

# The impact of family physician panel size on prevention

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CAHSPR 2012

# Primary care

- Ontario reform models, from traditional FFS to:
  - **Reformed Fee-For-Service**
    - FFS may encourage overproduction
  - **Capitation** (blended)
    - Capitation rewards larger panels
  - **Capitation + Inter-professional** (Family Health Teams)
    - Teams are expected to care for more patients

# What we know

- Larger panel size = Lower quality of care
  - Access, Continuity, Comprehensiveness, Prevention
- Panel size workload formula (Murray M, et al. 2007)  
# of visits per day X # of days worked per year  
# of patient visits per year
- Ontario has disincentive at 2,400/MD
- Insufficient data to inform panel size benchmarks for OPTIMAL CARE

# Current Targets/Benchmarks

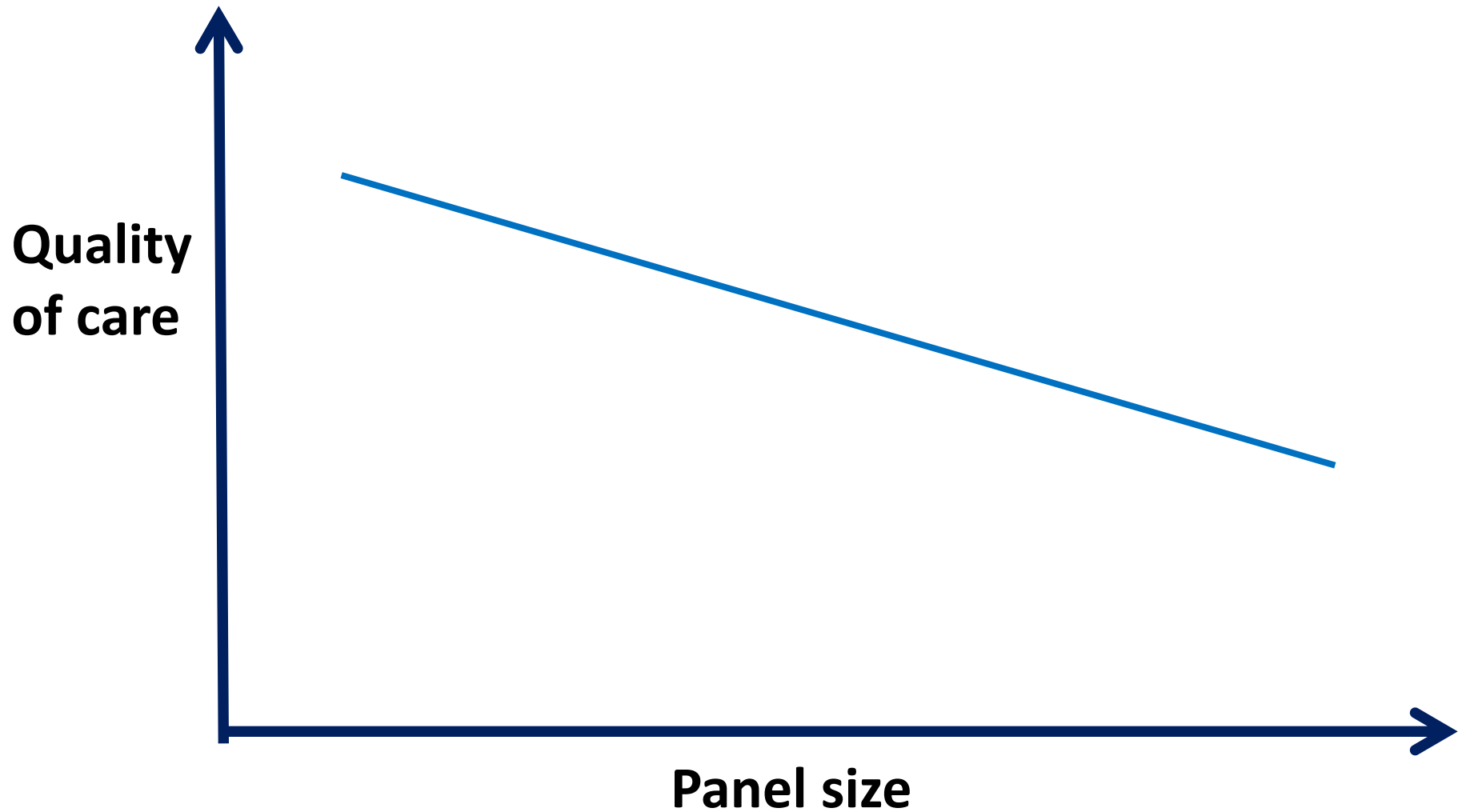
- Panel size is influenced by context:
  - Team composition
  - Patient complexity (medical, social)
  - Practice setting
  - Other (EMR, vision, priorities?)
- American Veteran's Association, and US CHCs provide targets accounting for contextual factors

# Objective

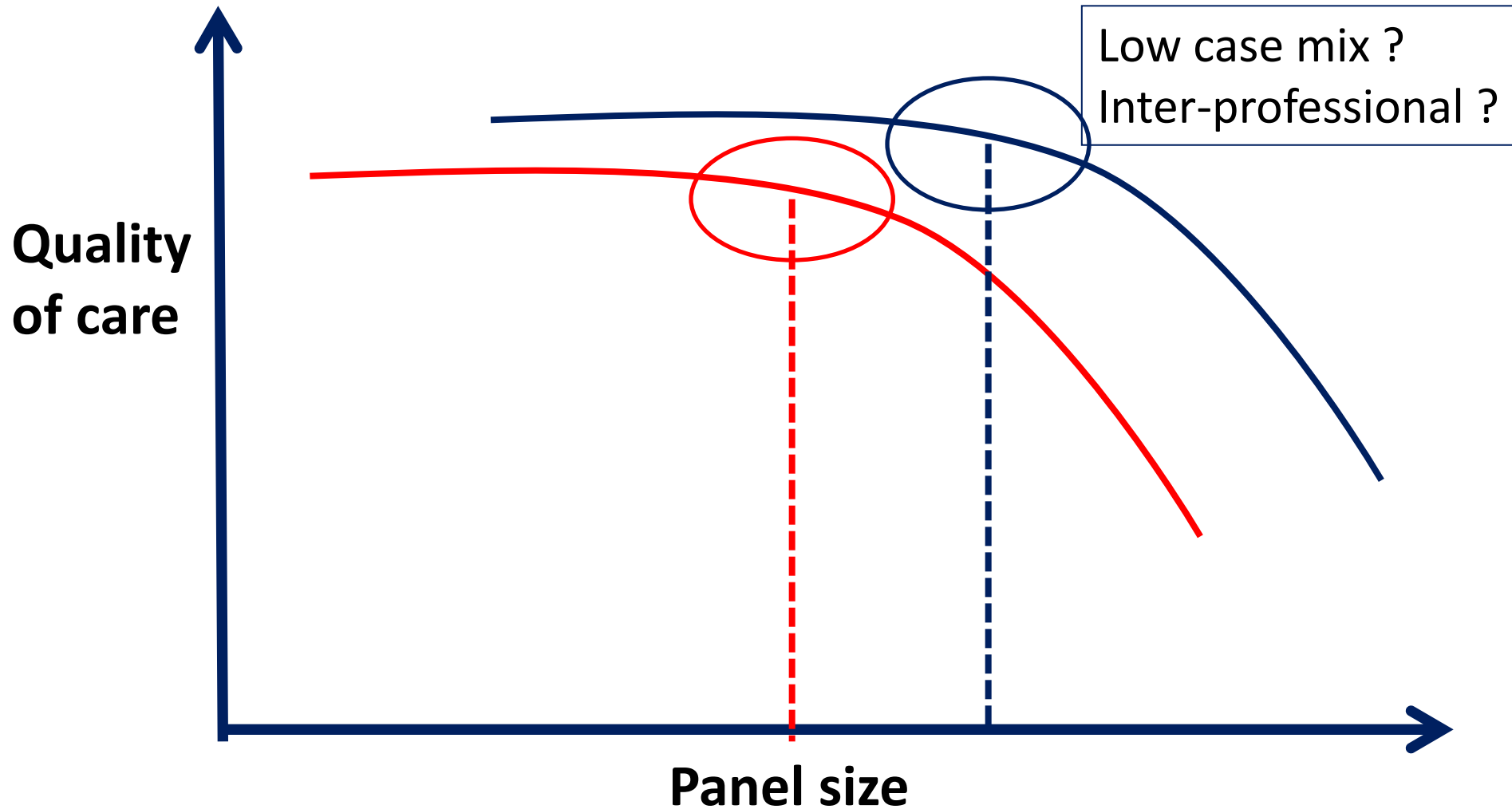
Inform panel size benchmarks for different contexts

1. Quantify the relationship between panel size and quality of care:
  - Prevention, Chronic disease management, Access, Continuity, Comprehensiveness
2. Quantify the impact of various contextual factors on that relationship

# Potential Outcome ?



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# What's new in this study?

- Large dataset (population base)
- Large range of panel size
- Breadth of quality indicators
- Can account for:
  - Non MD health professionals ✓
  - Patient complexity (medical, social) ✓
  - Context ✓
  - Other (EMR, vision, priorities?)







# Methods

# Design

- Cross sectional study in Ontario
- Health Administrative Data (ICES)
- Reformed models (6,390 physicians, >10 million patients)
  - Reformed FFS
  - Capitation
  - Inter-professional Capitation (FHT)

# Design

- **Panel size:** All patients under the care of a provider working “full time”

# Patients

Family Physician FTE

- Limit to Panel sizes  $\geq 1,200$ 
  - 4,195 physicians, 8.3 million patients
- **Outcome:** Prevention, April 1st 2008 - March 31st 2010

# Quality of Care: Prevention

- **Overall Prevention Score (per FP):**  
# screening tests eligible and performed  
# screening tests eligible
- **Cervical cancer:** Proportion of women ages 20-69 years who had a Papanicolaou test
- **Breast cancer:** Proportion of women ages 50-69 who had a mammography
- **Colorectal cancer:** Proportion of patients ages 50-69 who had a colorectal cancer screening investigation

# Analysis

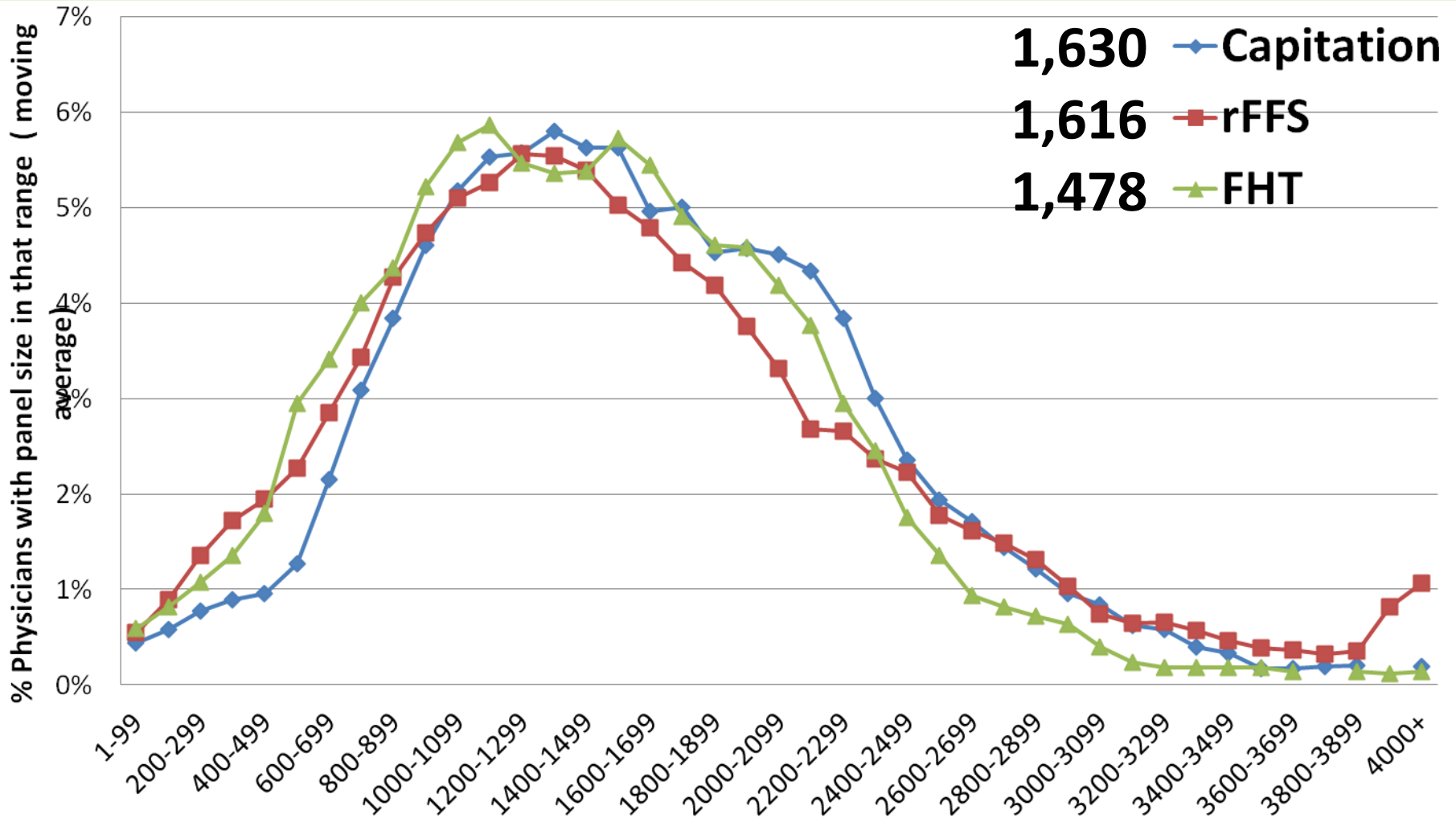
- Panel size categorized into deciles
- Logistic regressions
  - Unadjusted, and Adjusted for:
    - Physician: sex, age, foreign trained
    - Patient: sex, age, rurality, case mix, income level, immigration status



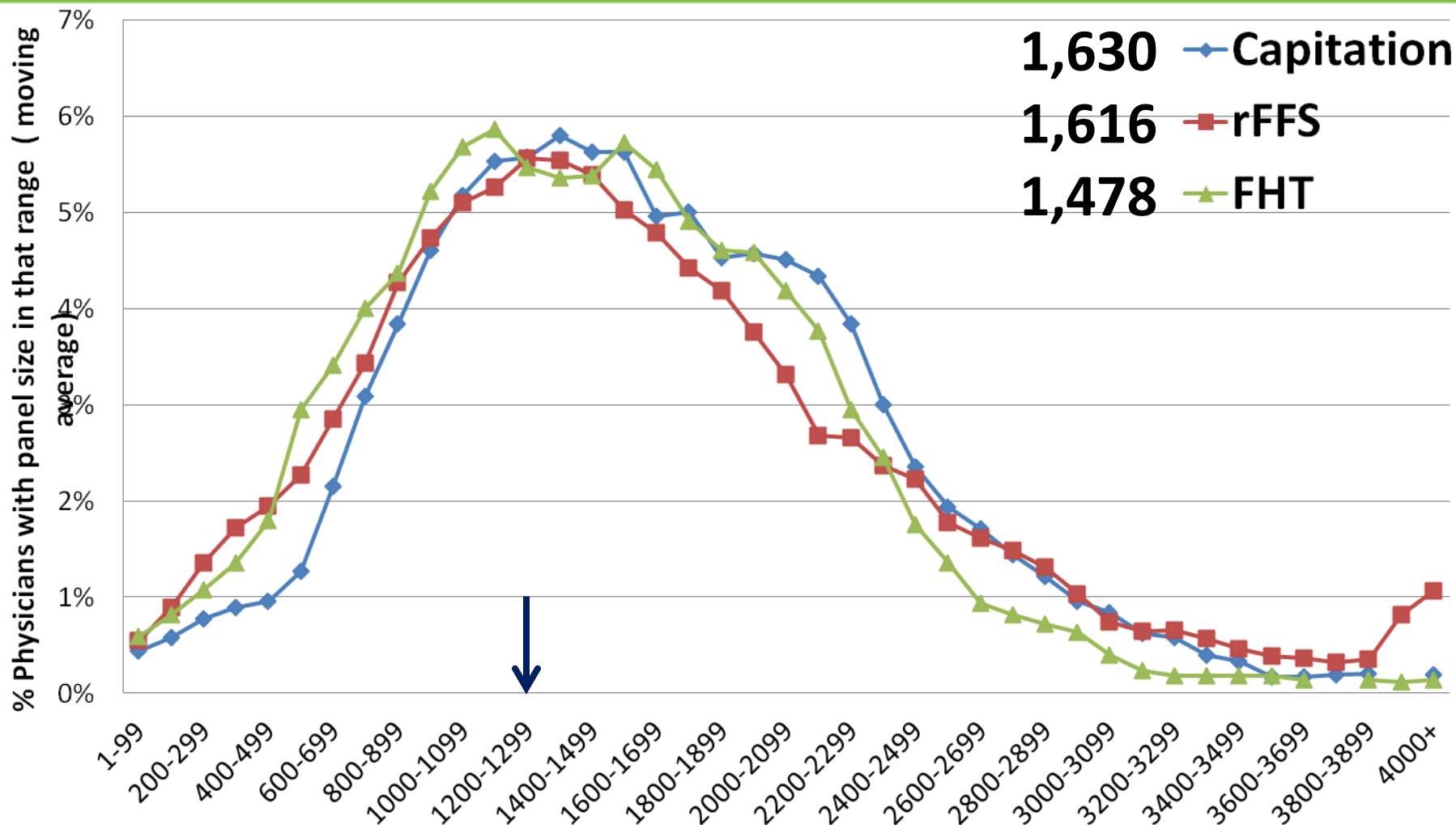


# Results

# Panel Size Distribution

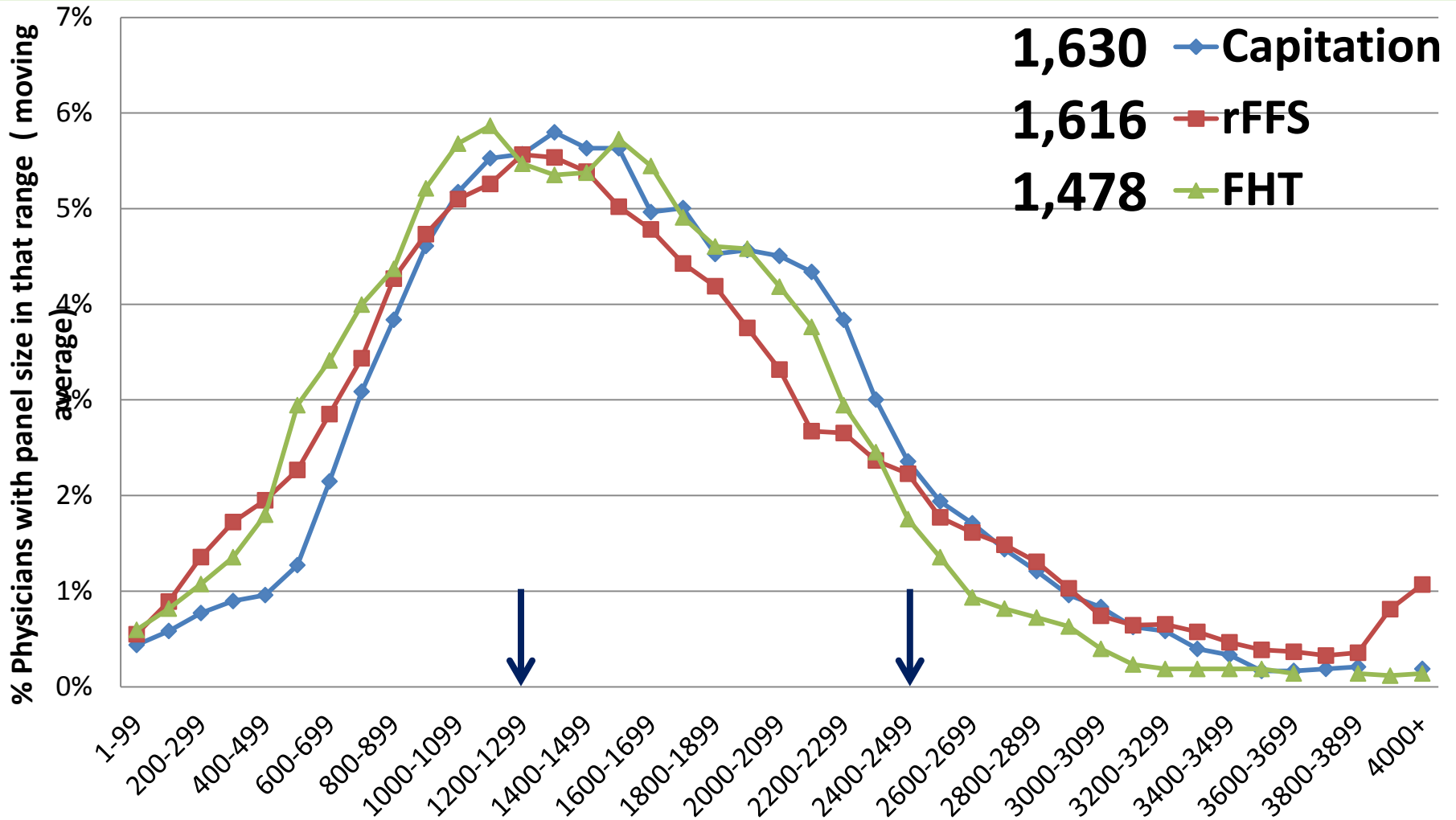


# Panel Size Distribution

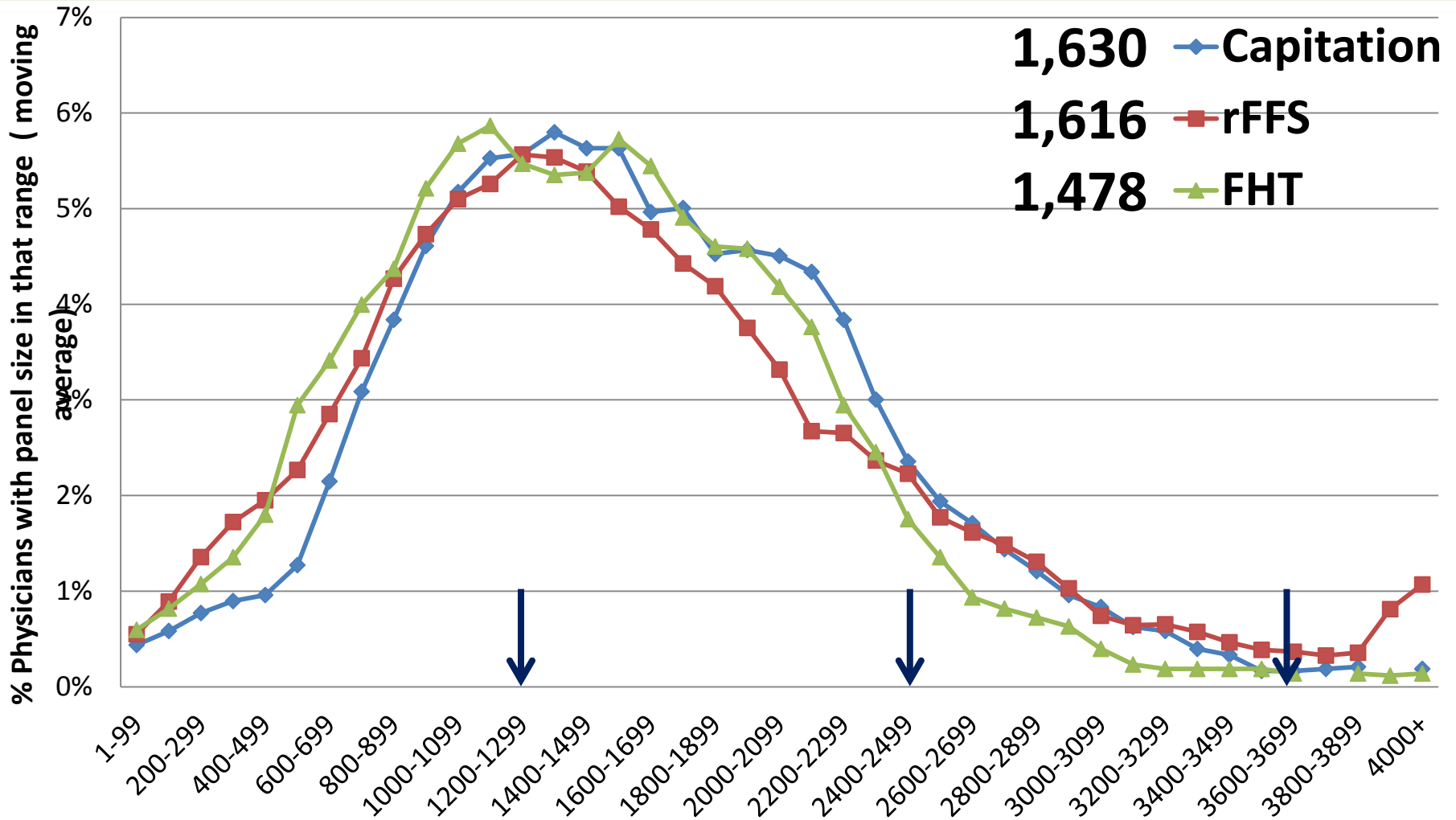




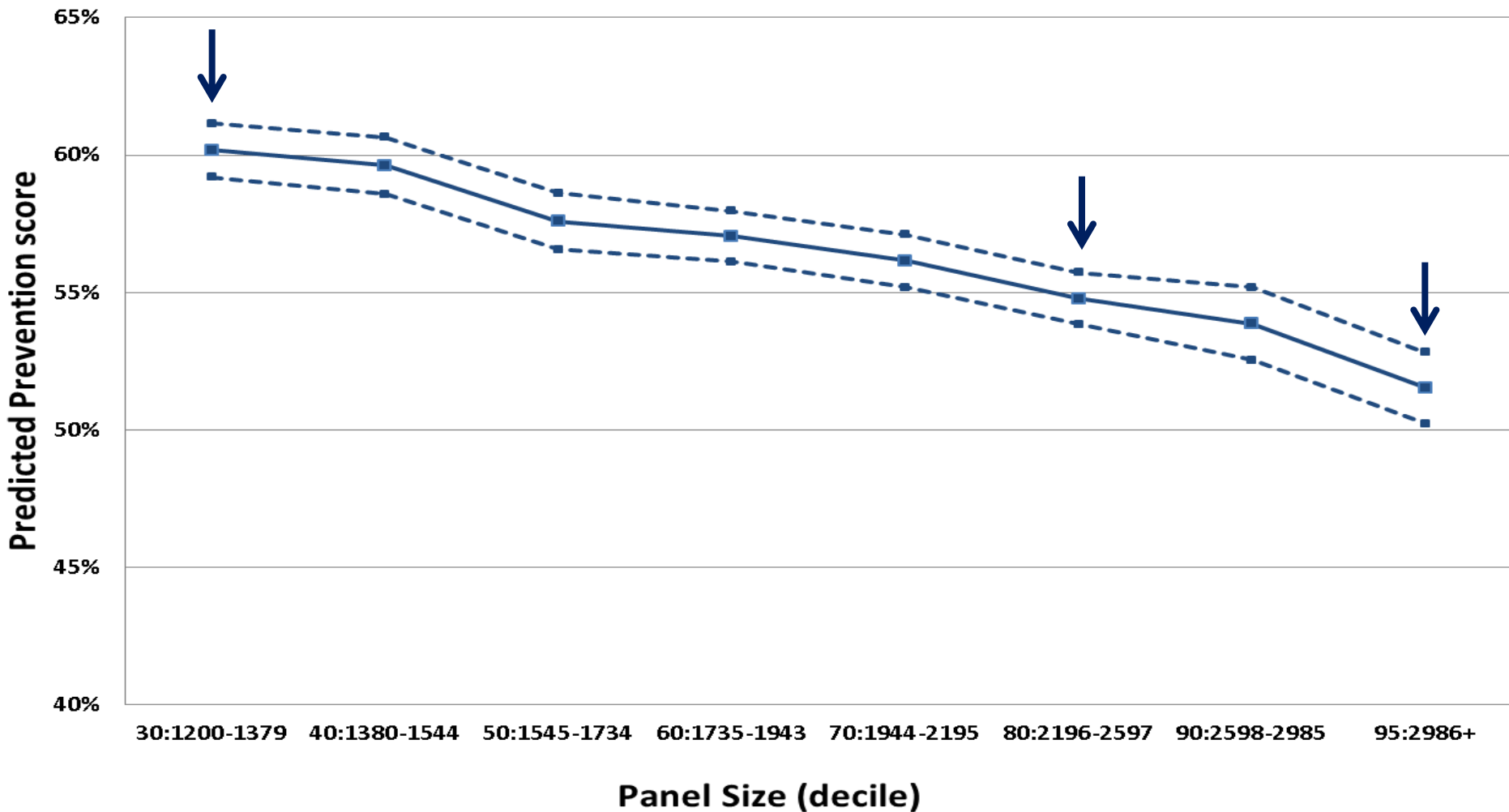
# Panel Size Distribution



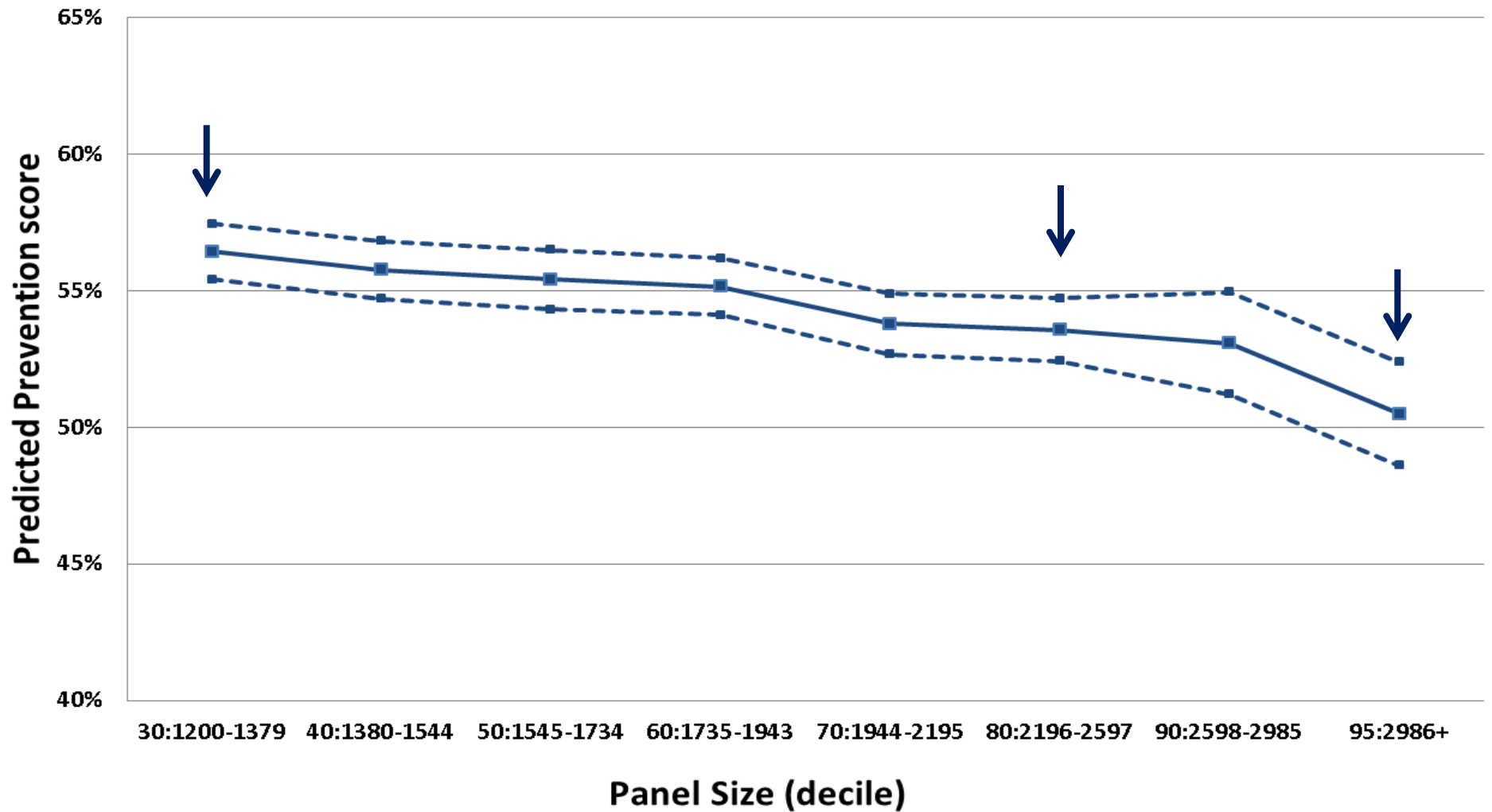
# Panel Size Distribution



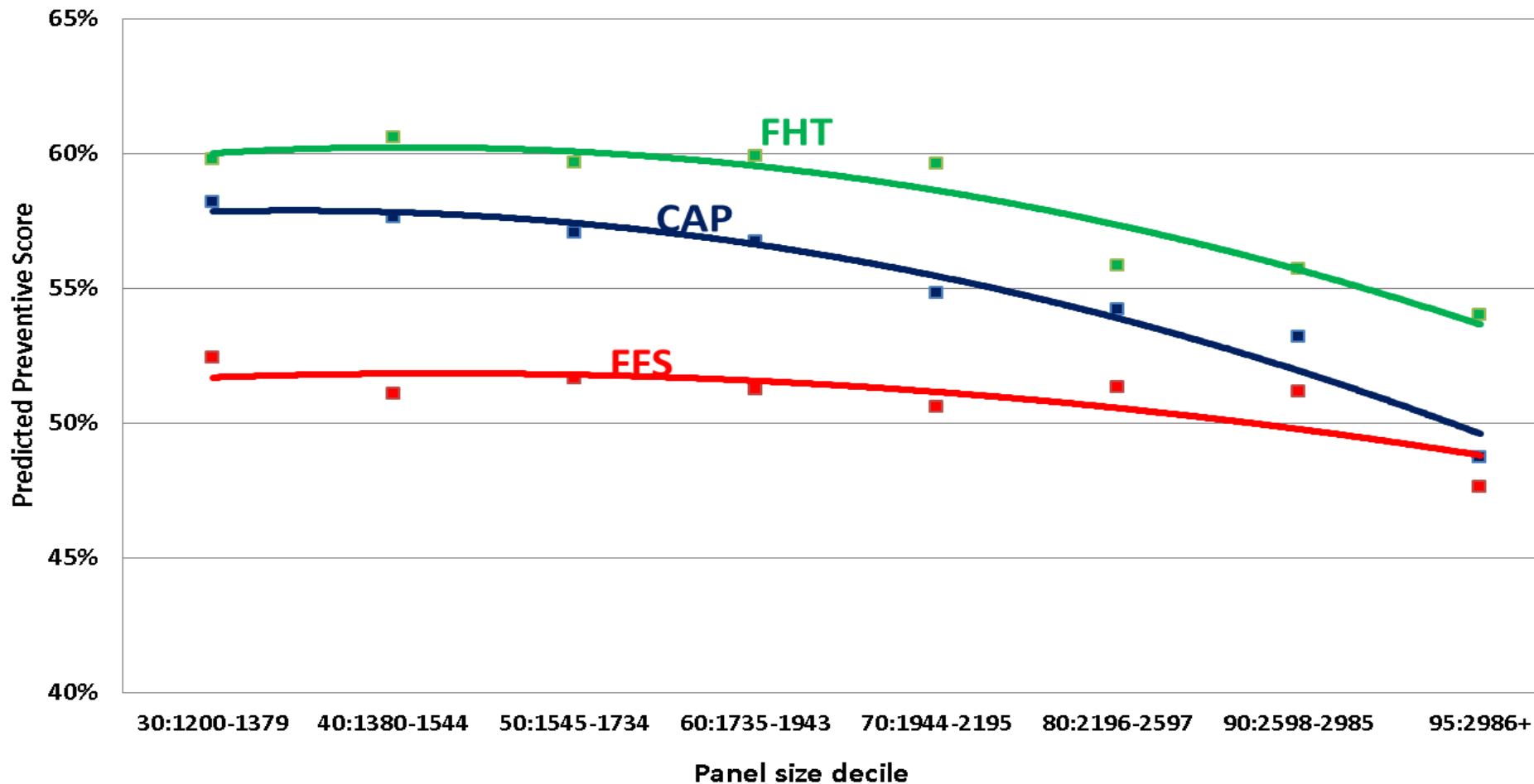
# Overall Prevention - Unadjusted



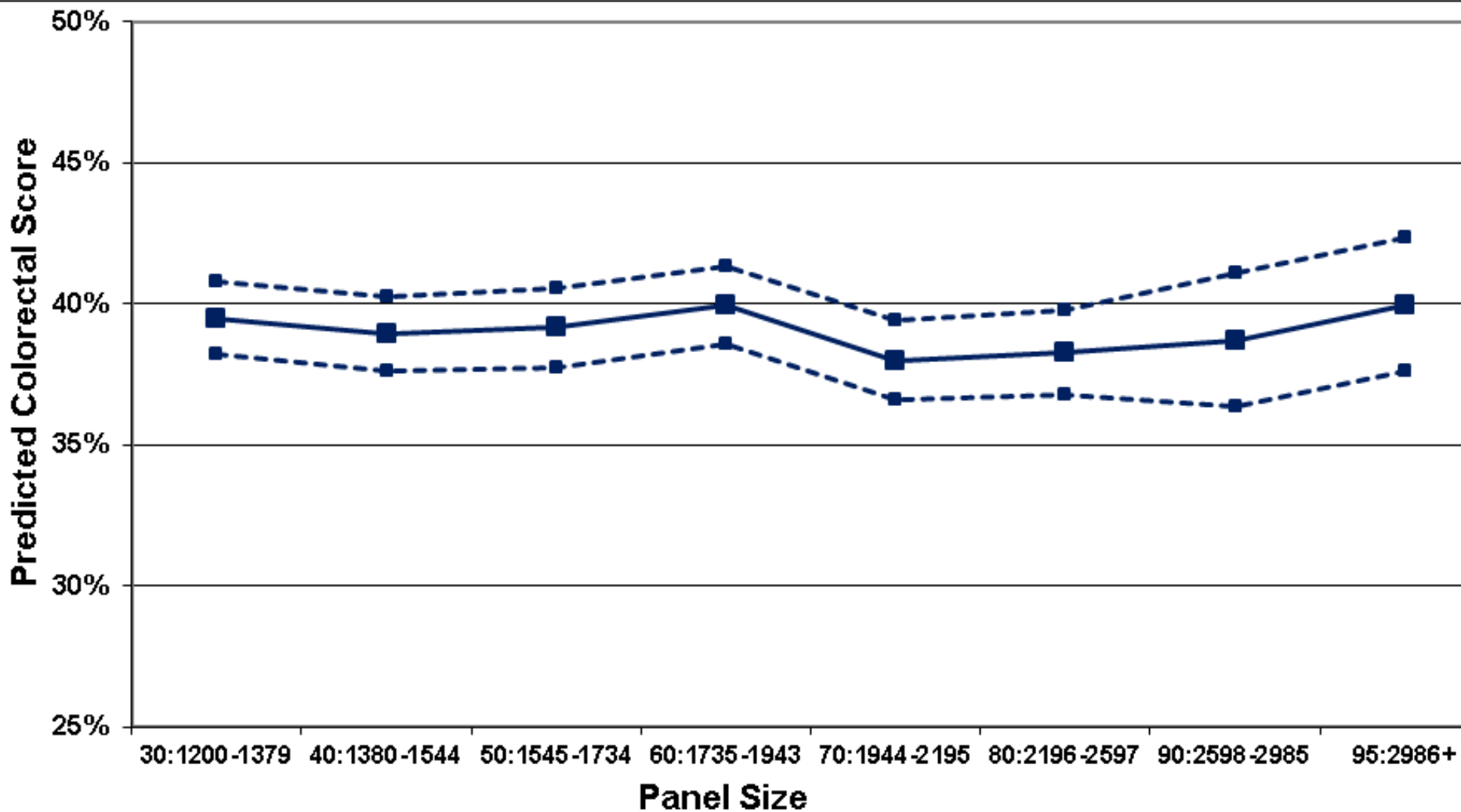
# Overall Prevention - Adjusted



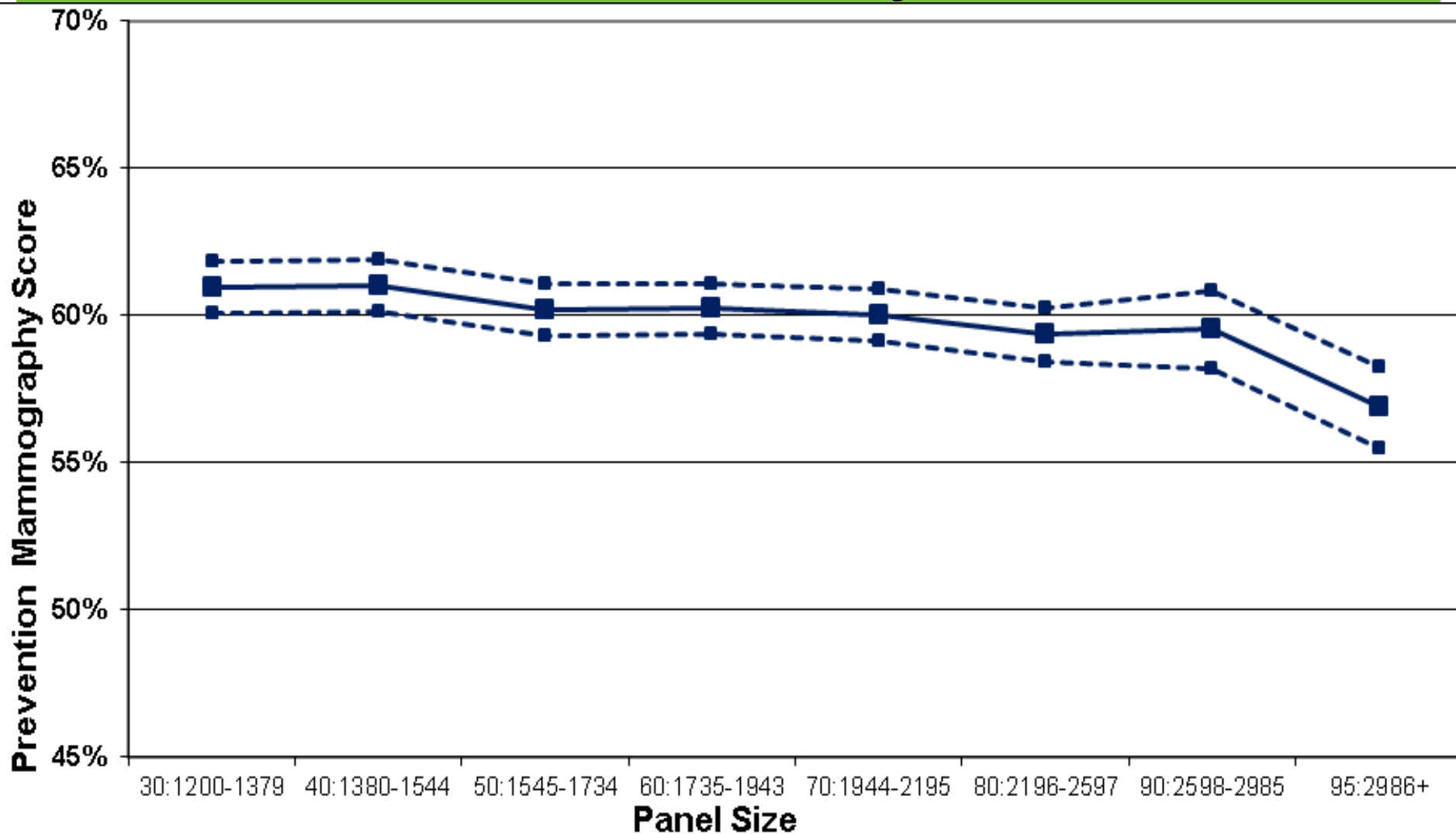
# Overall Prevention – By Model



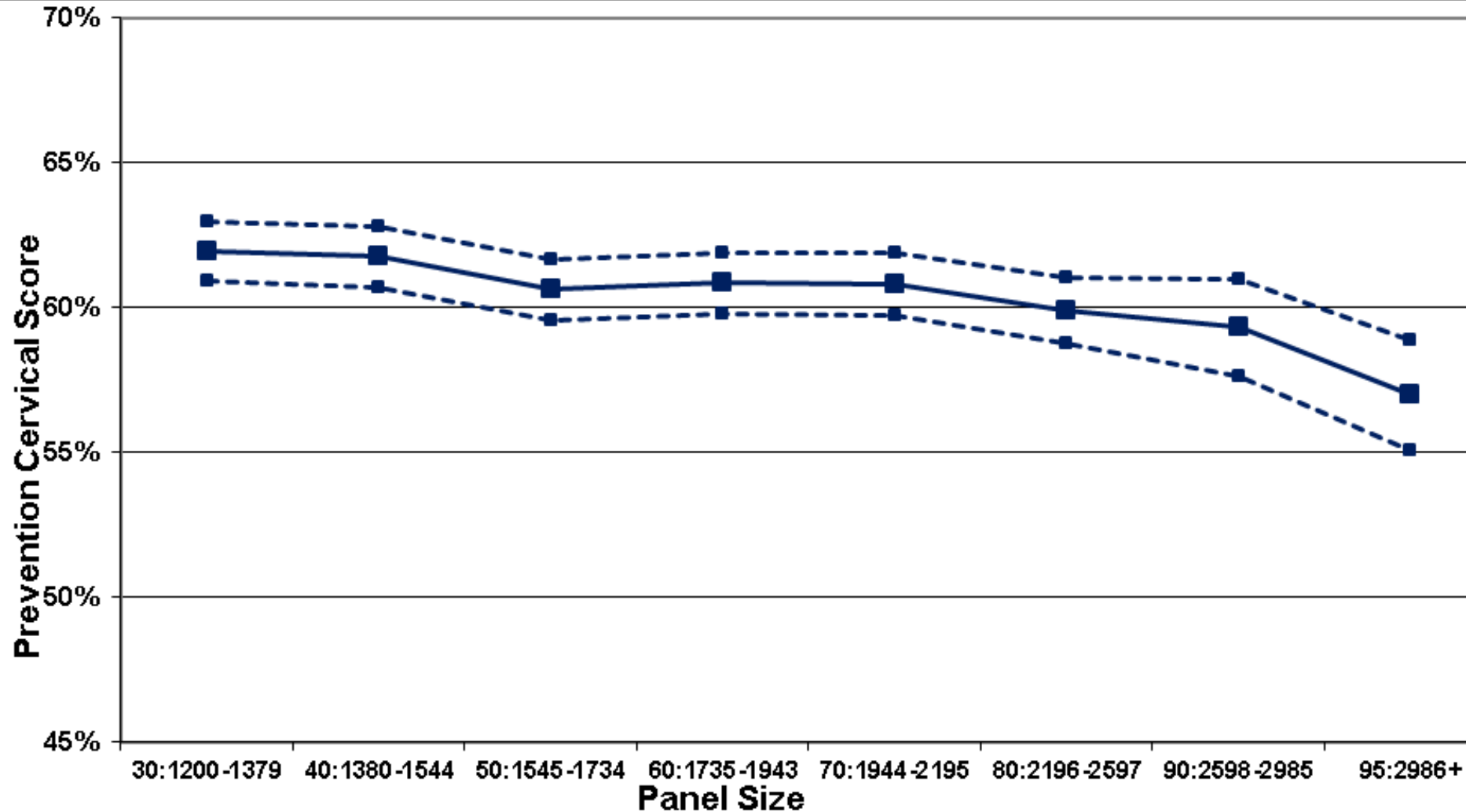
# Colorectal Cancer - Adjusted



# Breast Cancer - Adjusted



# Cervical Cancer - Adjusted





# Conclusions

1. Modest impact of panel size on prevention. Largest effect on more time intensive procedure.
2. The association between panel size and prevention is consistent across models
3. The relationship between panel size and prevention in Inter-professional practices compared to the capitation model suggests a somewhat greater capacity

# Next steps

1. Complete other dimensions
2. Establish the influence of contextual factors on the panel size-QOC relationship.
3. Integrate the results across different dimensions



# Why not?

**Patient medical complexity**

- Low
- Medium
- High

**Patient social complexity**

- Low
- Medium
- High

**Inter-professional team**

- Low
- Medium
- High

**Rurality**

- Rural
- Non rural

**Panel Size**





Thank you

# Overall Prevention – Model Summary

		Prevention Score	
		Lower	Higher
	Model - FFS	X	
MD profile	Panel size	X	
	Female		X
	Foreign Trained	X	
Patient Profile	Rurality (incr)	X	
	Age (incr)	X	
	Female		X
	Income (incr)		X
	Immigrant	X	
	Case Mix		X

