

# **Maryland Physician Workforce Study: Applying the Health Resources and Services Administration Method to Maryland Data**

**An MHCC Extramural Report**

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# Outline of Presentation

- **Context:** Conflicting estimates of Maryland physician supply.
- **Method:** Compare physicians/1000 population, Maryland versus U.S.
  - Maryland: Use physician license renewal data.
  - U.S.: Use HRSA benchmarks (U.S. year 2000 average based on AMA Masterfile physician counts).
  - Broad brush: State average, then four broad physician categories x five regions. No detail, no projection of future.
  - **Most important point:** Adjust for differences between Maryland license renewal data and AMA Masterfile data.
- **Conclusions:**
  - Maryland is 27% above U.S. average for physicians/capita.
  - But Southern Maryland is well below U.S. for all types of physicians.

# Main Caveat

- This is a study of Maryland state and regional physician supply.
- This is **NOT** a study of:
  - Direct measures of access to care.
  - Physician supply in small areas, counties.
  - Disadvantaged populations.
  - HPSAs or MUAs.
  - Individual physician specialties.
  - Future trends (e.g., impact of health care reform).

## Context: Conflicting Estimates of Maryland Per-Capita Physician Supply, Relative to U.S. Average

<b>Organization</b>	<b>Published</b>	<b>Maryland (vs US)</b>
US Health Resources and Services Administration (HRSA)	2008	25% above
Association of American Medical Colleges (AAMC)	2009	29% above
MHA/MedChi	2008	15% below

# Deceptively Simple Task

- Count physicians using Maryland license renewal data.
- Compare to HRSA standard from AMA Masterfile data.
- How hard can that be?
- But HRSA, AAMC used just *one source of data*.
- Here, we use *two completely different sources*.
- Important: Must account for data sources' treatment of
  - Hospital residents (= interns, residents, fellows).
  - Retirees.
  - Newly licensed physicians.
- Less important: Details of identifying Maryland active, patient-care, non-federal physicians from detailed license renewal data.

# AMA Masterfile Versus Maryland License Renewal File

- AMA Masterfile (for HRSA standard).
  - Over-count is a well-known issue.
  - Retirees retained as active up to four years post-retirement.
  - Estimated net over-count from comparison between Masterfile and U.S. Current Population Survey (Staiger et. al, 2009).
- Maryland license renewal file.
  - Omits most residents as Unlicensed Medical Practitioners (UMPs).
  - Omits many initially-licensed physicians (initial license not in this file).
  - Retirees should not be an issue (active-but-retired-pre-renewal should roughly balance active-but-retired-post-renewal.)
- Remove residents from both sources, adjust for retirees, adjust for new physicians.

# Accounting for Differences, HRSA 2000 Count and Maryland 2009/2010 License Renewal Count

<b>Physicians per 1000 Population</b>			
	US 2000 Masterfile (HRSA)*	Maryland 2009/2010 renewal file	<b>% Difference, MD vs U.S.</b>
Raw count	2.54	2.43	-4%
Remove residents	2.12	2.35	11%
Remove AMA overcount, retirees	1.93		
Add Maryland undercount, new physicians		2.44	
<b>Final comparison</b>	<b>1.93</b>	<b>2.44</b>	<b>27%</b>
*Note: HRSA Masterfile count may include federal and unknown status physicians. HRSA's implied count of residents is higher than counts from other sources.			

# Apply Same Adjustments to AMA Masterfile Count for Maryland

Physicians/1000, Maryland, AMA Masterfile (ARF) Data	
	Physicians/ 1000
Active patient care physicians	3.20
Remove residents	2.65
Adjust for Mastefile overcount, retirees	2.41
Adjust 2008 data to 2009/2010 basis (1.5 years average growth)	2.46
Memo: Adjusted count from Maryland license renewal data	2.44
Memo: Discrepancy, Masterfile versus Maryland license renewal	<b>-0.7%</b>



# A Comment on the Data

- There is uncertainty in all these estimates.
- Plus or minus a few percentage points.
- Not enough to change conclusions materially.
- Mere chance that the Maryland-to-Maryland discrepancy is tiny (-0.7%).
- But no coincidence that it would be close.

# Do We Need to Adjust for ...

- Maryland average population age? No, U.S. and Maryland demographics are similar.
- Border-crossing for care? No, based on Medicare claims, it's a wash.
- Lower patient-care hours for Maryland physicians? Some survey evidence of slightly lower hours. No evidence of vastly lower hours.

# Maryland Physician Supply by Region (Excluding Residents)

Maryland Physician Supply Versus HRSA Standard, All Adjustments					
Region	Total	Primary Care	Medical Specialties	Surgical Specialties	All Other
Entire State	27%	11%	54%	19%	39%
Baltimore Metro	44%	21%	69%	40%	66%
Eastern Shore	4%	0%	8%	-2%	13%
National Capital	18%	4%	56%	8%	23%
Western	20%	12%	48%	3%	29%
Southern	-26%	-19%	-7%	-34%	-39%

Key: Green = >10%, Yellow = -10% to 10%, Red = <-10%

# Medicare Beneficiaries' Travel for Physician Services

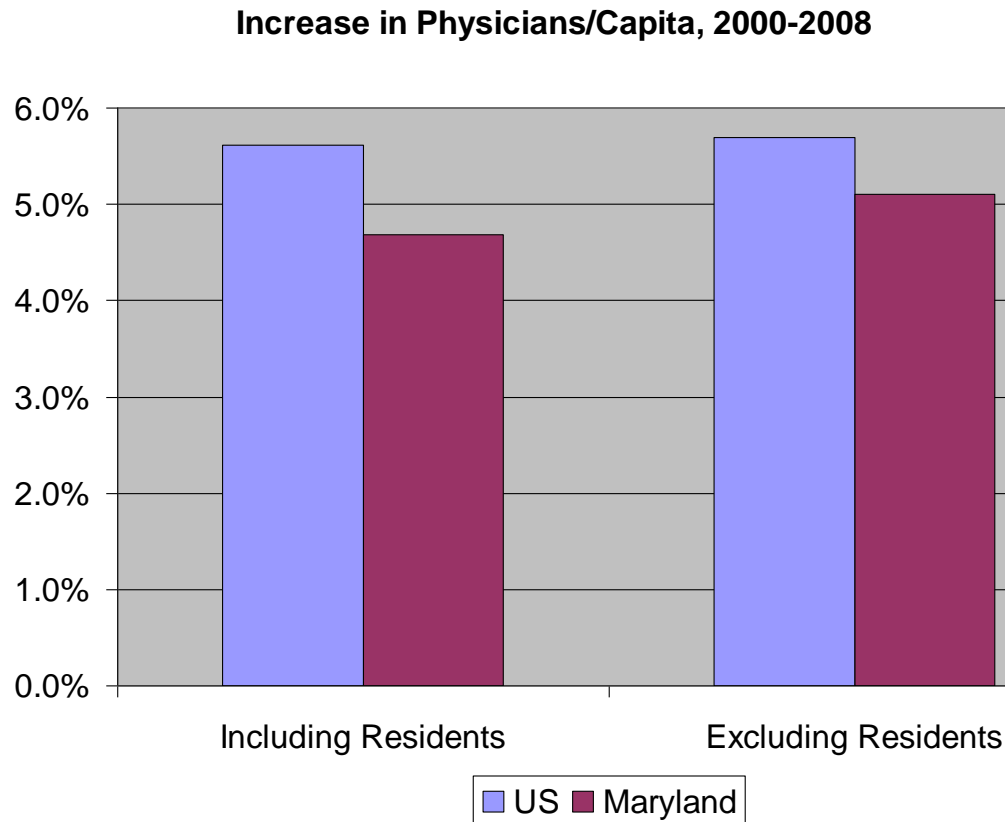
Medicare 2009 Part B Physician Services Spending per Capita								
		<u>Physician Location</u>						
		Balti- more Metro	Eastern Shore	National Capital	South- Western ern	Out of state	Total	
<u>Patient Residence</u>	Baltimore Metro	94%					\$ 2,675	
	Eastern Shore	13%	72%			13%	\$ 2,362	
	National Capital	5%		73%		19%	\$ 3,181	
	Western	5%		4%	80%	10%	\$ 2,290	
	Southern	7%		14%		67%	12%	\$ 2,692
NOTE: PERCENTAGES ADD ACROSS THE ROWS (% = % OF ROW TOTAL).								
Note: Cells under 2% were suppressed for clarity								

# A Reminder on Caveats

- Did not address:
  - Small areas/counties/HPSAs/MUAs.
  - Individual specialties.
  - Future trends including retirement of the baby boom generation or impact of health care reform.
  - Direct measures of access to care or health status.

# Historical Trend: Maryland Slightly Below U.S. Growth in Physicians/Capita

Calculated from ARF data, M.D. only (no D.O.)



# Conclusions and Suggestions

- Once you account for differences across data sources:
  - HRSA, AAMC got it right, Maryland is well above the national average.
  - My estimate: 27% above HRSA benchmark.
  - Q: Could the *real* number be 23%? 31%? A: Does that matter?
  - Maryland ARF data reconcile well with Maryland licensure count.
- Southern Maryland
  - Clearly below the U.S. average.
  - But impact other than increased travel is not clear.
- Did not address small areas, individual specialties, future, HPSAs, direct measures of access to care or health status.
- Suggestions
  - An accurate physician head count is (just) a good start.
  - Integrate the data you already own to get a better picture of impact.
  - Disease prevalence, use of services, wait times, travel patterns, ...