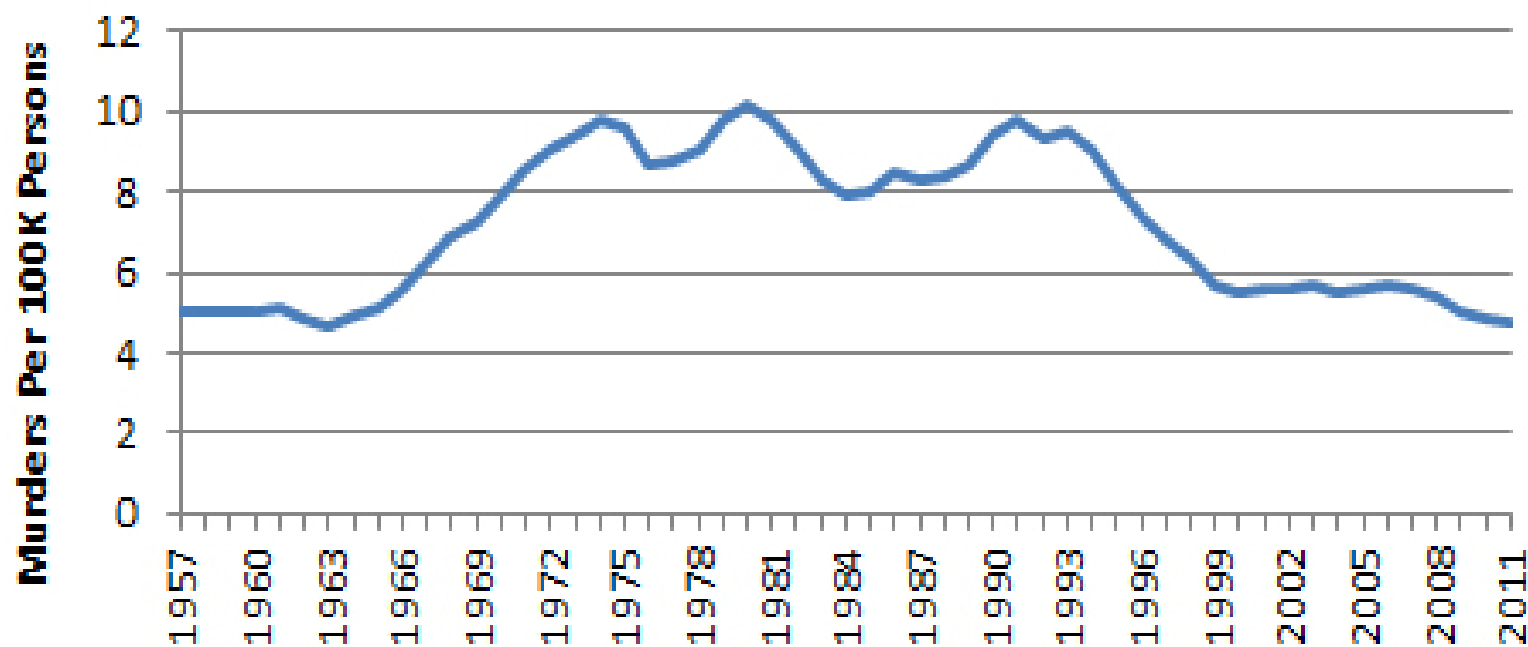
Suicide Rate in the US by Year



* Rates for All Ages are age-adjusted to the standard 2000 population; rates for the 10-24 yrs age group is age-specific.



Murder Rate Per 100,000 Persons USA, 1957-2011



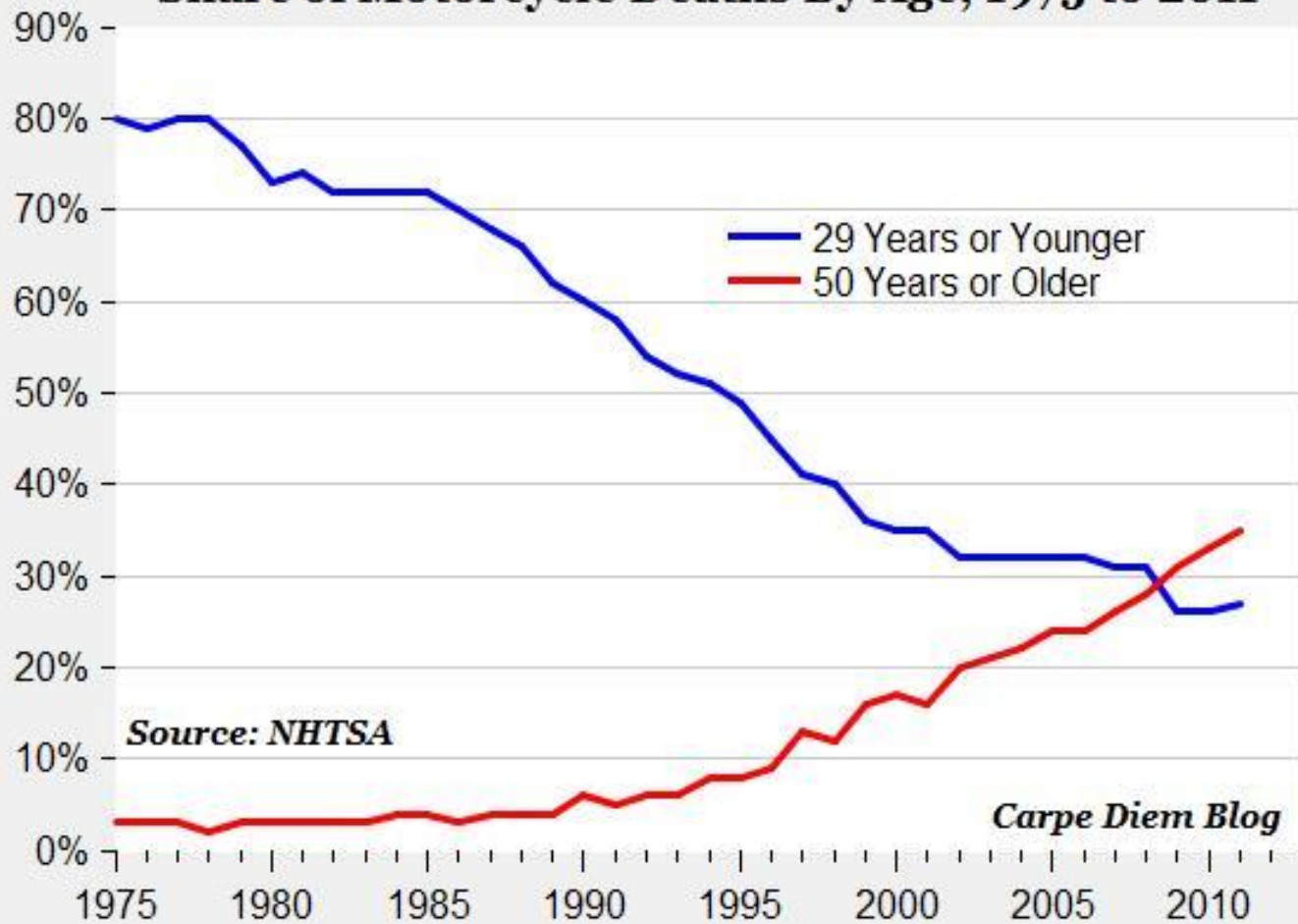
Source: FBI Uniform Crime Report

Year

© 2012, Michael W. Kruse

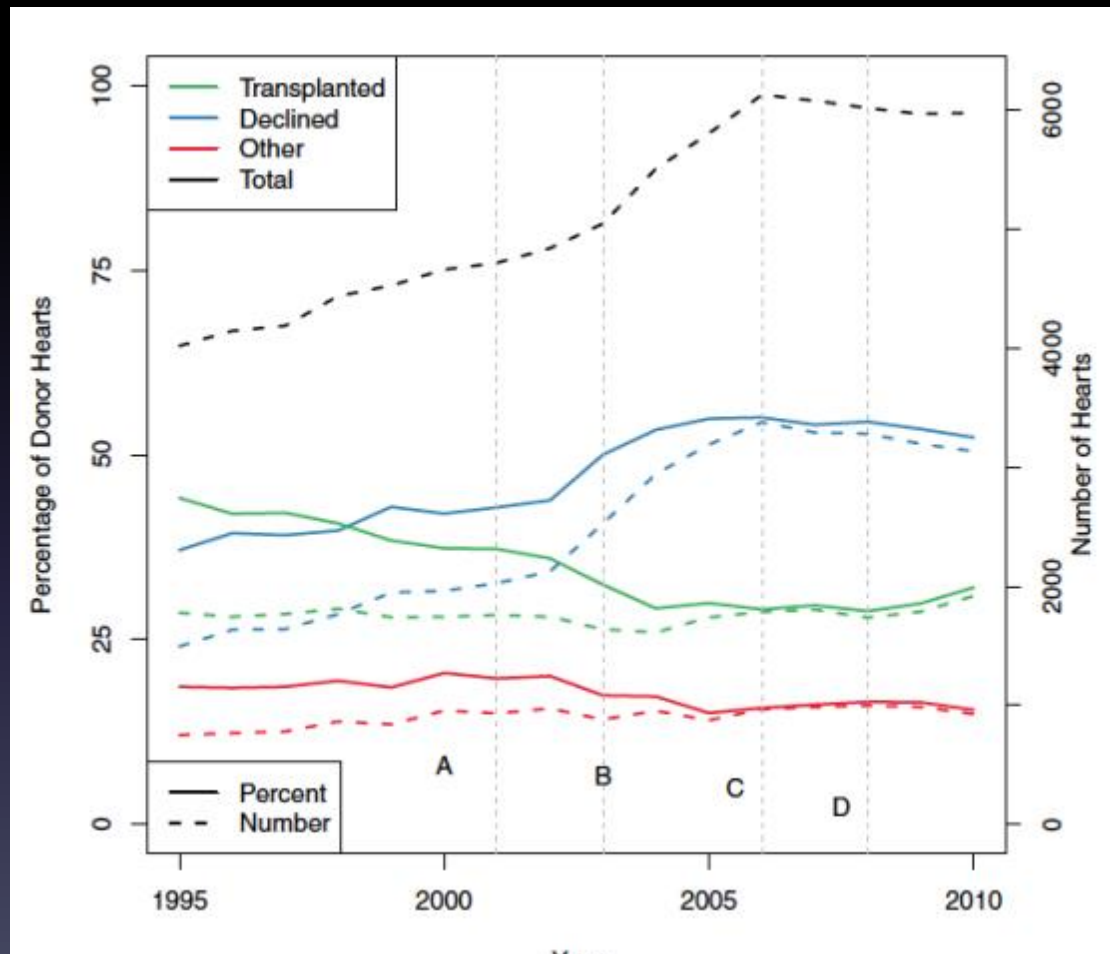


Share of Motorcycle Deaths By Age, 1975 to 2011





But, It's more complicated



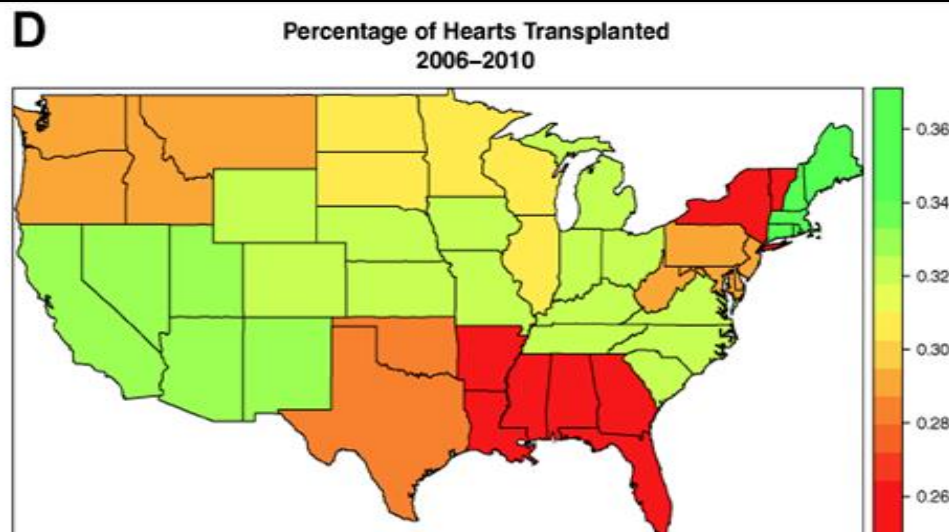


Figure 3: Percentage of donor hearts accepted for transplantation, by UNOS region. (A) United States map showing geographic location of 11 UNOS regions, (B) 1995–1999, (C) 2000–2005, (D) 2006–2010. (note B–D: Alaska and Hawaii are not shown, but belong to region 6).

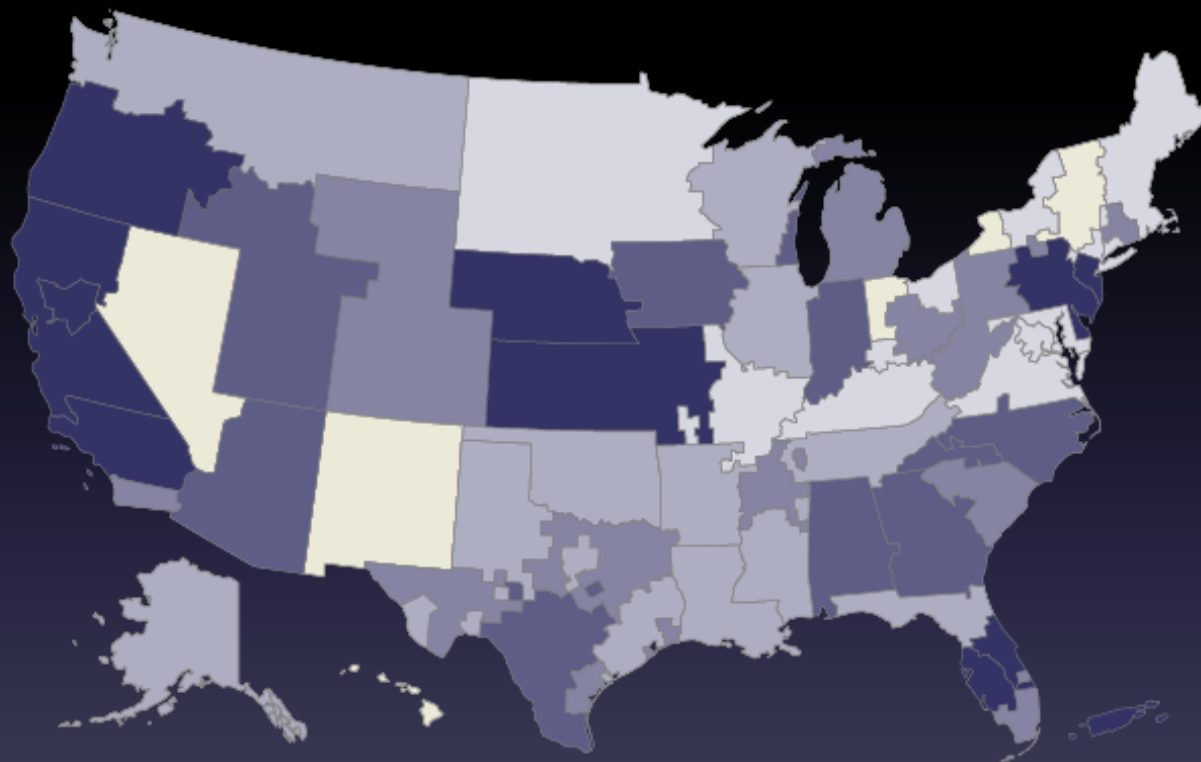


So Why is That Happening?

- Decline in heart utilization from 44% to 29%
- Increasing age of the donor population
- Fear of “high risk” hearts
- Avoidance of LVH
- Fear of longer ischemic times
- Avoidance of gender and size mismatching



Deceased donor heart transplant rates per 100 patient years on the waiting list



No tx
program

46.43

60.80

83.71

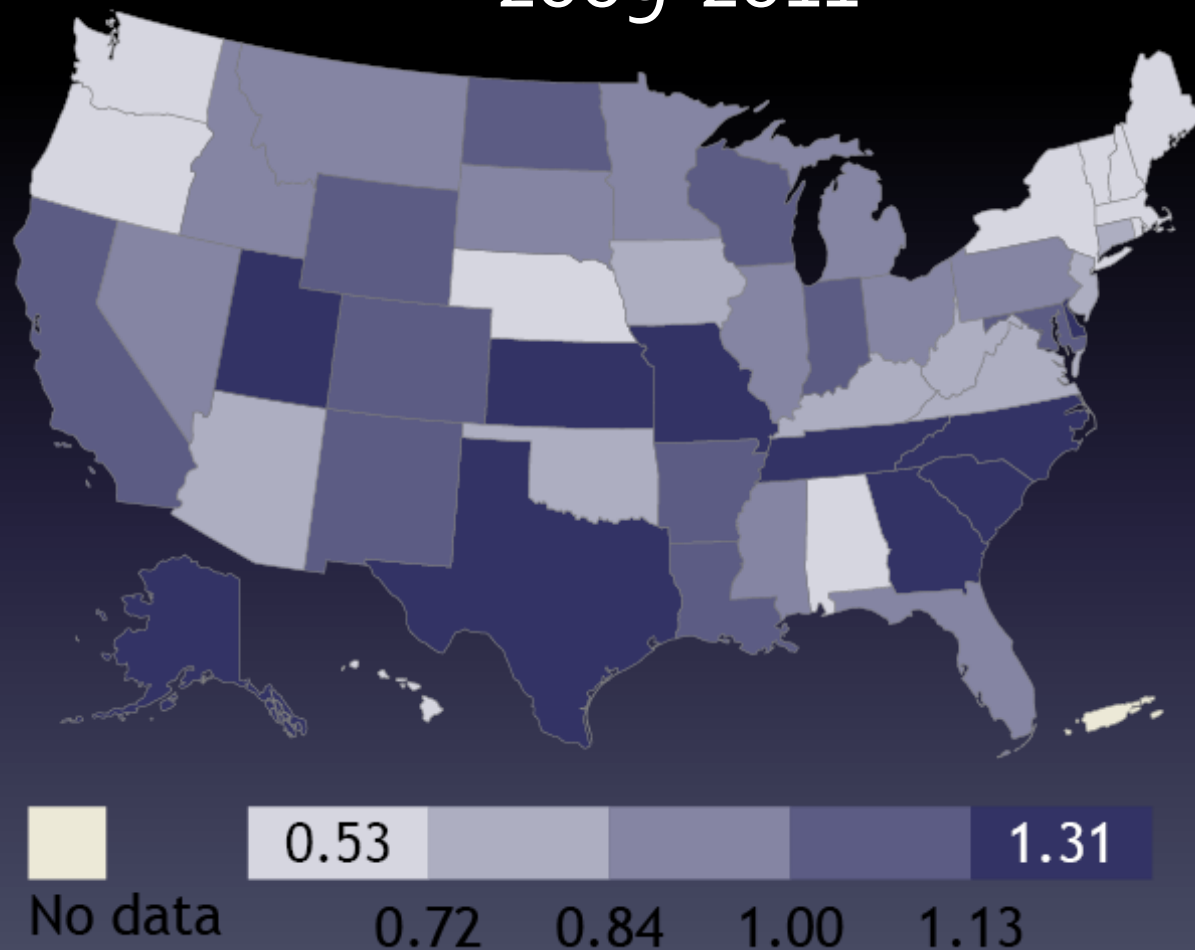
121.92

169.11

279.60



Deceased donor heart donation rates (per 1,000 deaths), by state: 2009-2011





UW Donor Stats

- 2012
 - 325 Donor offers
 - 78 Transplanted hearts
 - 20 Transplanted at the UW
- 2012
 - 6% overall utilization
 - 26% adjusted utilization



The Plan

- Review every donor offer
- Identify missed opportunities
- Establish a Donor Review Conference
- Consensus for donor assessment
- Review our outcomes



Review every offer

- Careful review of each donor offer
- Highlight hearts transplanted by other centers
- Identify reasons for refusal



Missed Opportunities

- Initial Low EF that improves
- CPR positive donors with normal EF
- Obese donors with normal Echo and Angio
- Mild LVH in local donors
- Local older donors
- Young donors turned down for CDC high risk status



Donor Conference

- Non-threatening, collaborative
- De-identified
- Thorough review of selected cases
- Discussion
- Literature review plan



Heart transplantation outcomes from cardiac arrest–resuscitated donors

Mohammed A. Quader, MD, Luke G. Wolfe, MS, and Vigneshwar Kasirajan, MD

From the Division of Cardiothoracic Surgery, Virginia Commonwealth University, Richmond, Virginia.

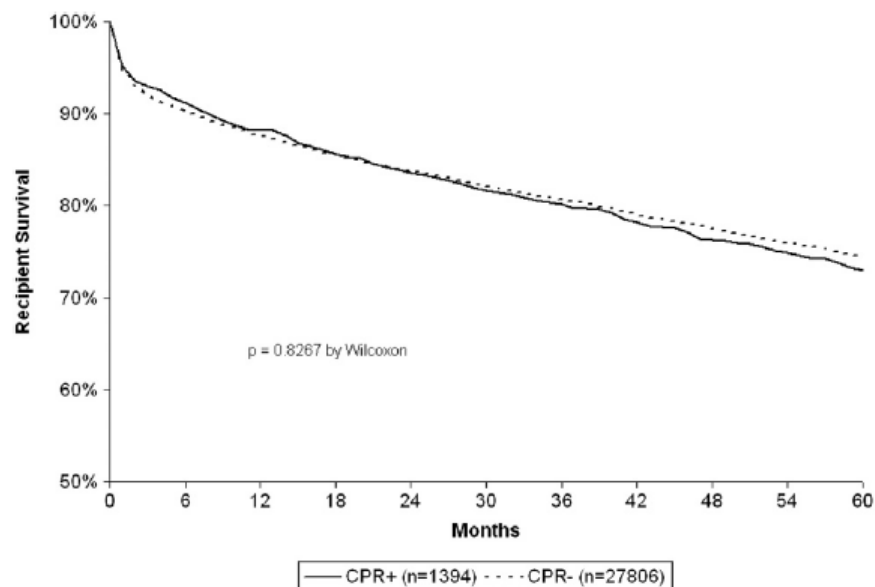


Figure 1 Recipient survival.

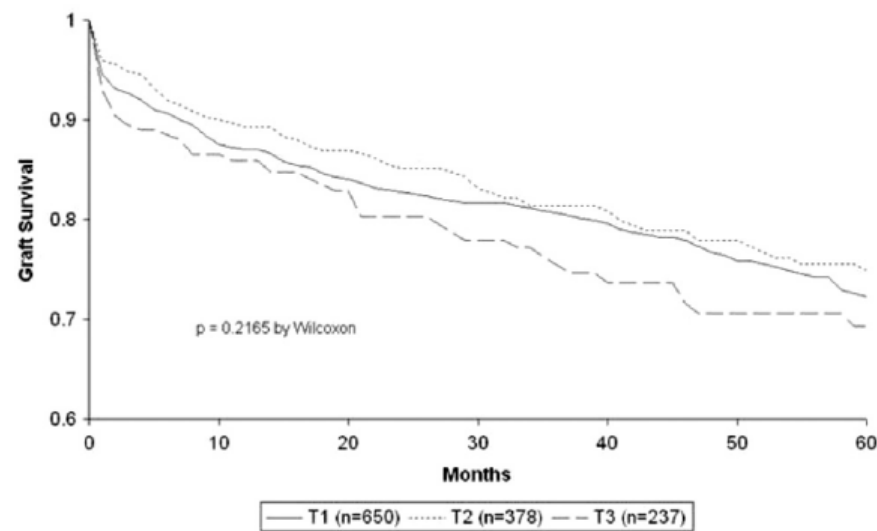


Figure 2 Graft survival by CPR duration.



Consensus

- Discussion leads to consensus
- Voting
- Summarize
- “newsletter”

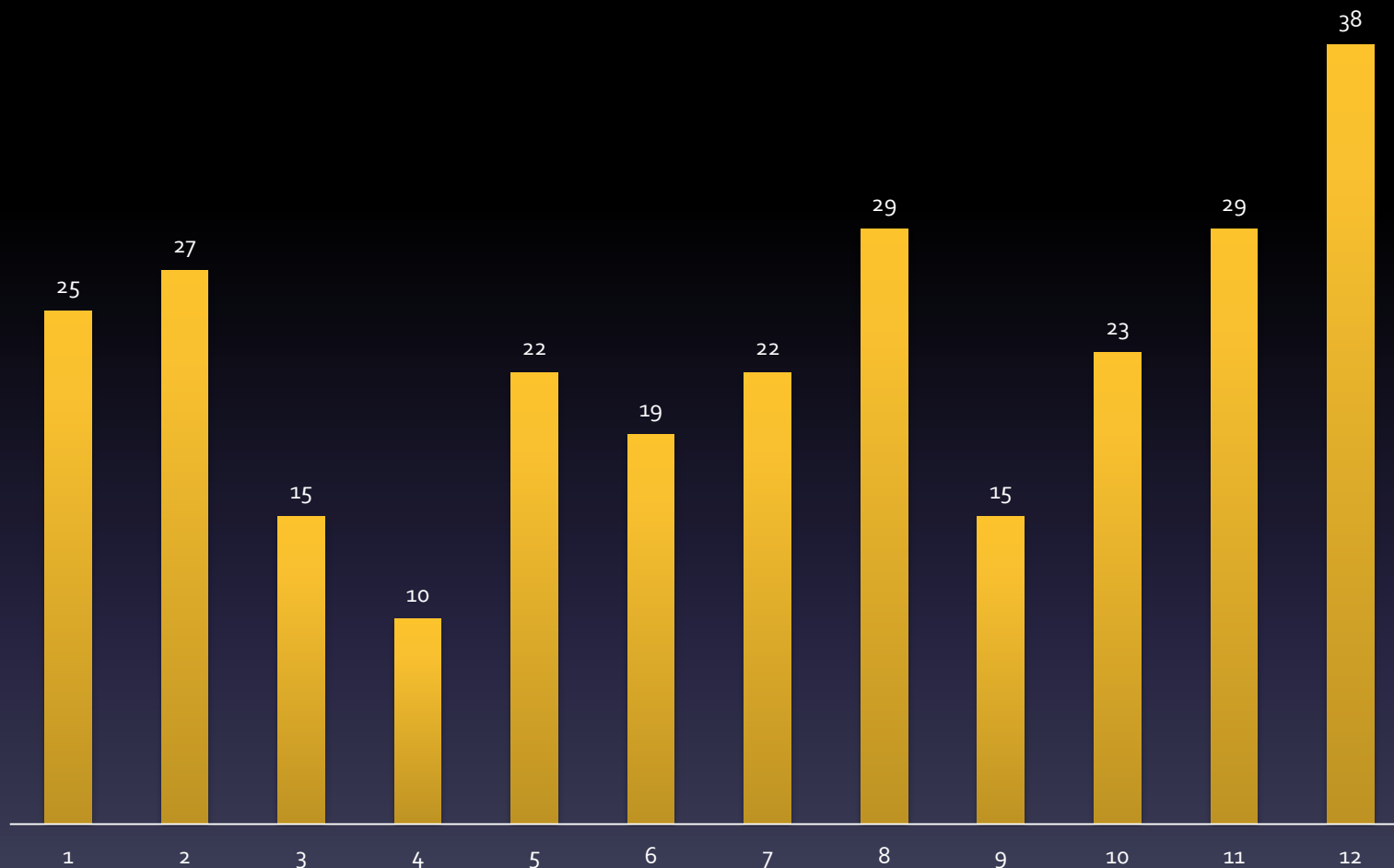


Review Outcomes

- 2012
 - 325 Donor offers
 - 78 Transplanted hearts
 - 20 Transplanted at the UW
 - 2013
 - 292 Donor offers
 - 66 Transplanted hearts
 - 31 Transplanted at the UW
- 2012
 - 6% overall utilization
 - 26% adjusted utilization
 - 2013
 - 11% overall utilization
 - 47% adjusted utilization



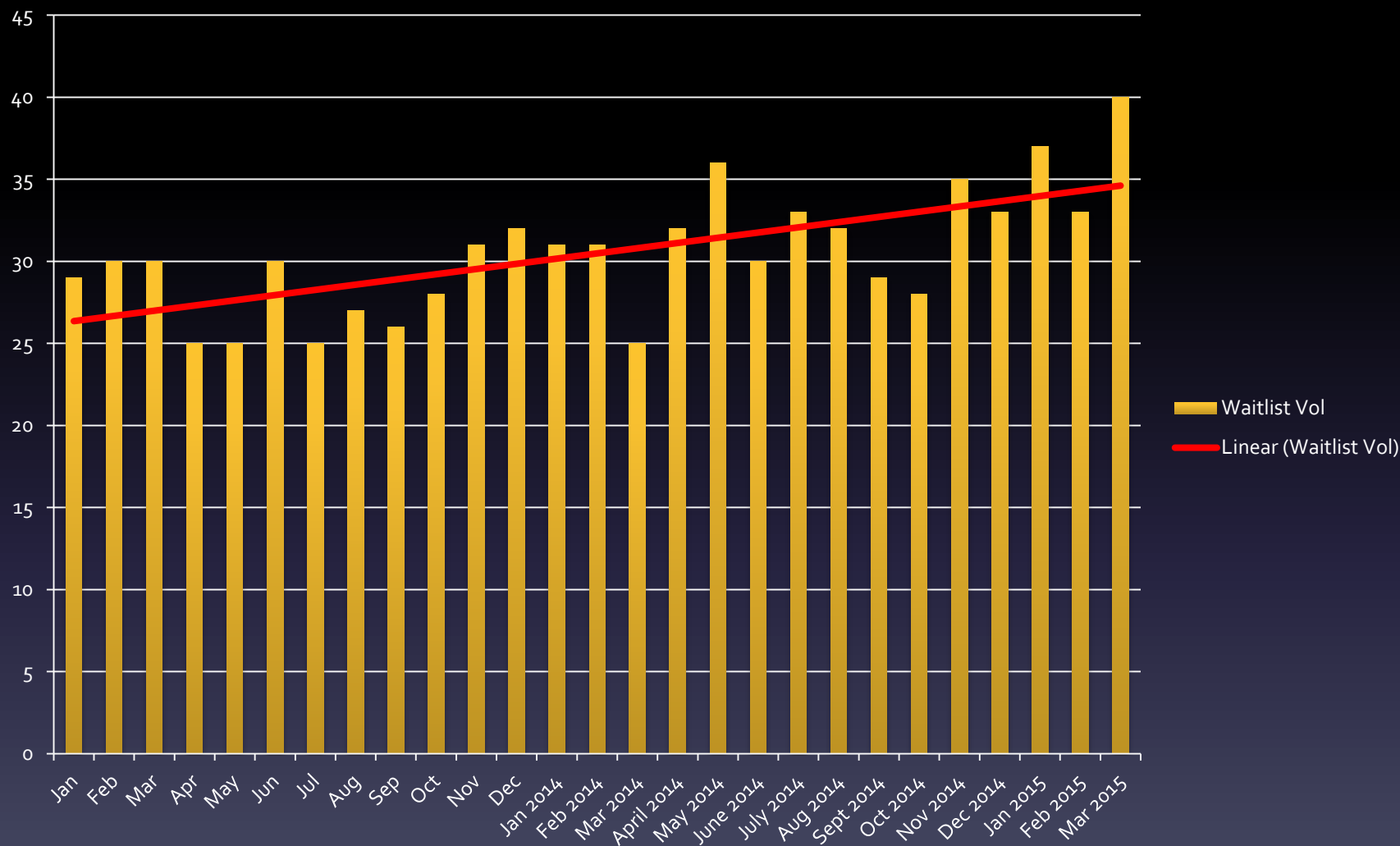
UW Transplant Volumes



One year Survival increased from 80% to 94%
over the same period



UW Active Waitlist Vol





Conclusions

- A small conservative program can significantly change volumes
- Can do this safely
- This is a project about stewardship
- But.....



NEXT

- Increase organ donation rates
- Expand DCD
- Legislate Cortical Brain death definition