HSCT in 2020
System Capacity Initiative

Transplant Center Capacity Changes Over Time

Navneet Majhail, MD, MS

Assistant Professor, University of Minnesota
Assistant Scientific Director, CIBMTR

For CIBMTR-Patient Services
Health Services Research Program

September 15, 2010

Financial Disclosure – None

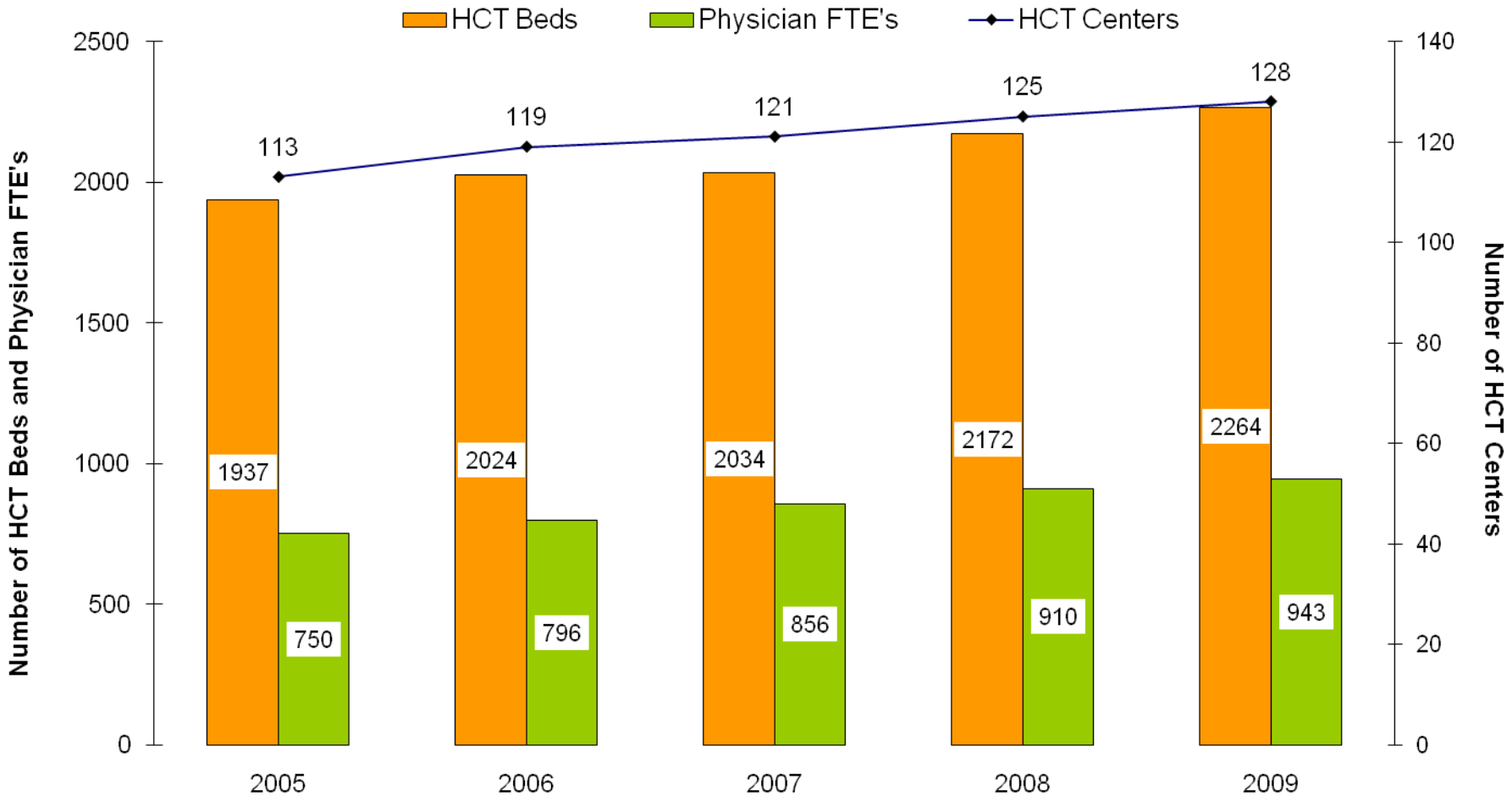
Transplant Center Network Renewal Survey

- Annual survey to ensure centers are in compliance with NMDP transplant center requirements
- Self-reported survey for all centers in the NMDP network
- Administered using online instrument since 2004

Transplant Center Network Renewal Survey

- Data for US centers analyzed to describe:
  - HCT activity, 2005-2009
  - Transplant bed capacity, 2005-2009
  - Physician FTE's , 2005-2009
- Limitations of survey data:
  - Administrative survey
  - Centers report allogeneic HCT activity only
  - Restricted to centers in the NMDP network
  - Self-reported data, no NMDP audit

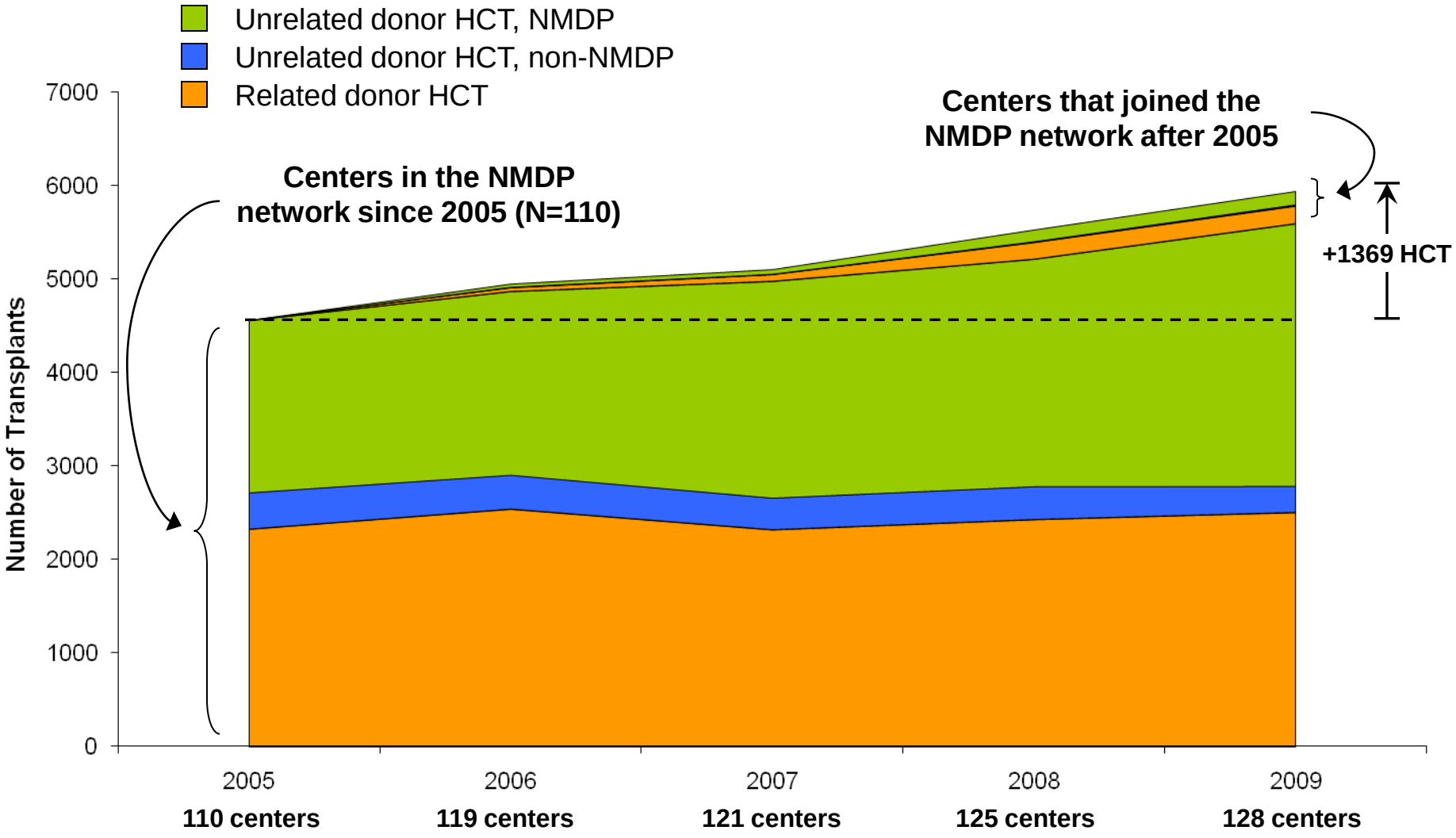
HCT Bed Capacity and Physician FTE's



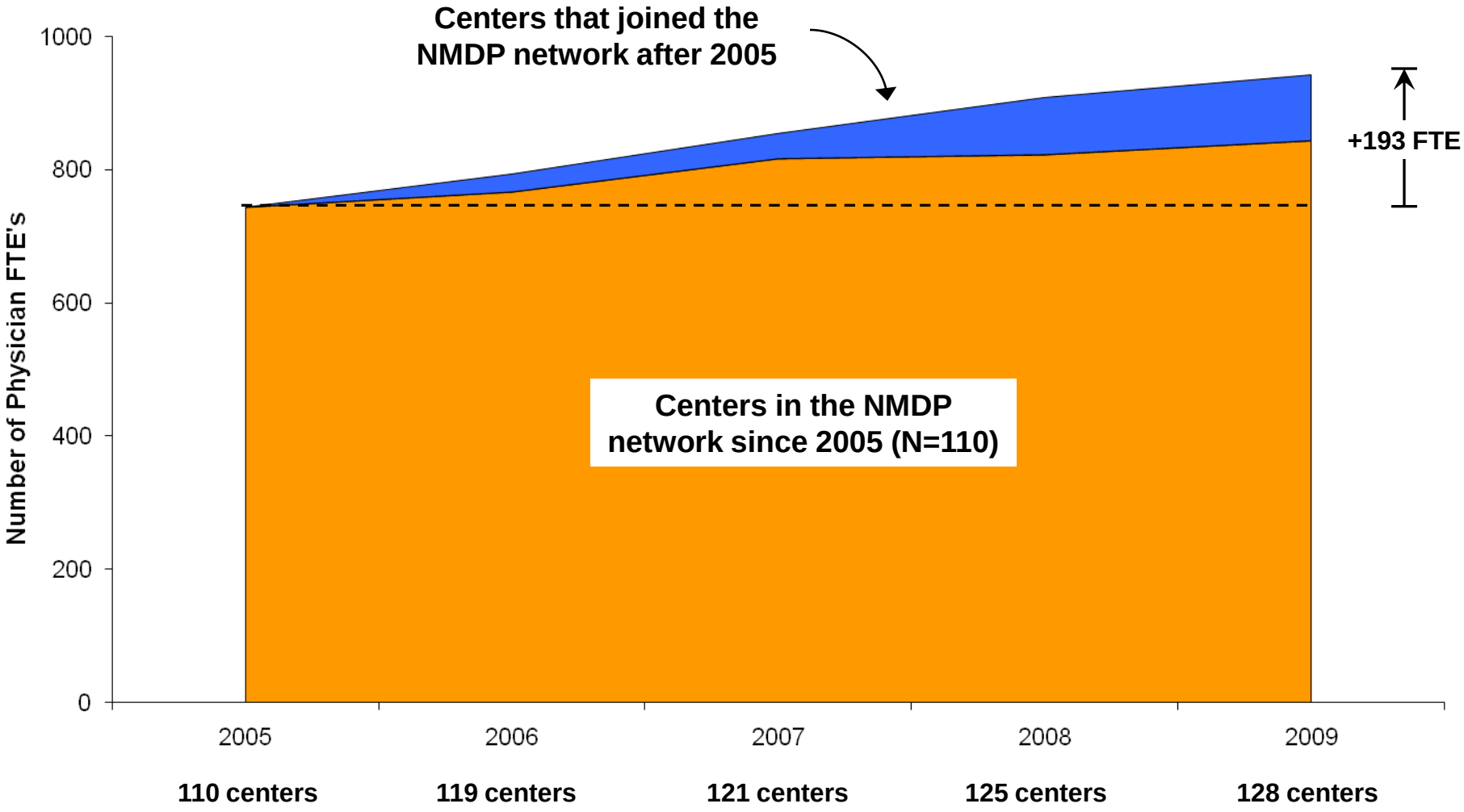
Center Characteristics

Characteristic	Year					Change 2005 to 2009 (%)
	2005	2006	2007	2008	2009	
Centers, N	113	119	121	125	128	+13.3%
Transplant bed capacity	1937	2024	2034	2172	2264	+16.9%
Median beds/center (range)	16 (2-56)	14 (2-56)	13 (2-56)	14 (2-65)	14 (2-73)	
Transplant physician FTE's	750	796	856	910	943	+25.7%
Median FTE/center (range)	5 (1-49)	5 (1.5-46)	5 (1.5-47)	5 (1.5-47)	5 (2-47)	
Number of allogeneic HCT	4578	4960	5148	5532	5947	+29.9%
Median HCT/center (range)	25 (1-286)	28 (3-285)	25 (2-252)	30 (2-298)	31 (2-313)	
Allogeneic HCT/HCT bed	2.4	2.5	2.5	2.6	2.6	+8.3%
Allogeneic HCT/Physician FTE	6.1	6.2	6.0	6.1	6.3	+3.3%
HCT Bed/Physician FTE	2.6	2.5	2.4	2.4	2.4	-8.3%

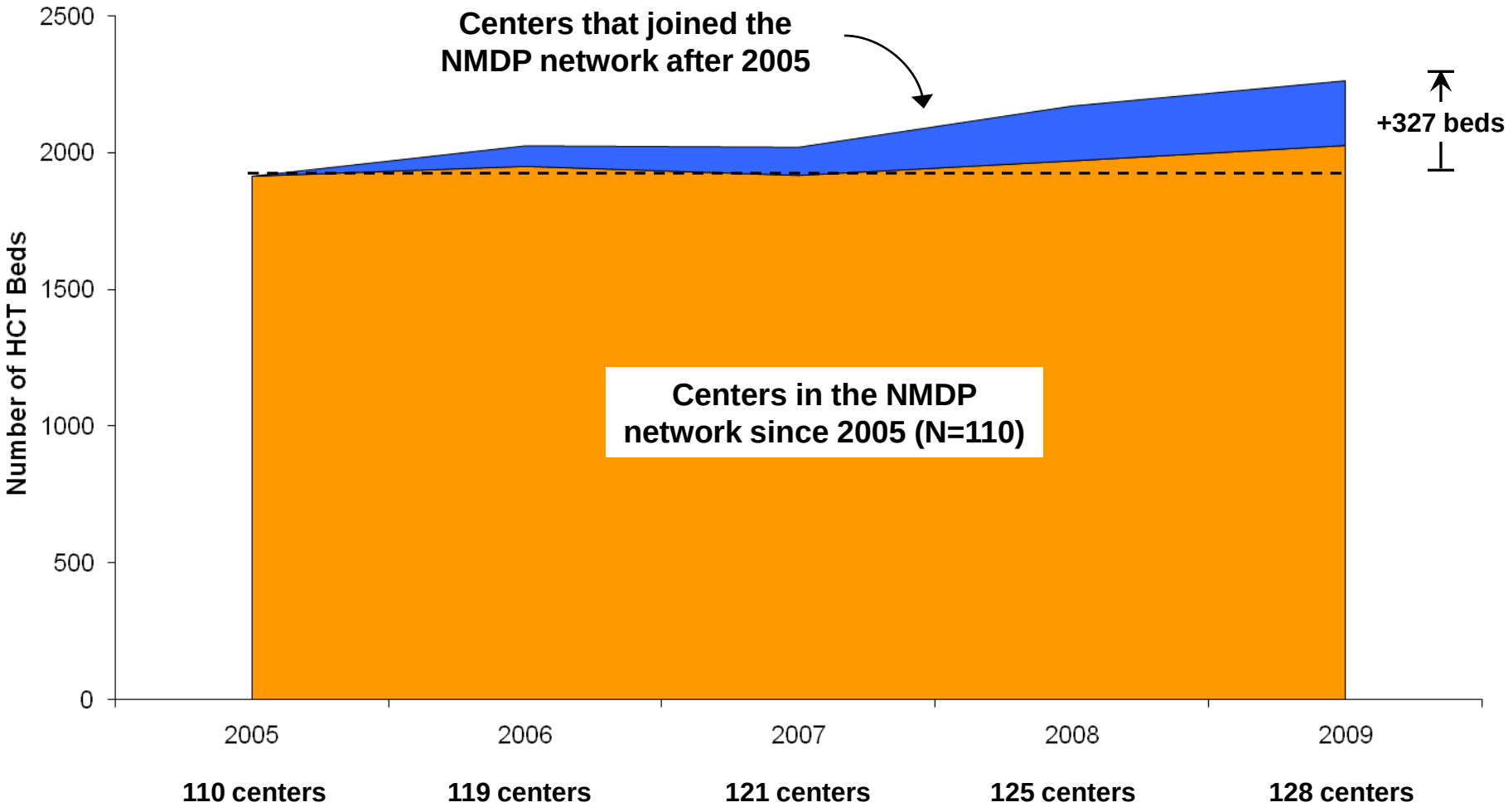
Allogeneic HCT Activity for NMDP Network Centers



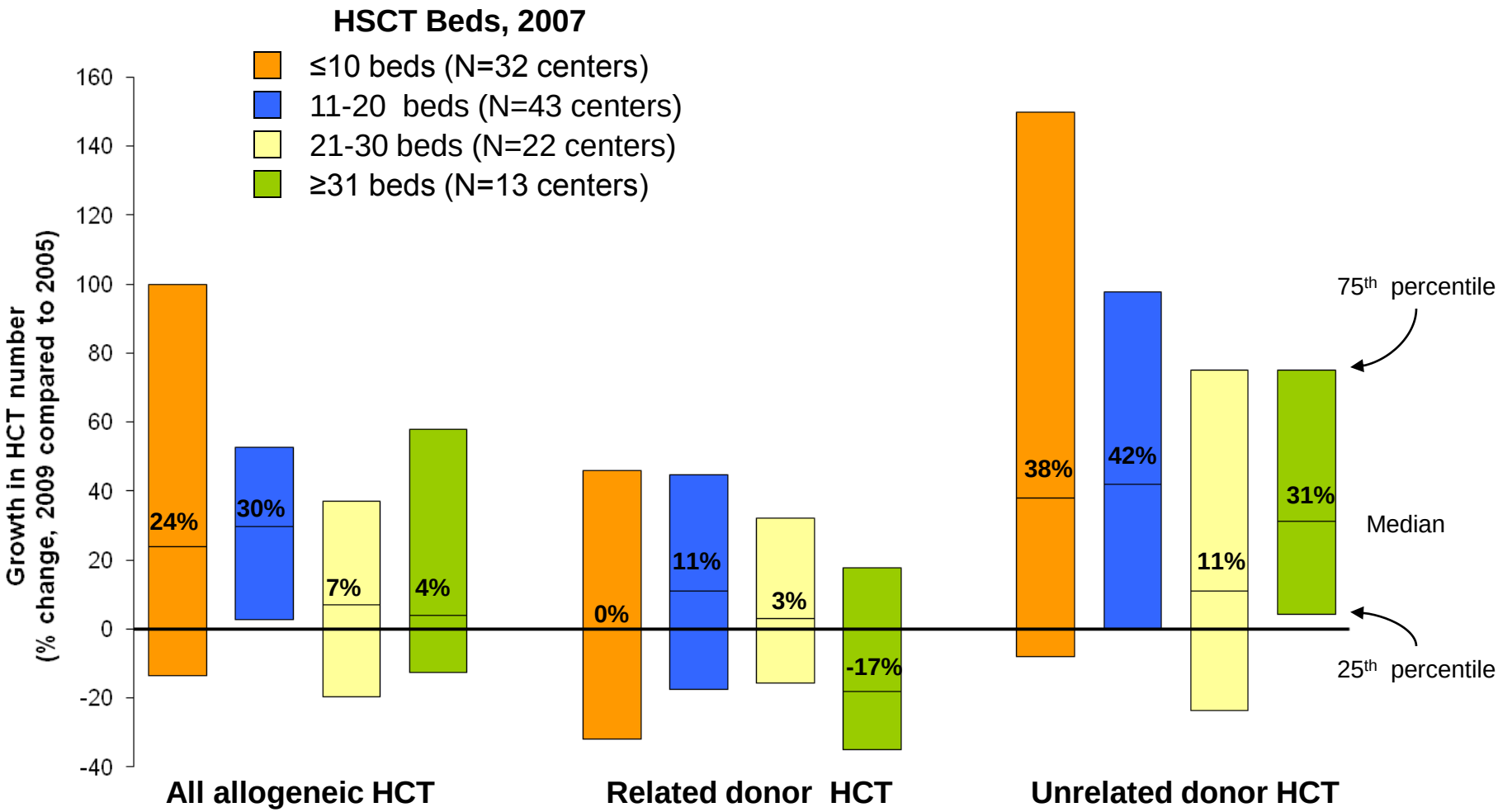
Transplant Physician FTE's



Transplant Bed Capacity



Growth in HCT Activity by Center Size



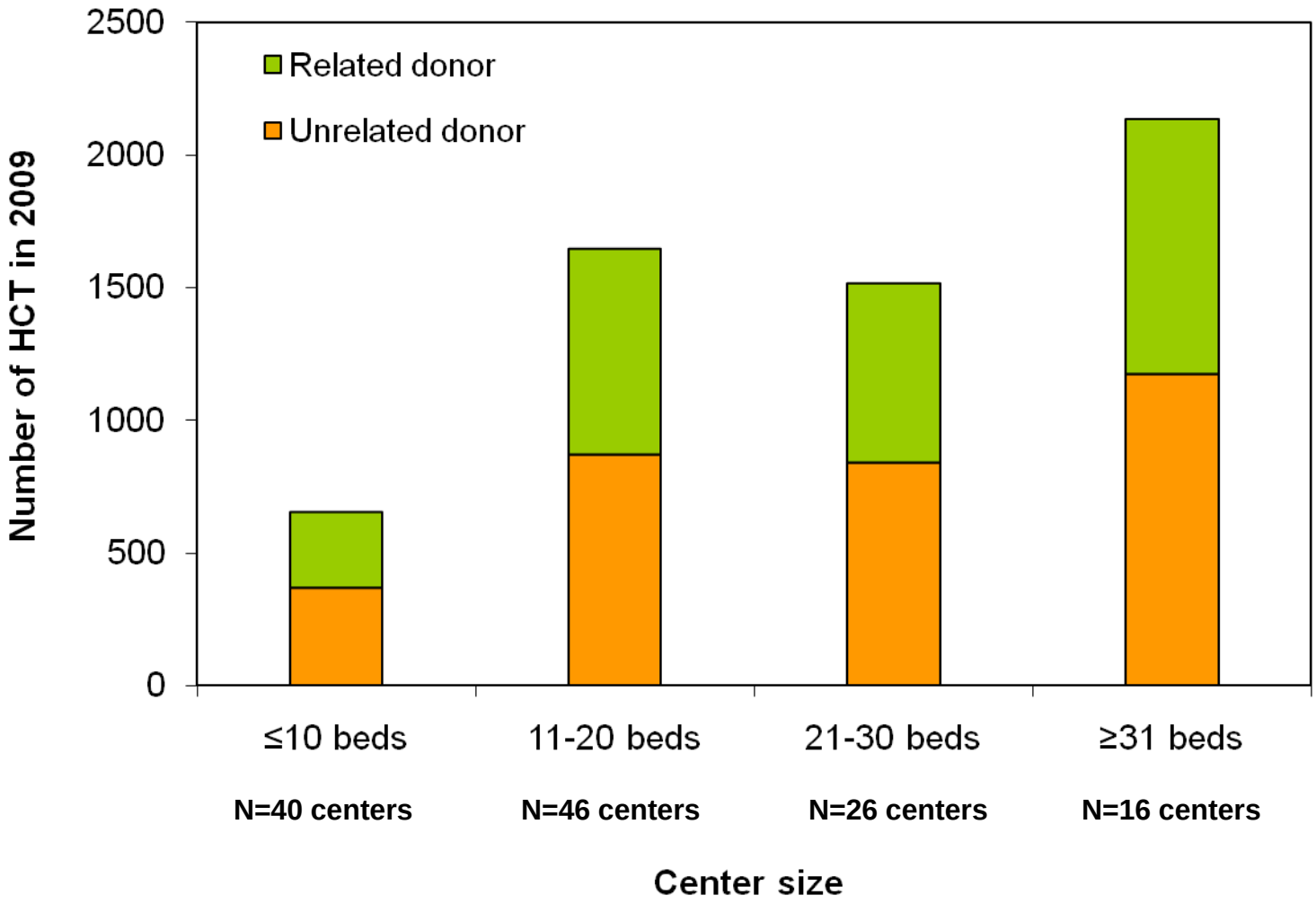
*Limited to 110 centers that were part of the NMDP network for all five years

Summary

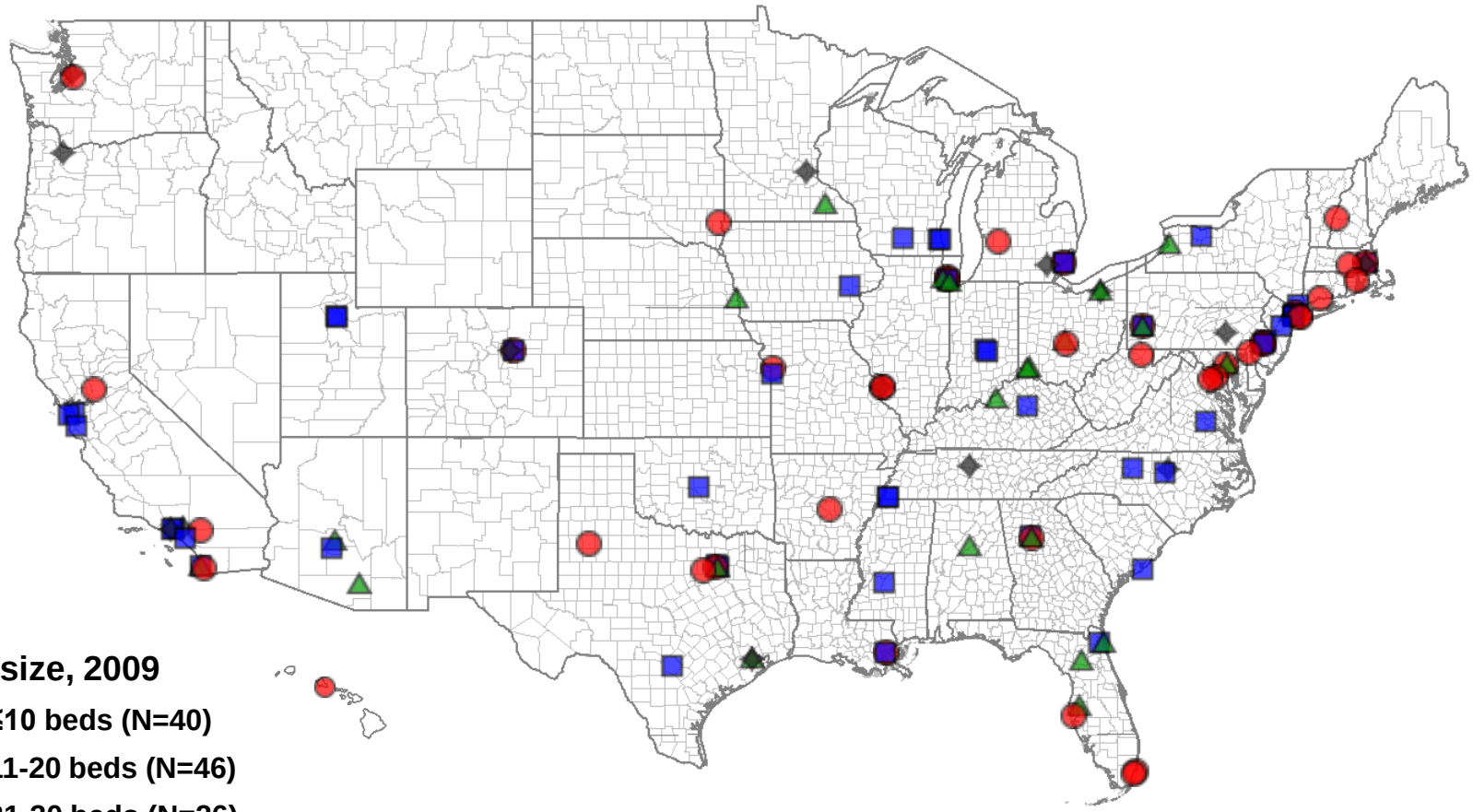
- There has been an overall growth in allogeneic HCT activity in US centers in the NMDP network from 2005 to 2009
- For centers in the NMDP network, growth in allogeneic transplant activity has primarily occurred due to increase in utilization of unrelated donor HCT

Center Size and Transplant Activity, Bed Capacity and Physician FTE's

Center Size and Transplant Activity (2009)



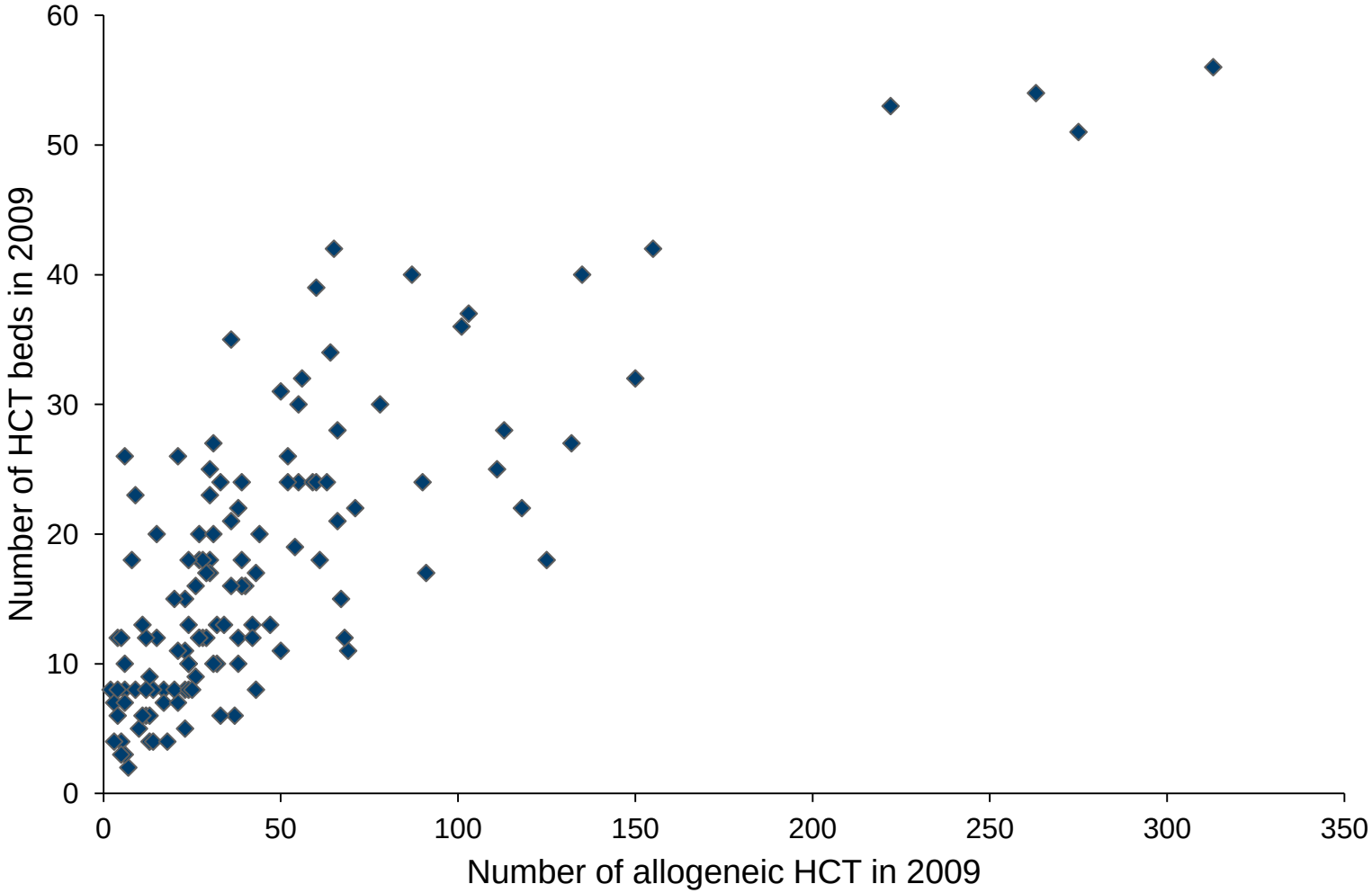
Location of Centers in NMDP Network (2009)



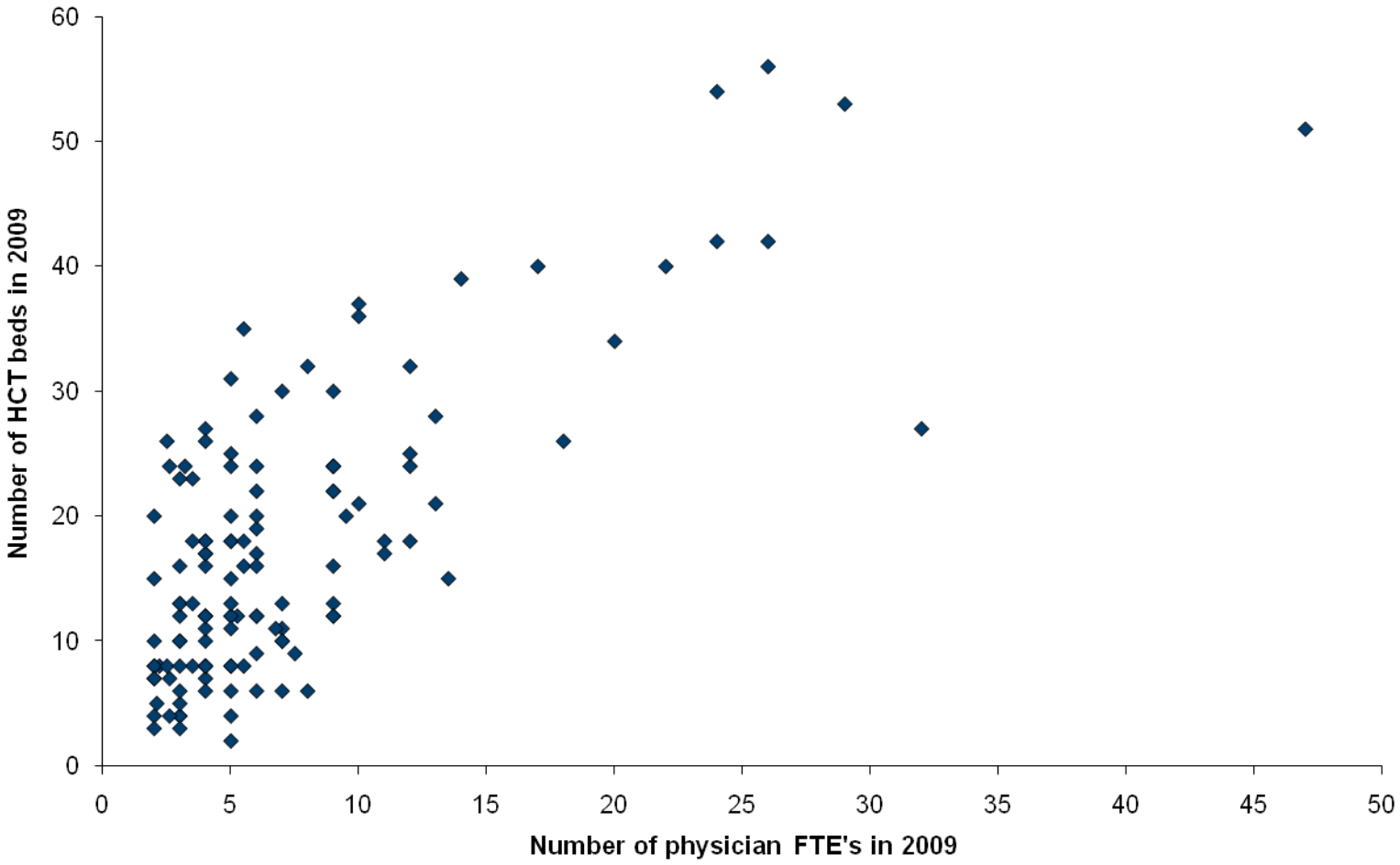
Center size, 2009

- ≤10 beds (N=40)
- 11-20 beds (N=46)
- 21-30 beds (N=26)
- >30 beds (N=16)

Bed Capacity and Transplant Activity (2009)



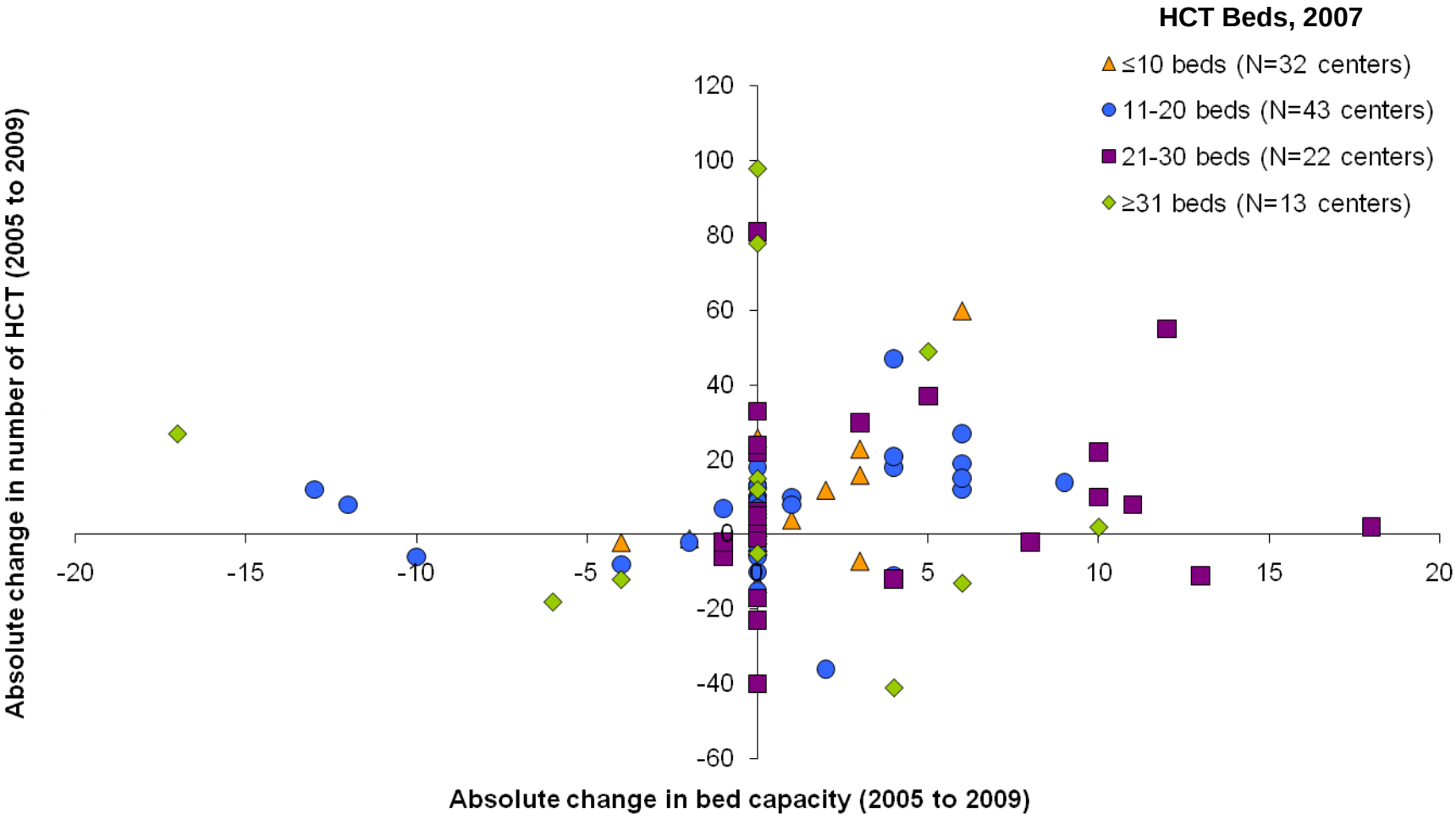
Bed Capacity and Physician FTE (2009)



Summary

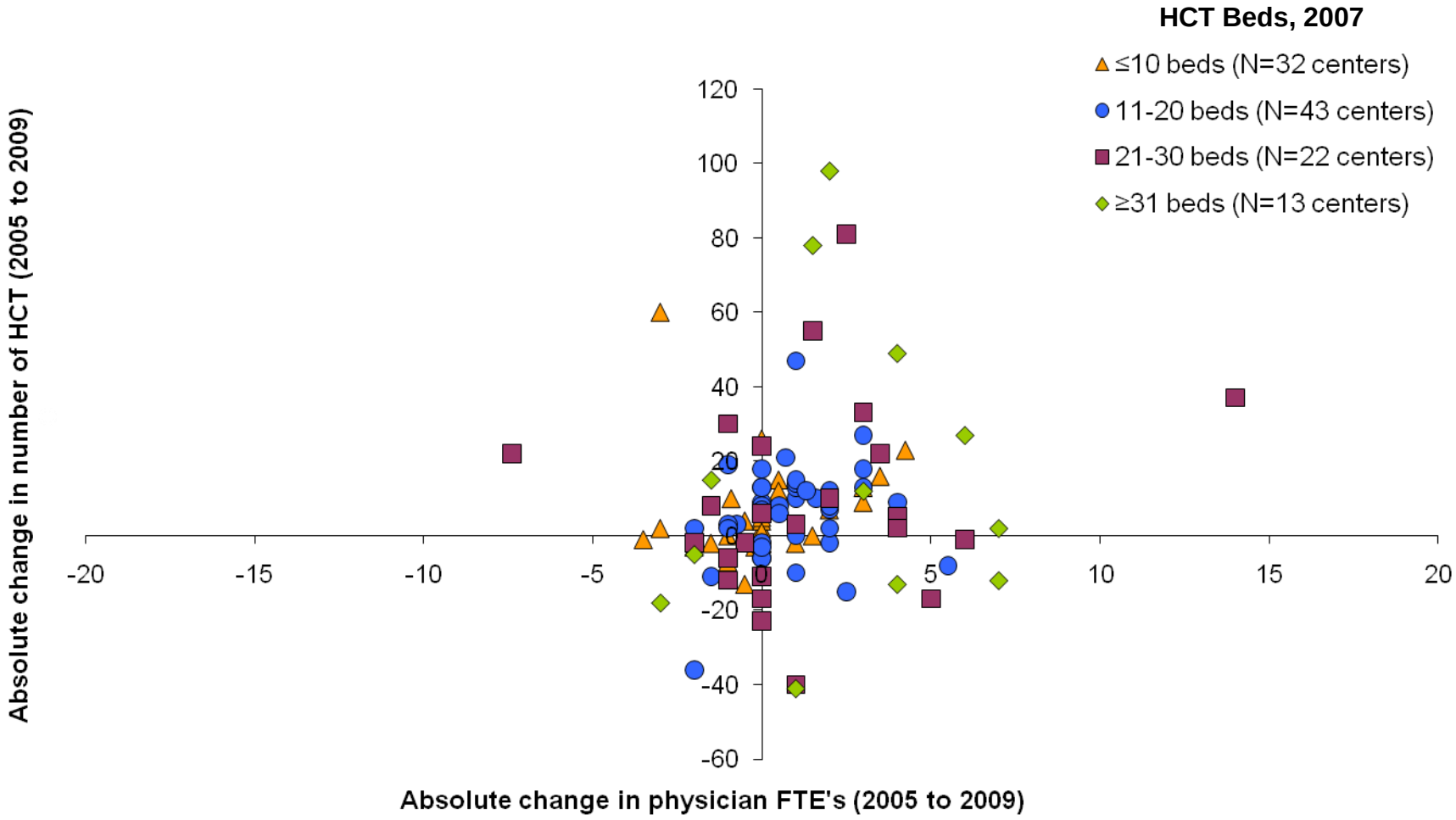
- ‘Medium’ to ‘large’ sized centers (11-30 beds) constitute a significant proportion of NMDP network centers
- ‘Medium’ to ‘large’ sized centers contribute significantly to overall transplant activity in the US
- Larger centers have more physicians/center and perform more allogeneic transplants/center

Change in Bed Capacity and Allogeneic HCT Activity



*Limited to 110 centers that were part of the NMDP network for all five years

Change in Physician FTE and Allogeneic HCT Activity



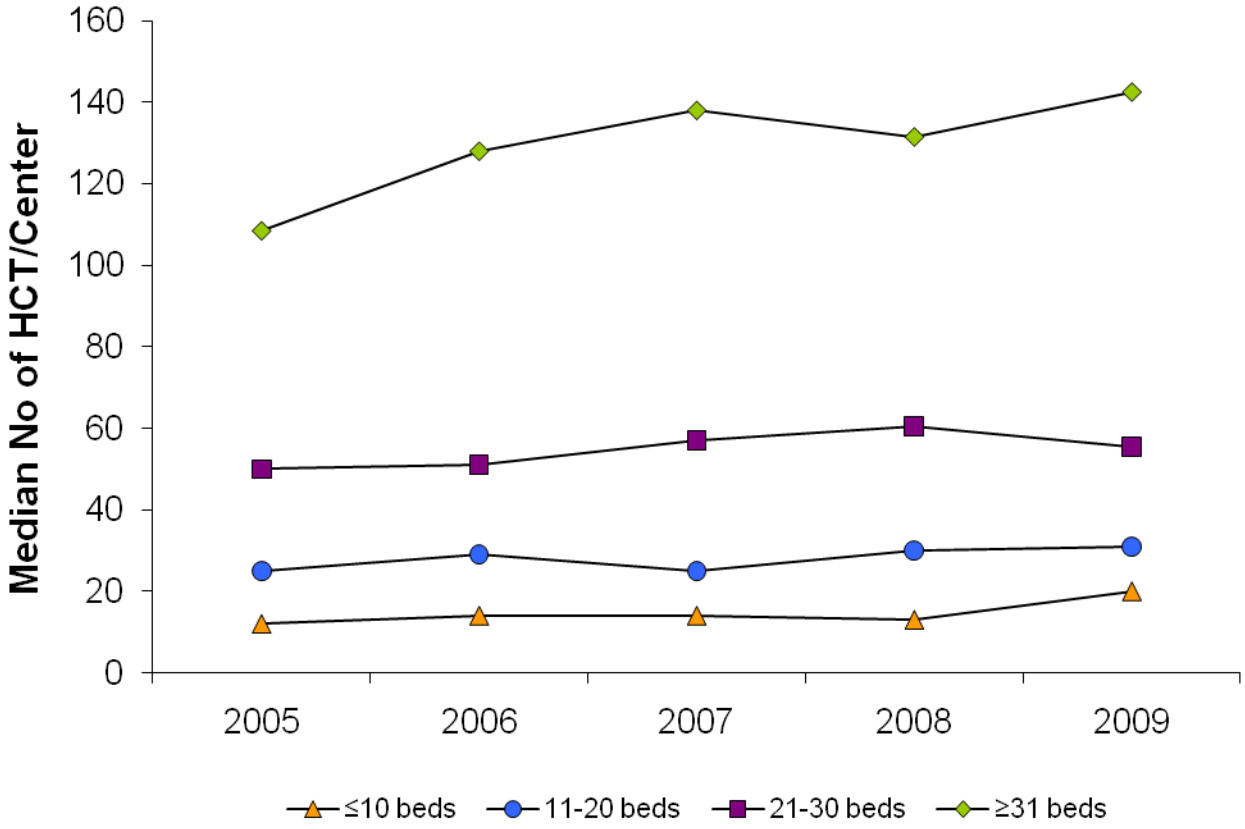
*Limited to 110 centers that were part of the NMDP network for all five years

Summary

- A large number of centers in the NMDP network increased transplant activity without increasing bed capacity
  - Increase in efficiency vs. performance at below capacity previously
- No clear correlation between center size and growth in bed capacity or physician FTE's

Center Characteristics by Center Size

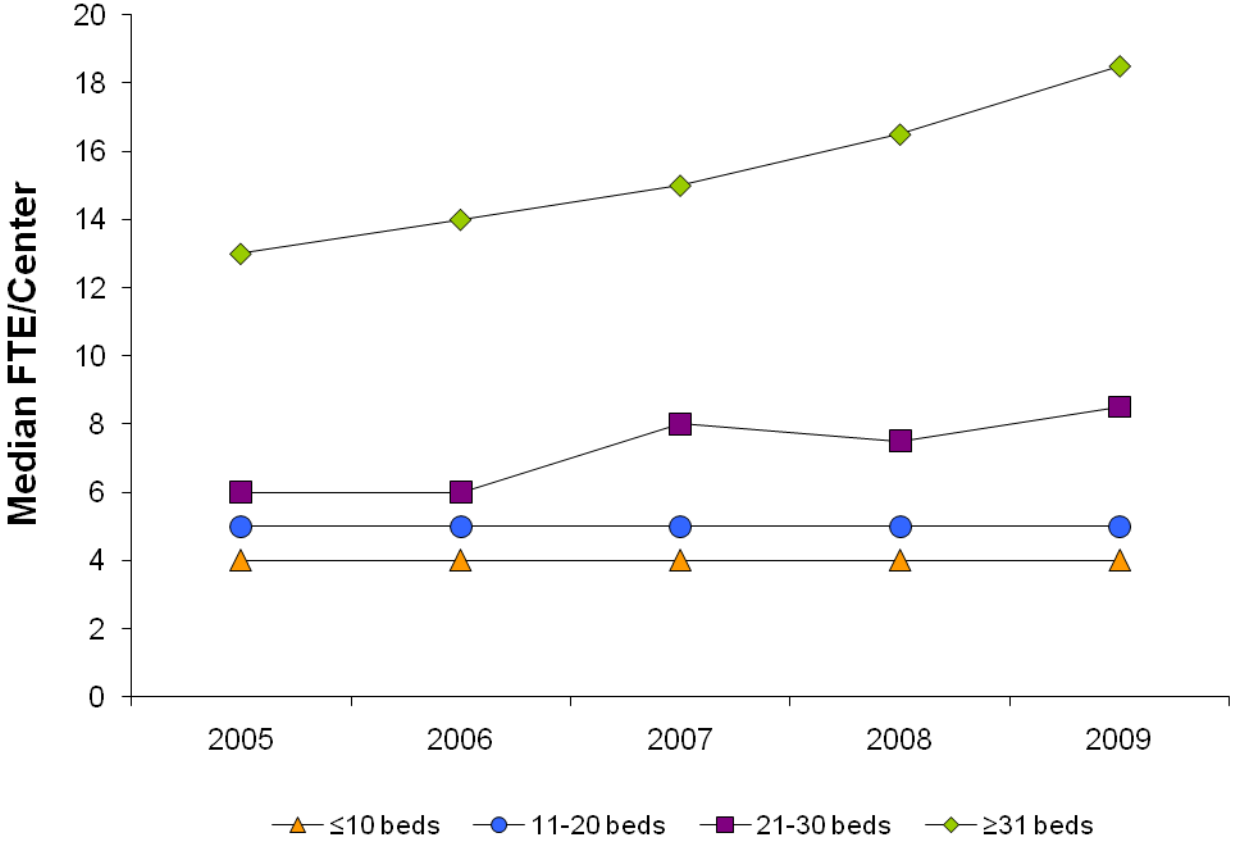
Allogeneic HCT/Center



*Limited to 110 centers that were part of the NMDP network for all five years

Center Characteristics by Center Size

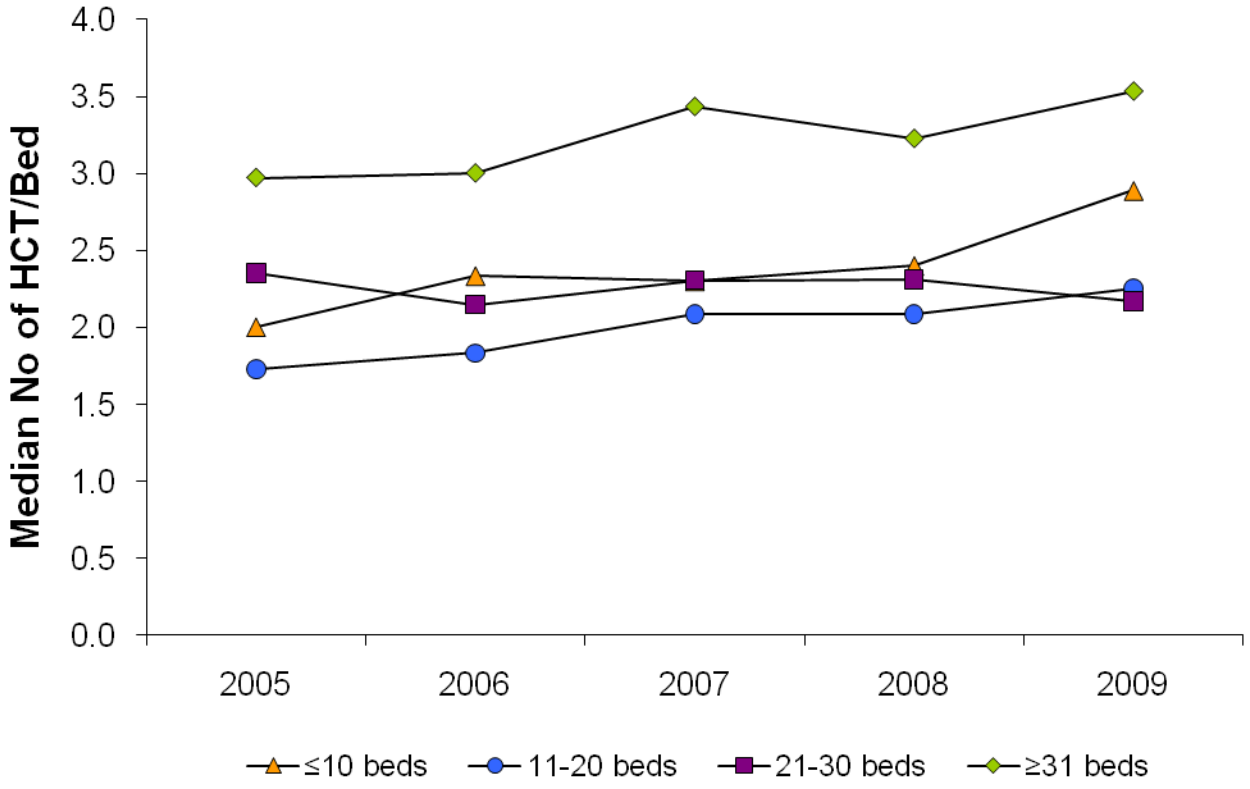
Physician FTE/Center



*Limited to 110 centers that were part of the NMDP network for all five years

Center Characteristics by Center Size

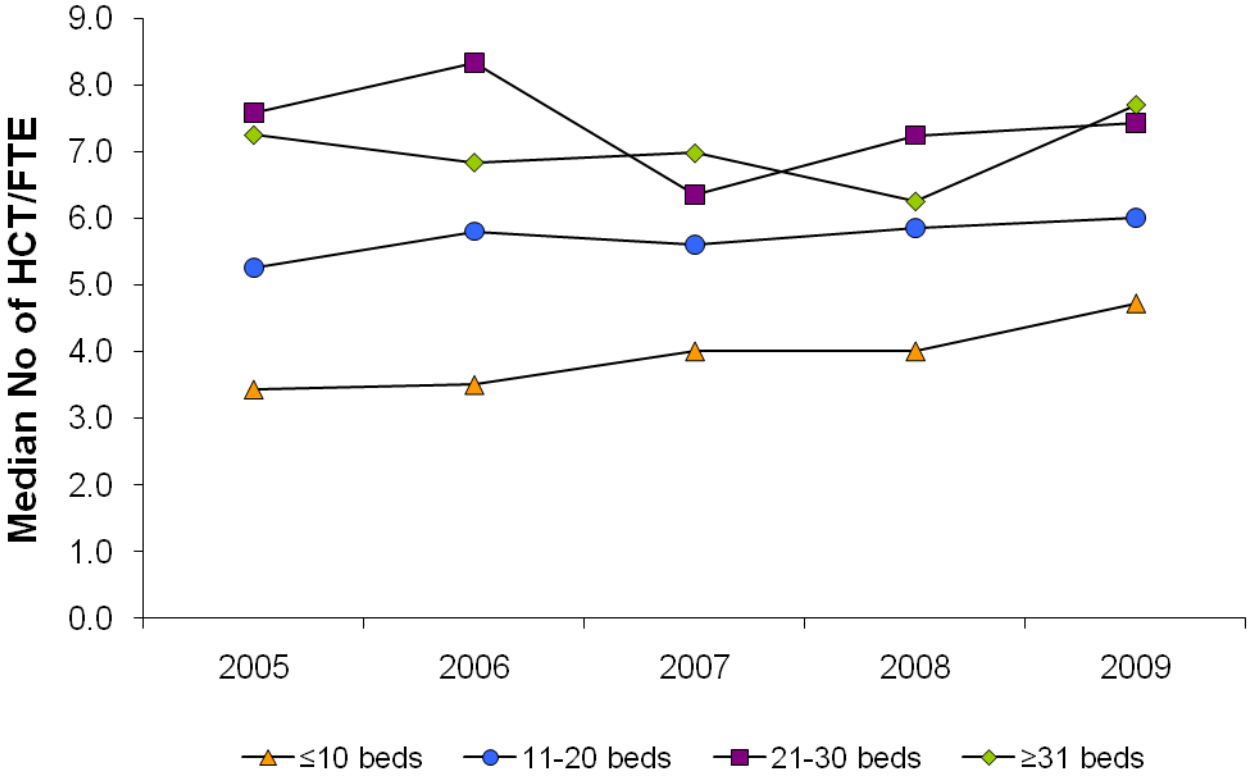
Allogeneic HCT/Bed



*Limited to 110 centers that were part of the NMDP network for all five years

Center Characteristics by Center Size

Allogeneic HCT/Physician FTE



*Limited to 110 centers that were part of the NMDP network for all five years

Summary

- Large centers have grown ‘bigger’
- Irrespective of their size, the majority of centers have maintained or increased their transplant activity, bed capacity and physician FTE’s

Conclusions

- Among US centers in the NMDP network (2005-2009)
  - Overall growth in allogeneic HCT activity
  - Increased utilization of unrelated donor HCT
  - "Medium" to "large" sized centers (11-30 beds) contributed significantly to overall allogeneic HCT activity
  - Many centers have increased HCT activity without increasing bed capacity
  - Centers have maintained or increased their HCT activity, bed capacity and physician FTE's

Acknowledgements

- CIBMTR-Patient Services Health Services Research Program
  - Elizabeth Murphy
  - Nancy Omondi
  - Ellen Denzen
  - Shaveta Nayyar
  - Tammy Payton
- NMDP Membership Services
  - Pam Robinett
  - Emilie Clancy
- CIBMTR/University of Minnesota
  - J Douglas Rizzo
  - Daniel Weisdorf

Questions or Comments

E-mail:

nmajhail@nmdp.org
or
SystemCapacity@nmdp.org