

Counting Pediatricians and Considering the Implications

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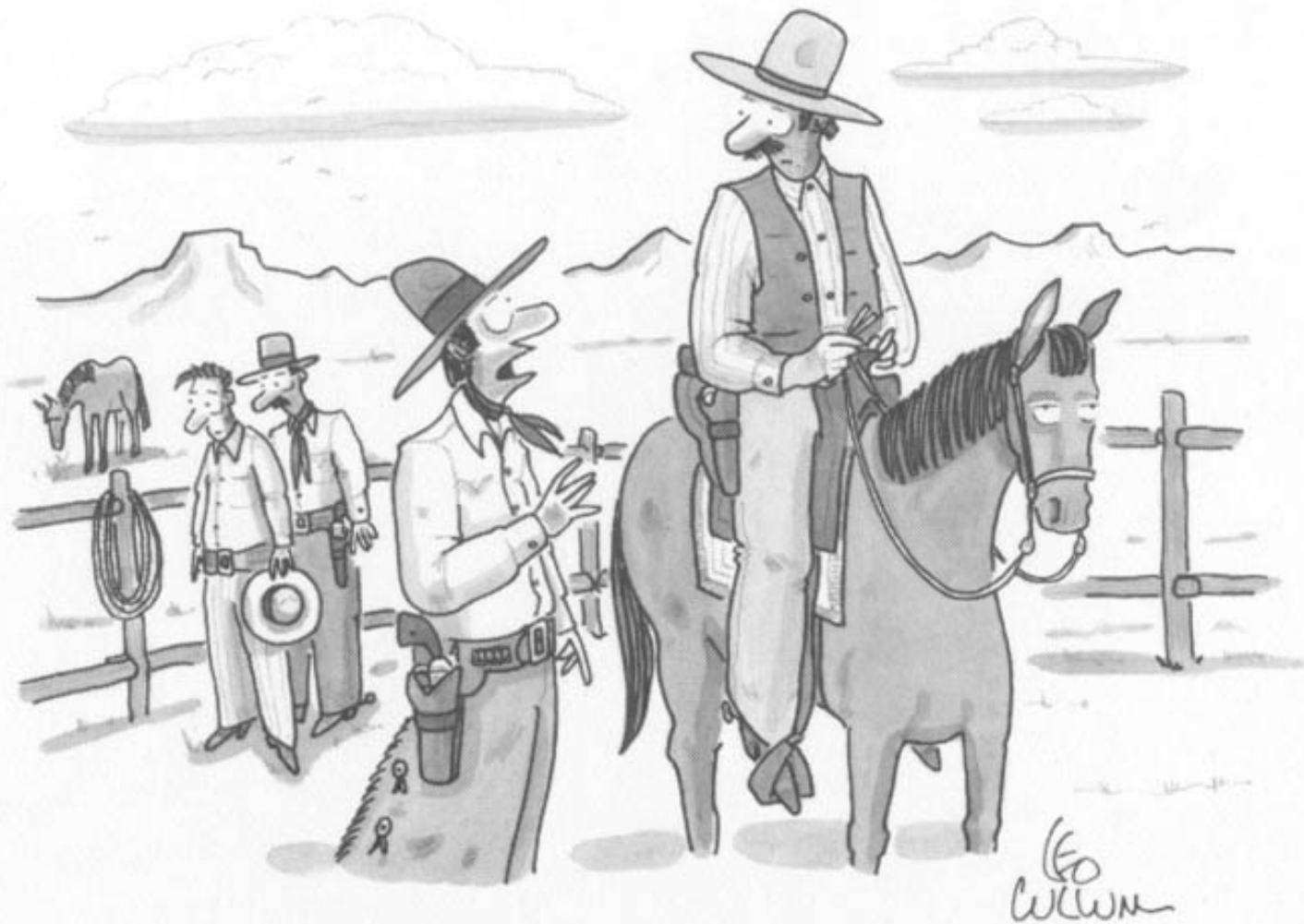
Oregon Health Research and Evaluation Collaborative

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Physician Supply

- Too many, too few, or just right?
- Varied ideologies
 - Demand-based
 - Need-based
 - Benchmarking
- Within pediatrics:
 - American Academy of Pediatrics, 1998 Workforce Statement: adequate aggregate supply of pediatricians
 - Future of Pediatric Education II Workforce Workgroup, Final Report: “keep stable levels or ↑ slightly”



"Slim has a dry scaly patch on his neck! Ride to town and bring the dermatologist."

Unified primary care workforce policy: is it appropriate?

- Pediatrics shares much in common with IM, FM:
 - Similar philosophies, traditions, policy challenges
- However, there are significant differences:
 - Subspecialization rates lower for pediatrics than IM
 - Pediatric population quite stable when compared to the growing elderly population
 - The majority of pediatricians are women
 - U.S. student interest:

% of NRMP positions filled by USMGs 2000-2003

Pediatrics 74.3 Internal Med 57.8 Family Med 48.8

Research questions

- Is the future supply of general pediatricians likely to be balanced with the requirements of the population?
- How much influence do assumptions have on the projected adequacy of the supply?
- Are projected workforce trends generalizable across pediatrics, general internal medicine and family medicine?

Methods

- Modeling using Stella® software
- 20 year projection, 2000-2020
- *Baseline workforce:* All general pediatricians practicing > 20 hrs/ week, excludes residents & fellows
- *Annual entry into workforce:*
(pediatrics residency graduates + 0.5med/peds graduates - fellowship entrants - 0.25 of IMG graduates) x (0.94)[†]
[†]*research, administrative, or other non-clinical positions*
- *Annual attrition:* age and gender specific retirement/death rates; all censored at 75 years of age
- *Child population:* all U.S. children < 18 years of age

Methods: Data sources

Current general pediatrician supply	1999 American Medical Association (January 1 1999) and American Osteopathic Assoc. (June 1 1999) Physician Masterfiles
New general pediatricians	1999-2000 AMA Annual Survey of Graduate Medical Education
International Medical Graduates	1999-2000 AMA Annual Survey of Graduate Medical Education
Death and Retirement	Bureau of Health Professions Separation Rates, 1995
FTE adjustment	American Academy of Pediatrics, 2000
Population	US Bureau of Census, 2000
Market share	Nat. Ambulatory Medical Care Survey, 1999

Methods: Sensitivity Analyses

Pediatrician Supply

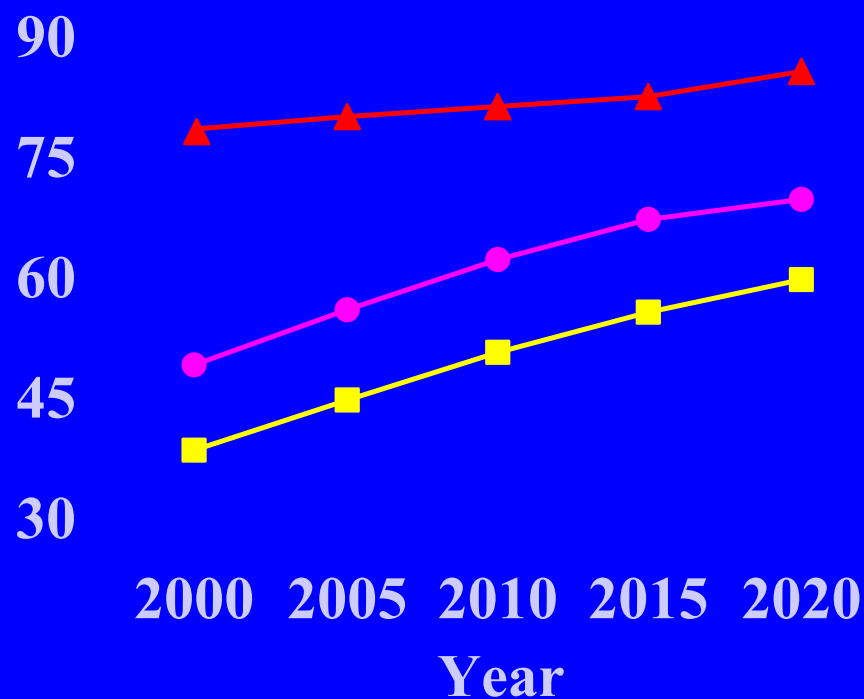
- Number of new entrants*
 - Simulated policy mandates, variable student interest
- Gender of new entrants
- Retirement rate*, age
- Productivity/ work effort*
 - Variable by age group

Requirements for Pediatricians

- High, middle, low Census estimates for child pop.*
- Market share by age group (0-4, 5-9, 10-14, 15+)*
- Shifting ethnicity of child population

*sensitivity analyses included in this presentation

Results: Projected Number of Pediatricians and Children, 2000-2020



Rate of growth*

Children: 9%

Pediatricians: 55%

Per capita supply: 42%

*over 20 years

- ▲ Child population (millions)
- Pediatricians (thousands)
- MD per 100K children

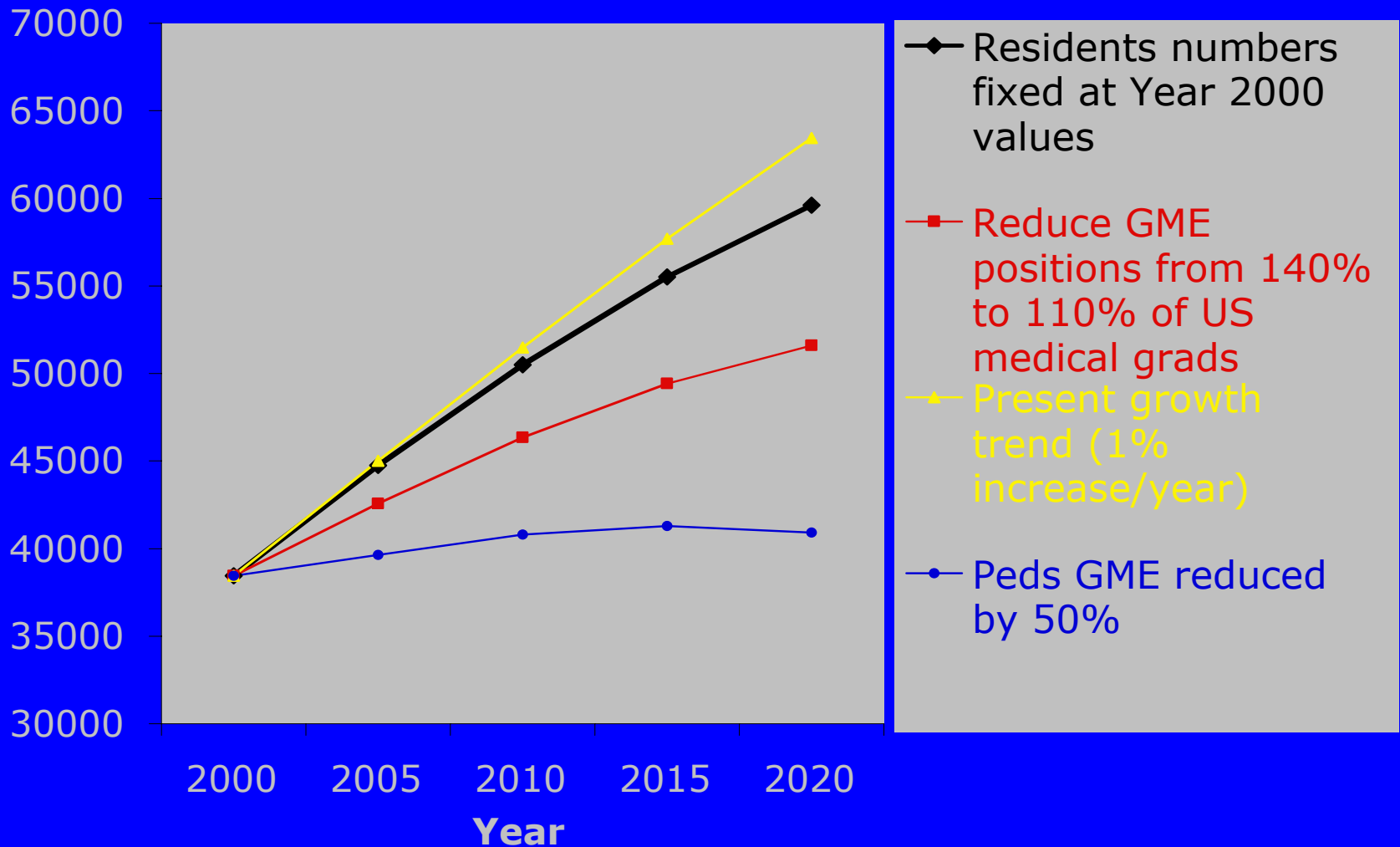
General Pediatrician Supply: Baseline model and sensitivity analyses

	Excess* general pediatricians		
	2000	2010	2020
Baseline	0	10,820	17,685
50% ↓ in new entrants	“	3,510	1,295
↓ productivity mid-late career	“	4,330	9,045
Doubling of retirement rate	“	9,065	14,610

*Beyond the number needed to maintain per capita ratio at 2000 values

All analyses FTE adjusted

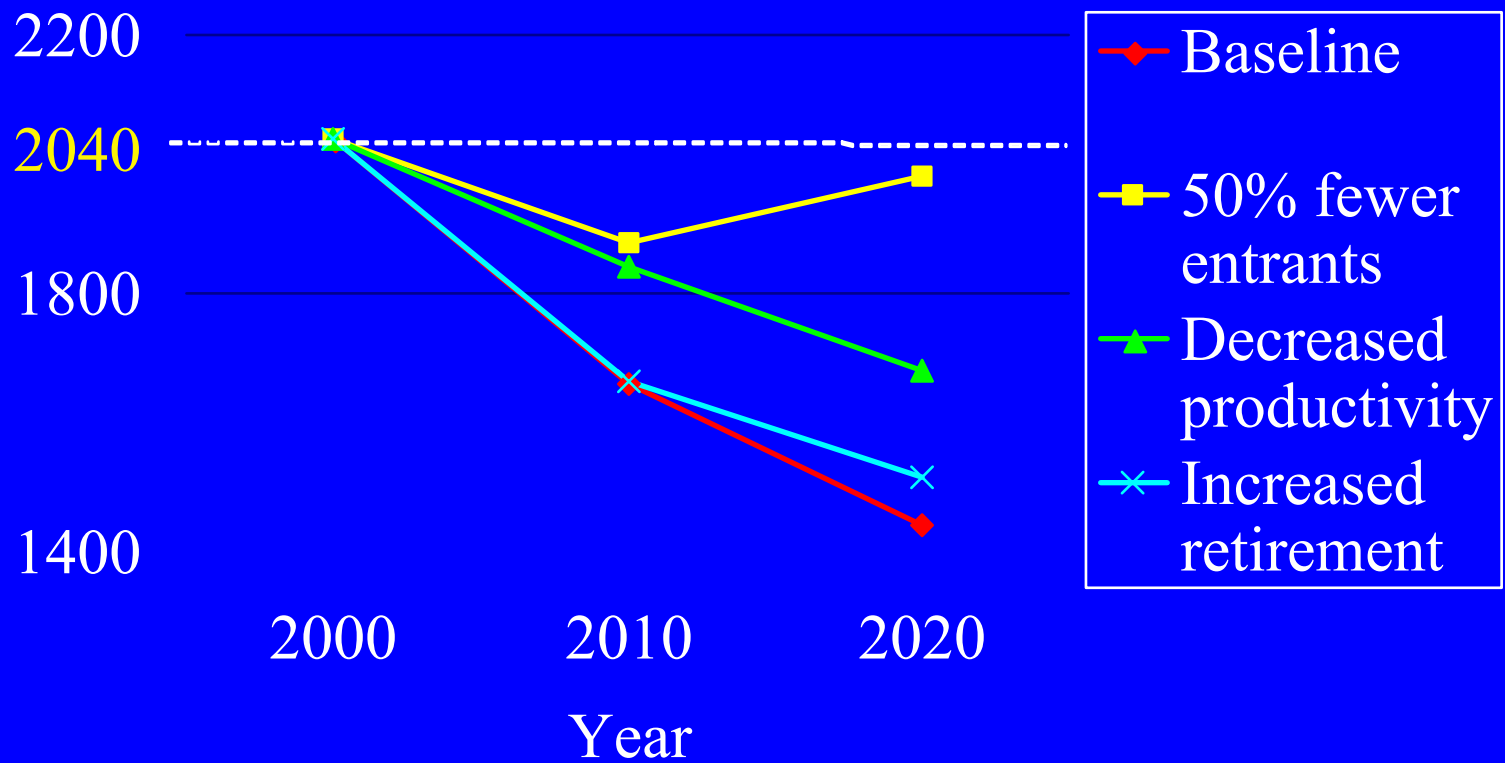
Effect of GME Variation on General Pediatrician Workforce



Impact of Retirement and Productivity on the General Pediatrician Workforce



Supply sensitivity analyses: No. of children per pediatrician



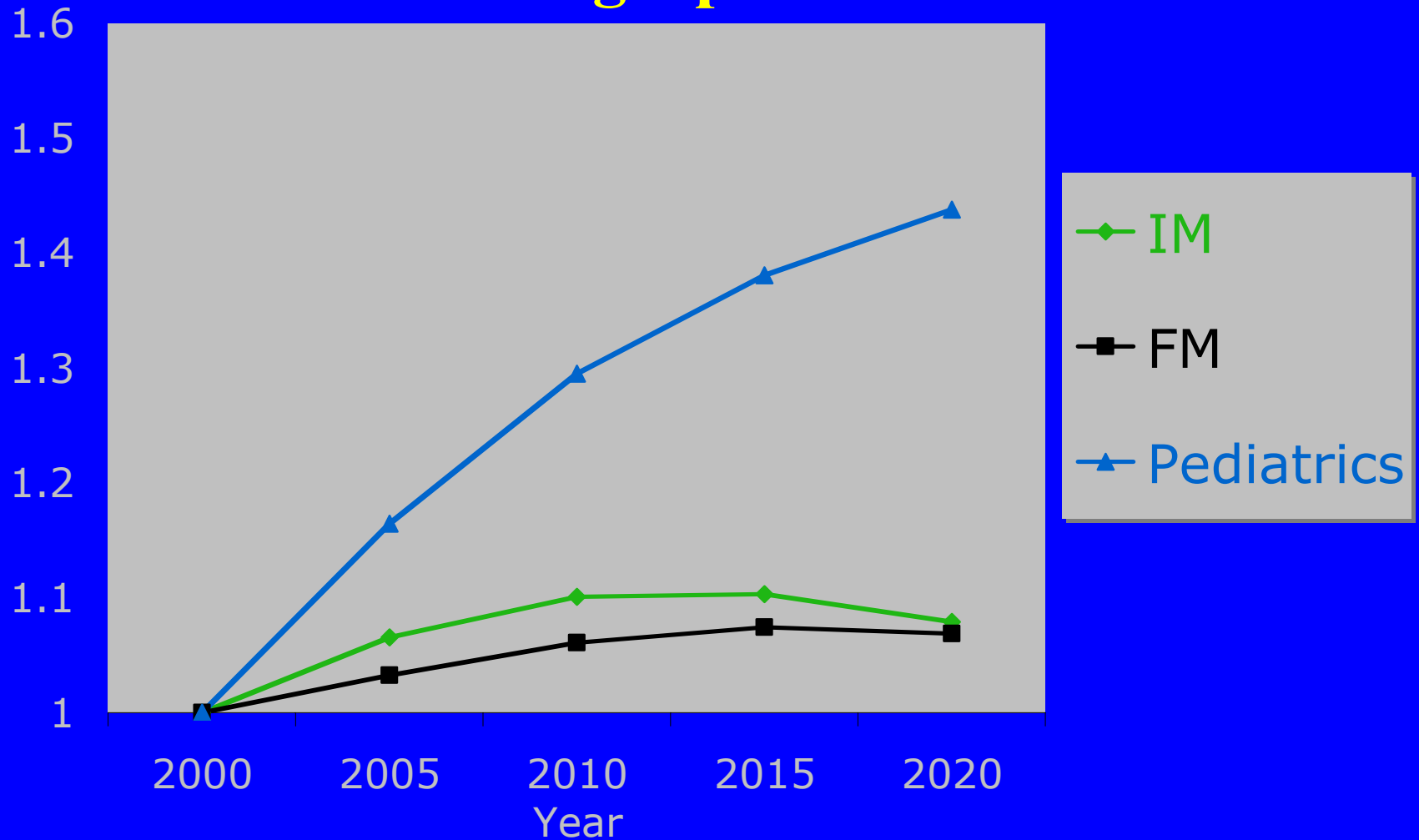
All analyses FTE adjusted

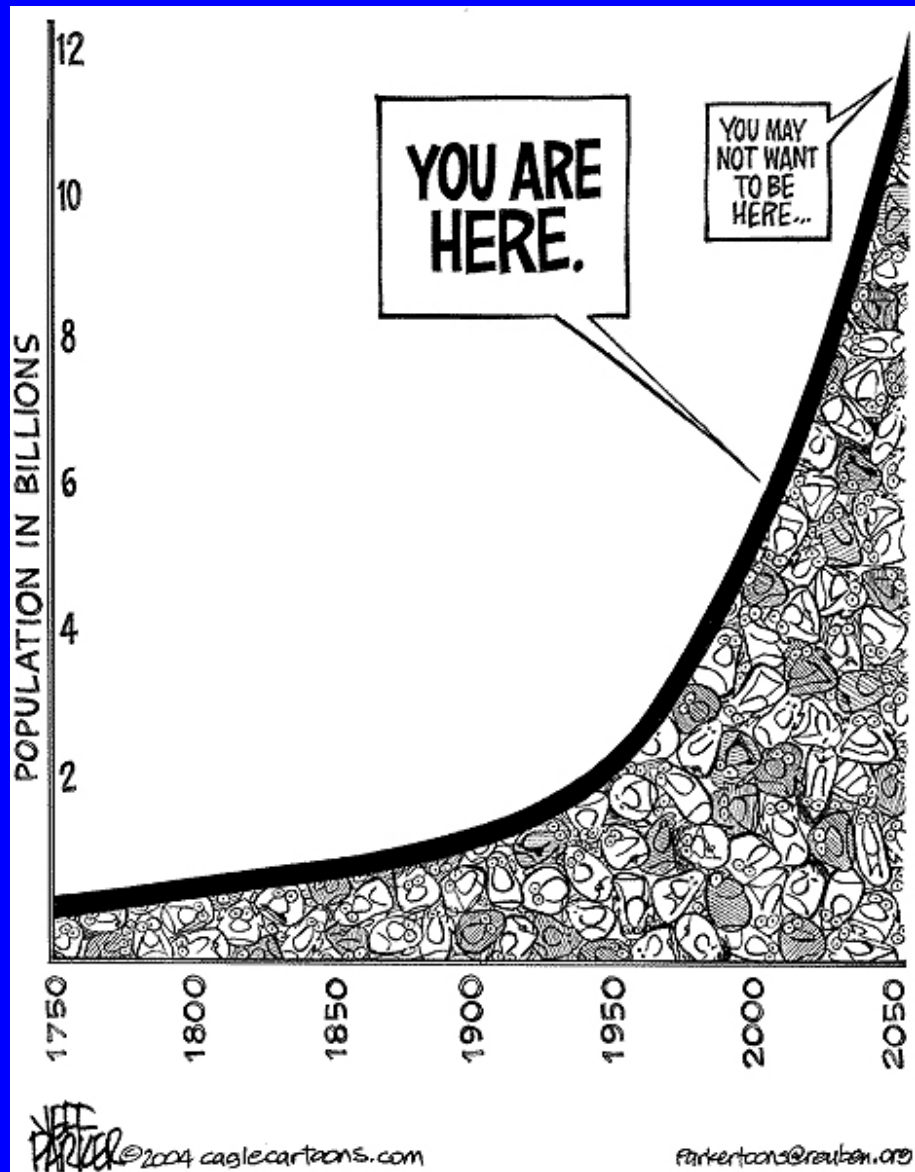
Requirements for Pediatricians: Sensitivity Analyses

	Added Peds FTEs needed		Excess supply beyond need	
	2010	2020	2010	2020
100% market share of visits ages 10-18	5,425	5,735	5,395	11,950
100% market share of all child visits	11,275	11,915	(540)	5,685
High population census estimate	2,170	6,455	8,570	11,140

All analyses are FTE adjusted

Projected Per Capita Supply for Primary care Physicians, Adjusted for Changing Population Demographics





Limitations

- National workforce model
 - Does not account for regional variation in supply
- Model is only as good as data sources
 - Retirement/death data, from 1995, is most recent available
- Workforce projections become more suspect over time
 - Limited to 20 years, robust within this period

Summary

- General pediatrics is experiencing a marked growth in supply, in excess of the growth in the child population
- Numerous scenarios that could decrease the effective supply of pediatricians or expand the requirements for their services are not adequate to overcome the expansion in per capita supply
- The robust expansion in per capita workforce within general pediatrics is unique among the primary care specialties

How might pediatric practice change?

- Less volume, less productivity
- Provide a broader array of services
- Expand care to new age ranges
- More non-clinical roles
- Greater dispersion of pediatricians
- Increased emigration of pediatricians

Workforce policy implications

- Additional factors may accentuate the impact of the growing general pediatrics workforce
 - e.g. expansion of non-physician providers, hospitalists
- For meaningful workforce considerations, may need to consider the primary care specialties independently
- Unless multiple forces act to limit workforce growth, the scope of practice of general pediatrics may need to evolve to maintain viable practices

OREGON Physician Workforce: policy trends

- OHSU wishes to double medical school enrollment to stave off a “physician shortage” in the state
- 2004 OMA/OHPR Physician workforce study found 22% of respondents anticipate retirement in next 5 years

OREGON Physician Workforce

- Generalist workforce ↑ 18% 1990-2000
- Specialist workforce ↑ 23% 1990-2000
- Population ↑ 20% 1990-2000

- Generalist workforce
 - 16th highest overall per capita supply
 - 9th highest rural per capita supply

Child Physician Workforce: OREGON

- 1 Pediatrician per 2,049 children
- 1 Child physician per 1,415 children
- 78 Oregon Primary Care Services Areas
 - 1 Pediatrician per 910 children in Portland
 - 1 Pediatrician per 10,200 children in Woodburn
 - 43 have no pediatrician
 - 12 have no family physician either

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Workforce lessons

- Little evidence to support assumption that a population's health is improved in areas with more physicians
- Consistent evidence showing that costs increase in areas with more physicians
- Cautionary note: growing overall supply may not achieve desired results, and may have unintended consequences

Workforce lessons, cont.

- Physician shortages are primarily a regional phenomenon
- Efforts to overcome shortages require **targeted efforts** to improve distribution to underserved areas
 - e.g. Per capita pediatrician workforce is growing rapidly, yet shortages persist

Questions and Feedback?



"You're doing it wrong."