



Financial Disclosure

- I have the following financial interests or relationships to disclose:
 - NANOS: Consultant/Advisor
 - University Physicians Associates of NJ, a 501c3 faculty practice: Consultant/Advisor
 - Quark: Grant Support



AMERICAN ACADEMY™
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- Professor of Ophthalmology and Neurosciences
- Rutgers-New Jersey Medical School
- Executive Vice President, NANOS





DISCLAIMERS

- 1. The opinions herein are solely my own, and do not necessarily represent those of NANOS or of any other organization/institution I am associated with.**
- 2. Of course I have a financial interest in the economics of neuro-ophthalmic practice**
- 3. But no economic or other factors are creating any conflict of interest with what I say.**





PAST HOYT LECTURERS

- 2001 Tom Carlow
- 2002 H Stanley Thompson
- 2003 Simmons Lessell
- 2004 Creig Hoyt
- 2005 Neil Miller
- 2007 Joel Glaser
- 2008 Peter Savino
- 2009 Norman Schatz
- 2010 Jonathan Trobe
- 2011 Steven A. Newman
- 2012 Alfredo A. Sadun
- 2013 Nancy J. Newman
- 2014 Mark Kupersmith
- 2015 Anthony Arnold



- “I don't want to belong to any club that will accept me as a member.”





HOYT LECTURE

“Stop Pouring, Start Casting”

J. Campbell

University of Birmingham, UK

- Copyright c 2012 American Foundry Society
- ***Editor’s Note: The Charles Edgar Hoyt Memorial Lecture is presented each year during the American Foundry Society’s Metalcasting Congress to provide an opportunity for leading metalcasting experts to express their thoughts on a topic of their choosing.***





- So, now, for something perhaps *not* completely different, I will talk about something I know nothing about



Can A Unique Little Specialty Show Us Some Pervasive Issues With The Old and New Models Of Healthcare Delivery?



WHO I AM NOT





SPEAKER



AUDIENCE





AGENDA

- *The Problem*
- How The Problem Is Changing
- What We Can Learn From Our Foreign Colleagues
- How We Can Alleviate The Problem



CURRENT LANDSCAPE/PROBLEM: THE DISCONNECT

- **Neuro-ophthalmologists (N-O) are all busy**
- **WSJ 2008 N-O earn 2/3 of comprehensive ophthalmologist**
- **Getting worse**
- **Pure consultative neuro-ophthalmologists who are taking on the most complex cases are getting too financially squeezed to continue to do so.**





Suspension of Economic Laws

- **Shortage of N-O**
 - Typically about 1/6 medical schools are recruiting
 - Often for long periods of time
 - Potentiated as many are struggling to sustain practice after a distressing sequence of events
- **Not targeting N-O**
 - Innocent bystanders sustaining collateral damage





SOME INCITING FACTORS

- **REVENUE FACTORS**

- Elimination of consult codes
- Pressure to code lower than reality- audits
- Not comparing audit data to a true peer group
- Down-valuation of specialty services to fund primary care efforts

- **PRODUCTIVITY FACTORS**

- Time for Clearance of imaging studies and specialty drugs
- Impact of scans on discs prolonging time for review
- Time to use EMR in a field where one EMR does not fit all specialties

- **EXPENSE FACTORS- OVERHEAD**

- Departments using blended overhead structure, such that lean neuro-ophthalmology practices tithed as if they were a specialty that utilized more resources



CONSULT STORY- INCOME SIDE

- N-O did a lot of consults- nature of practice



CONSULT STORY- PRODUCTIVITY

- In same practice, 99245 became 99215
 - 45% reduction in payment
- WITHIN SAME PRACTICE:
 - 99245 is now 5.37 total RVUs
 - 99215 is now 3.13 RVUS
 - Reduction of 42% of RVU's for same work!!
- OUTSIDE PRACTICE WORK RVUS
 - 99204 vs 99244
 - 2.3 v 3.02 (24% reduction)





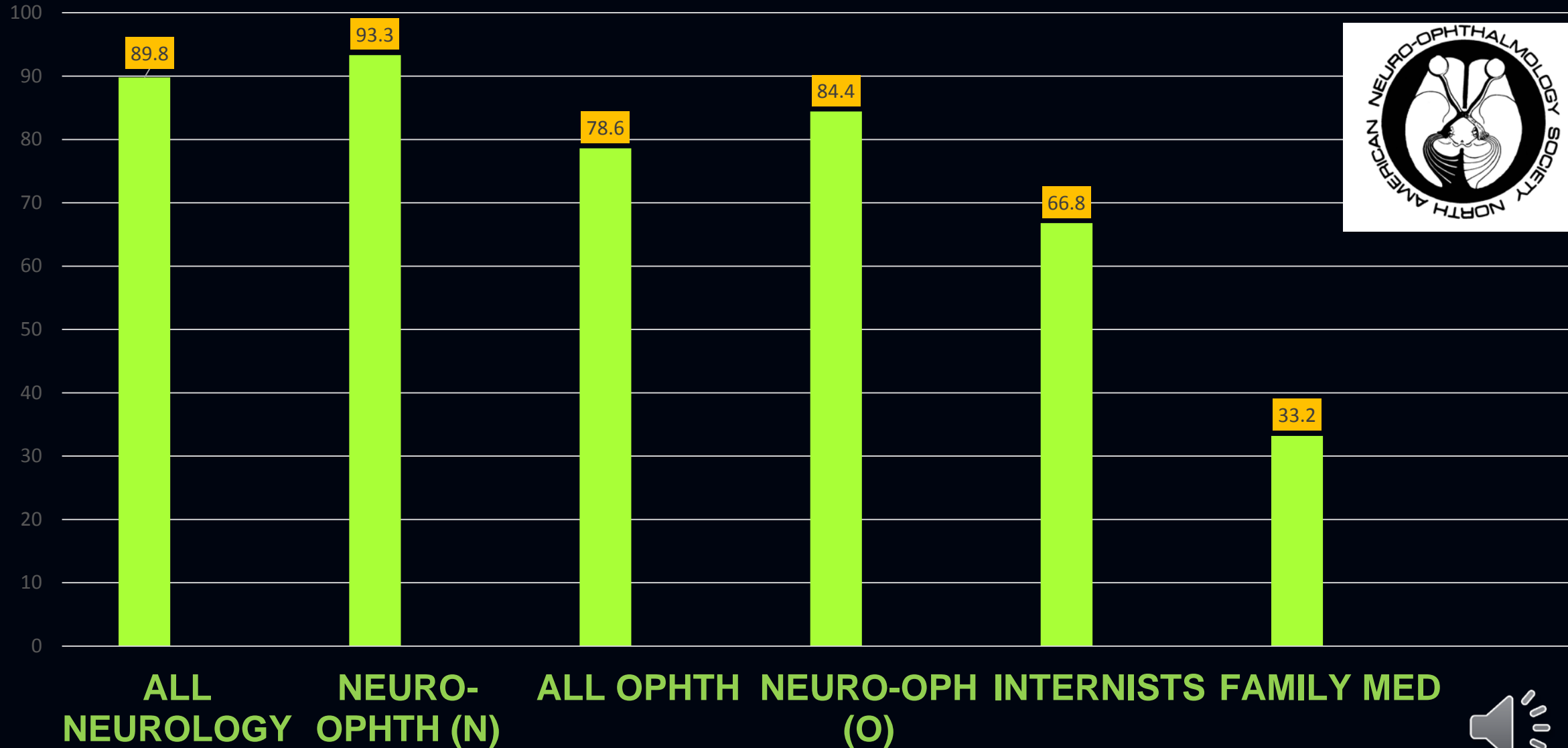
“SAME SPECIALTY CODING PROFILE AUDITS”

- Coding at too high a level
- Ordering too many scans
- Doing too many procedures
- *Not so if use proper peer group!*



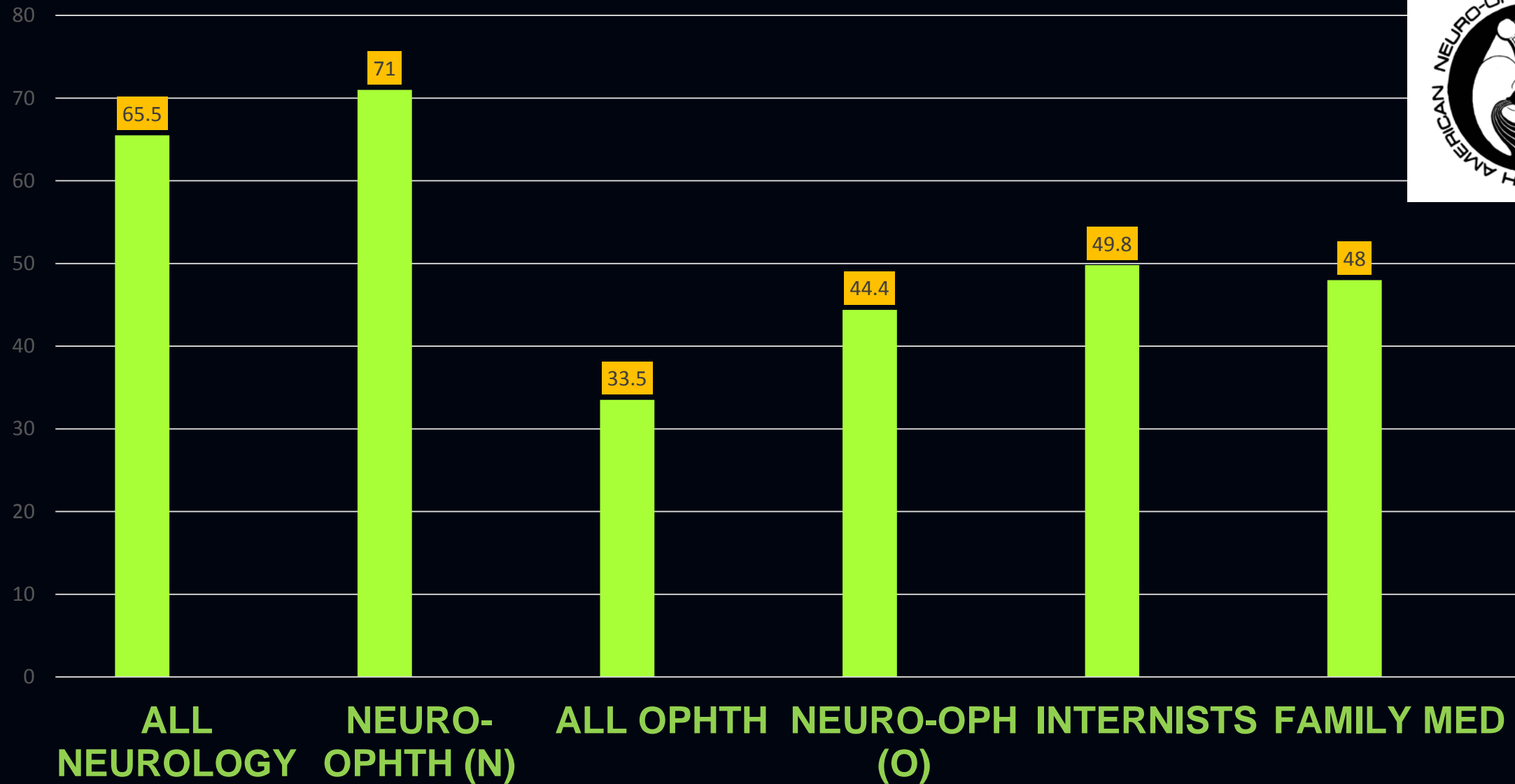


% INITIAL CODES THAT ARE LEVEL 4 OR 5 E/M





%F/U CODES THAT ARE LEVEL 4 OR 5 E/M



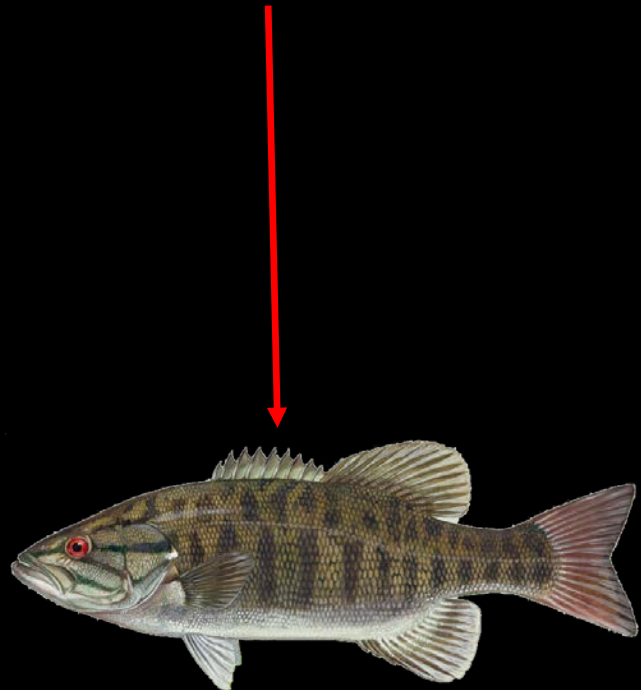


**Cognitive
Physicians**

**Primary Care
Physicians (Fish)**



**Surgeons &
Proceduralists
(Fowl)**



THE LION'S SHARE

PCP's



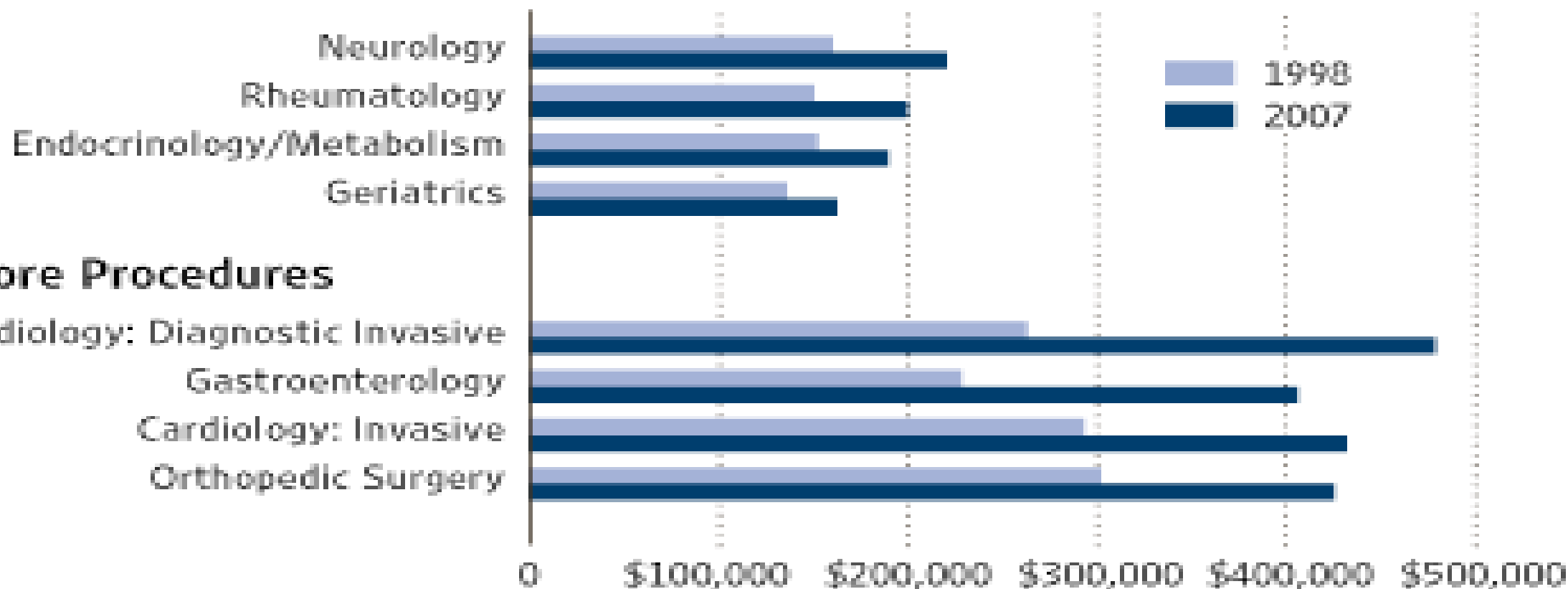
Surgeons &
Proceduralists



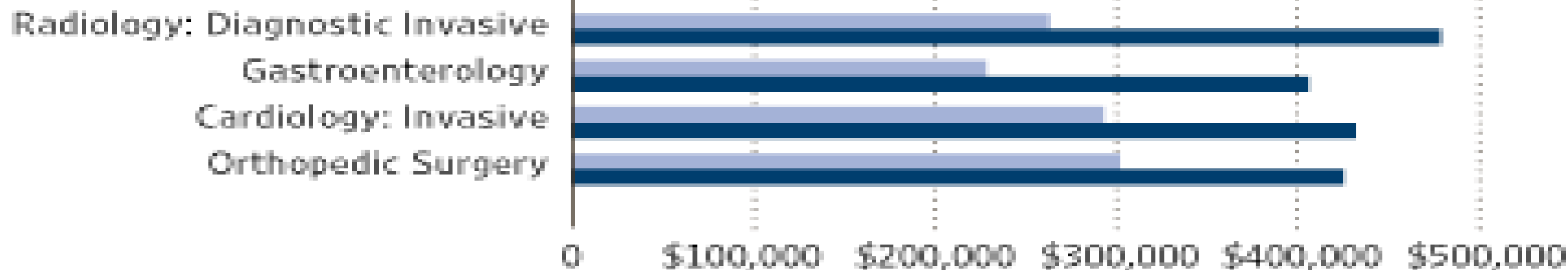
Paid Out

Salaries are lower for medical specialists who spend more time with patients but perform fewer surgeries and scans. Below, median salary by speciality.

Fewer Procedures



More Procedures



Source: Medical Group Management Association



HEALTHCARE WONK, *def*

- *One who knows damn well that he /she better not get really sick in the health care system that they are designing.*



GOVERNMENT AND CMS AT WORK





Merritt Hawkins Compensation Report-2016

SPECIALTY	AVERAGE SALARY	% INCREASE OVER PRIOR YEAR
Family Medicine	225,000	13.6
Psychiatry	250,000	10.6
Internal Medicine	237,000	14.5
Hospitalist	249,000	7.3
Nurse Practitioner	117,000	9.3



Cognitive Specialists: Neither Fish nor Fowl



- Rheumatology
- Endocrinology
- Infectious Disease
- Neurology
- Neuro-ophthalmology



Here is what CMS and Congress Forgot



Bottom Dwellers from Medscape Compensation Survey

- PCP's
 - Internal Medicine, Family Medicine, Pediatrics
- Neurology
- Rheumatology
- Psychiatry
- Endocrinology
- Infectious Diseases
- *Look familiar?*



In The Old Days, Ophthalmology Departments Had The Resources To Subsidize If Necessary

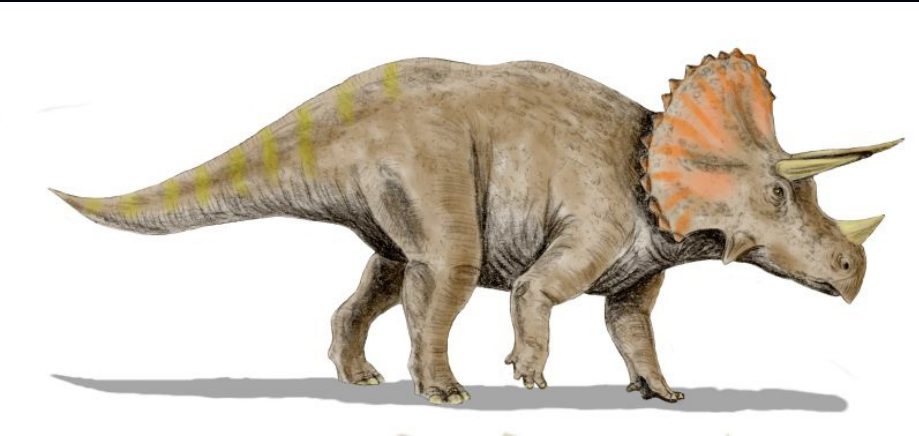


Getting hit from all sides in academic practices...



PAST & FUTURE EXTINCT SPECIES?

(Which is the dodo?)





Peter McDonnell Ophthalmology Times 2004

- “Not having a neuro-ophthalmologist would be quite a blow to the teaching and patient care functions of most departments.”





OLDSPEAK ADVICE- *Ophthalmology,* 2005

How to support /retain neuro-
ophthalmologists in academic depts.

8. *Promote multitasking/dual training*





AGENDA

- The Problem
- *How The Problem Is Changing*
- What We Can Learn From Our Foreign Colleagues
- How We Can Alleviate The Problem





RIGHT NOW, NEURO-OPHTHALMOLOGY IS A NASTY LITTLE HABIT

It is getting so that one has to do something else to be
able to afford this addiction





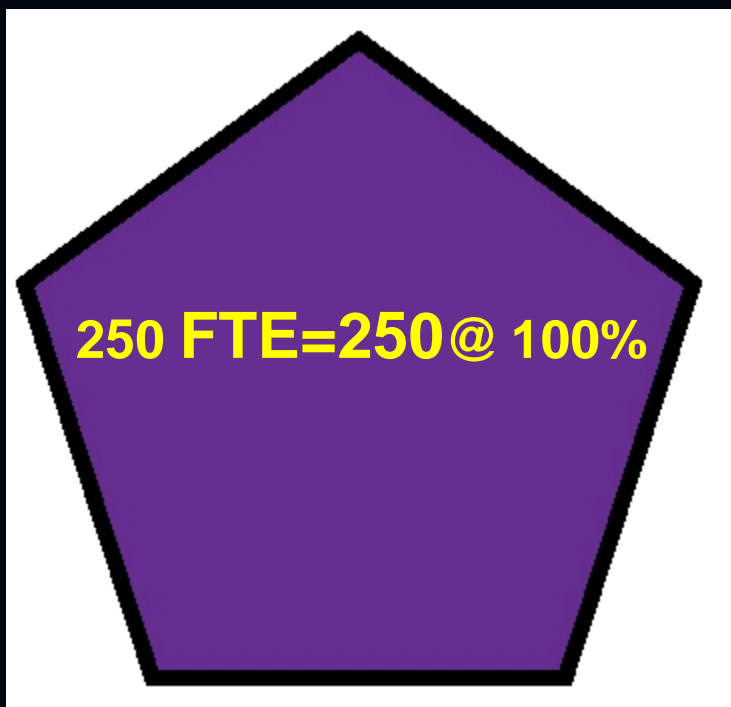
NANOS ADVICE TO MEDICAL STUDENTS, RESIDENT, FELLOWS CIRCA 2008-2016

- **If you want to do neuro-ophthalmology [and eat] you should train in a second area that reimburses better**
- **Behold- the creation of the:**
 - **Neuro-Glaucoma Specialist**
 - **Neuro-Pediatric Specialist**
 - **Neuro-Plastics Specialist**
 - **Neuro-Residency Director**



MANPOWER: FTE EQUIVALENTS IN N-O

- Probably about 250 FT N-O in US
- One full time clinical neuro-ophthalmologist =
Five people doing 20% CFTE
- You now need to train five to match the one person in the past



=



250 FTE= 1250@ 20%



Achieving 250 Clinical FTE's in N-O:

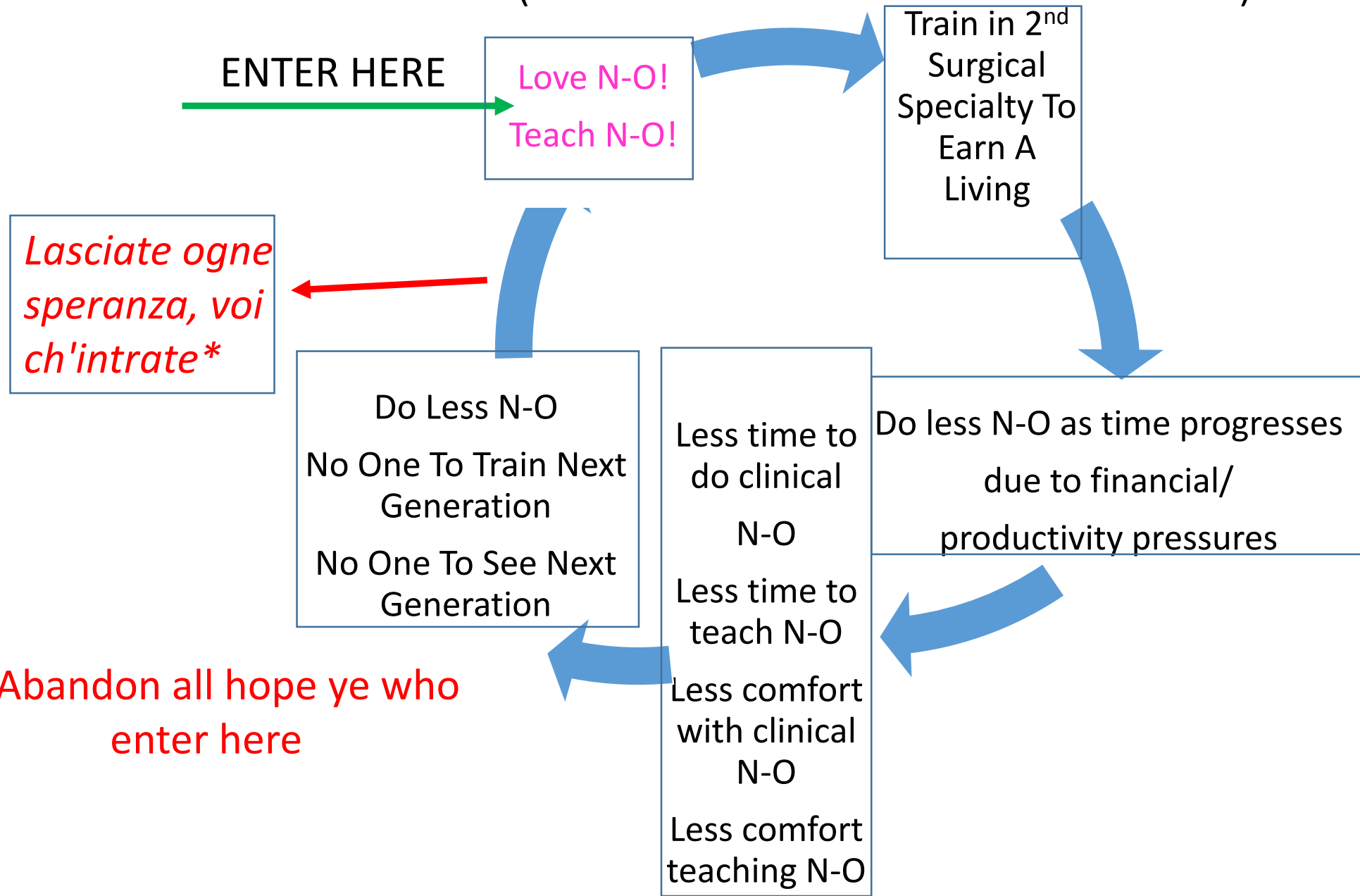
Problems with all Three Options

- *If you wanted to have 1250 people each doing N-O 20% of their time...*
 - *Where would you find 1250 interested people?*
 - *If you had them, how could you train so many using experienced people?*
 - *?What economic model would allow supporting the smaller number of exclusive N-O involved in training???*





The Death Spiral of N-O That Must Be Avoided (Or Is It Dante's Portal of Hell?)



If inadequate supply of N-O?

- Fewer experienced caregivers for N-O problems
- *Note same issues for*
 - *Rheumatology*
 - *Infectious Disease*
 - *Endocrinology*
 - *Neurology,...*





IMPACT OVERSEAS

- Many N-O who practice in other nations trained in the United States
- If no one to train them here, then shortages in other countries will soon develop.






BRAVE NEW WORLD


- **MACRA**
- **MIPS**
- **APM'S**
- **ACO'S**





INCREASED ROLE OF PHYSICIAN ASSISTANTS AND NURSE PRACTITIONERS AS PRIMARY CARE GIVERS





EXAMPLE ONE: IDEAL ASSESSMENT OF THIRD NERVE PALSY

- **Goal is rapid access to neuro-ophthalmologist for only medically necessary testing based upon history, exam, and experience**
- **Ideally, initial caregiver plugs patient directly into neuro-ophthalmologist who sees patient ASAP and only works up those who need it**



Not a new idea

- **Dillon EC, Sergott RC, Savino PJ, Bosley TM. Diagnostic management by gatekeepers is not cost effective for neuro-ophthalmology. Ophthalmology 1994 Sep;101(9):1627-30.**
 - Optic neuropathy
 - Diplopia
 - Ptosis
- **Between 16% and 26% of patients in the first three diagnostic categories were subjected to overtesting, resulting in \$57,900 of excessive costs, a 724% overcharge**



ANISOCORIA

- Two inpatient consults last month on same day
 - Huge outpt workups before sent in & I was consulted
 - Angio, MRI,...
 - \$\$\$\$\$
- Both had pharmacologic dilatation of the pupil!



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I wrote to NANOS members in many countries, and asked:

- **How is N-O care handled elsewhere?**
 - **Who makes the referrals?**
 - **Who has to authorize a referral?**
 - **How does one get approval to order imaging?**
 - **How are people supported financially?**





RESPONSES FROM:

- Australia
- Brazil
- Canada
- Chile
- Denmark
- France
- Hong Kong
- Israel
- Japan
- Singapore
- Republic of Korea
- Switzerland
- Turkey
- United Kingdom
- India



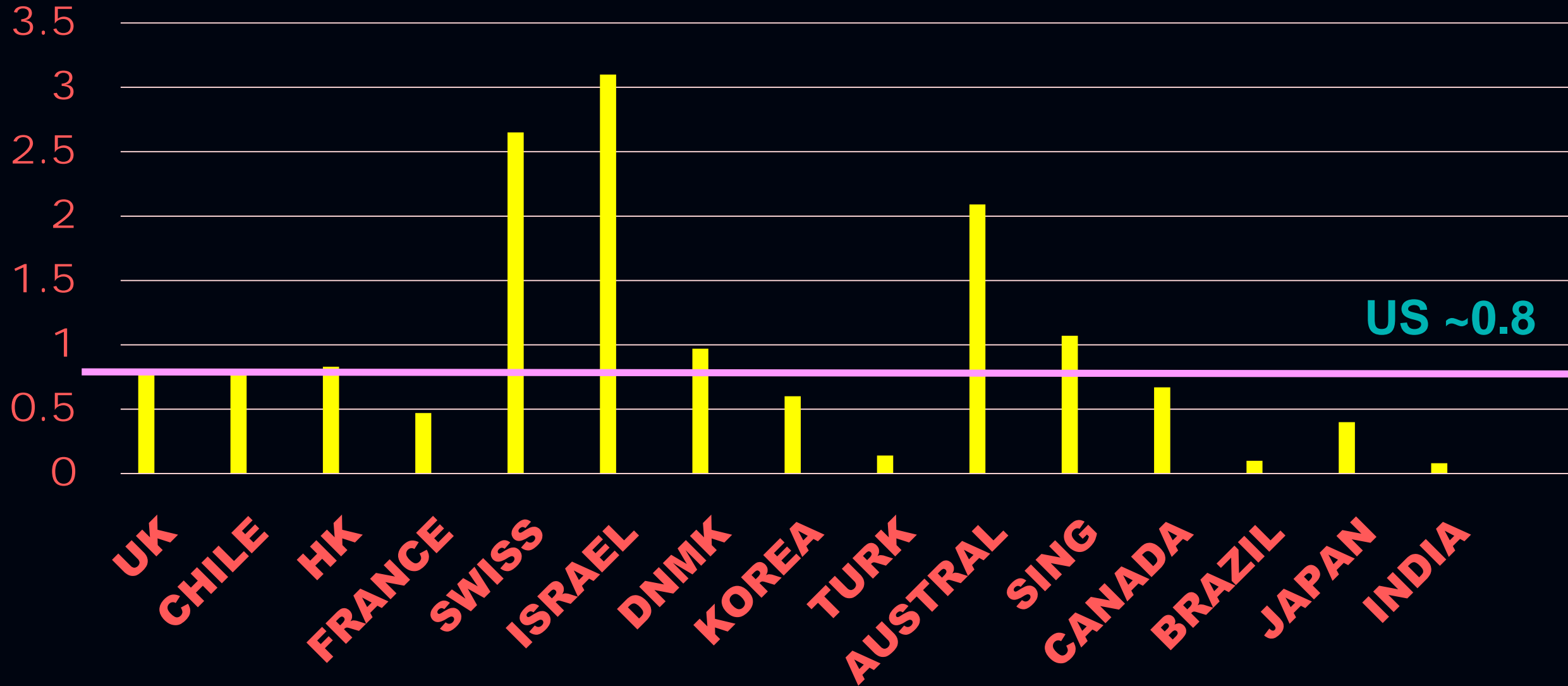
GENERALITIES

- Most train in Ophthalmology (2/3 in US)
- Israel & Switzerland : Exclusively practice N-O
- Most people who do mostly N-O are in academics
 - Exceptions- % who do largely N-O who are in academics
 - UK 4%
 - Turkey 11%
 - Rep of Korea 20%
 - Australia 50%





N-O/MILLION



US ~0.8





IS THERE ADEQUATE ACCESS TO NEURO-OPHTHALMOLOGY? Yes, Shortage, or Severe Shortage?

UK	NO!!!! Severe	REP KOREA	NO
CHILE	NO!!!! Severe	TURKEY	NO
HONG KONG	NO	AUSTRALIA	NO
FRANCE	NO	SINGAPORE	NO
SWITZERLAND	YES	CANADA	NO
ISRAEL	YES	BRAZIL	NO
DENMARK	NO	JAPAN	NO
		INDIA	NO



WHERE DID THOSE WHO DO A LOT OF N-O TRAIN?

THE HEAD BASKET OF THE WORLD?

NATION	AT HOME	IN US	NATION	AT HOME	IN US
UK	>95	<5	REP KOREA	50	45
CHILE	80	0	TURKEY	51	20
HONG KONG	16	50	AUSTRALIA	30	40
FRANCE	70	20	SINGAPORE	10	50
<u>SWITZERLAND</u>	<u>0</u>	<u>59</u>	<u>CANADA</u>	<u>40*</u>	<u>70*</u>
<u>ISRAEL</u>	<u>5</u>	<u>95</u>	BRAZIL	60	35
DENMARK	100	0	JAPAN	80	10
			INDIA	90	5

*= Two Fellowships in two nations



HOW ARE ACADEMIC N-O PAID?

NATION	SALARY ONLY	SALARY + PROD	NATION	SALARY ONLY	SALARY + PROD
UK	X		REP KOREA		X
CHILE	X		TURKEY	X	
HONG KONG	X		AUSTRALIA	X	
FRANCE	X		SINGAPORE	X	
SWITZERLAND	X		CANADA	X	X
ISRAEL		X	BRAZIL	X*	
DENMARK	X		JAPAN	X	
			INDIA	X	

* Note in Brazil, straight salary for academic time, but no one is FT academic



HOW ARE PRIVATE PRACTICE N-O PAID?

NATION	SALARY ONLY	SALARY + PROD	PROD ONLY	NATION	SALARY ONLY	SALARY + PROD	PROD ONLY
UK	X			REP KOREA			X
CHILE			X	TURKEY		X	
HONG KONG			X	AUSTRAL	X		
FRANCE			X	SINGAP	?	?	?
SWISS			X	CANADA		X	X
ISRAEL			X	BRAZIL			X
DENMARK	X			JAPAN	X		
				INDIA			X

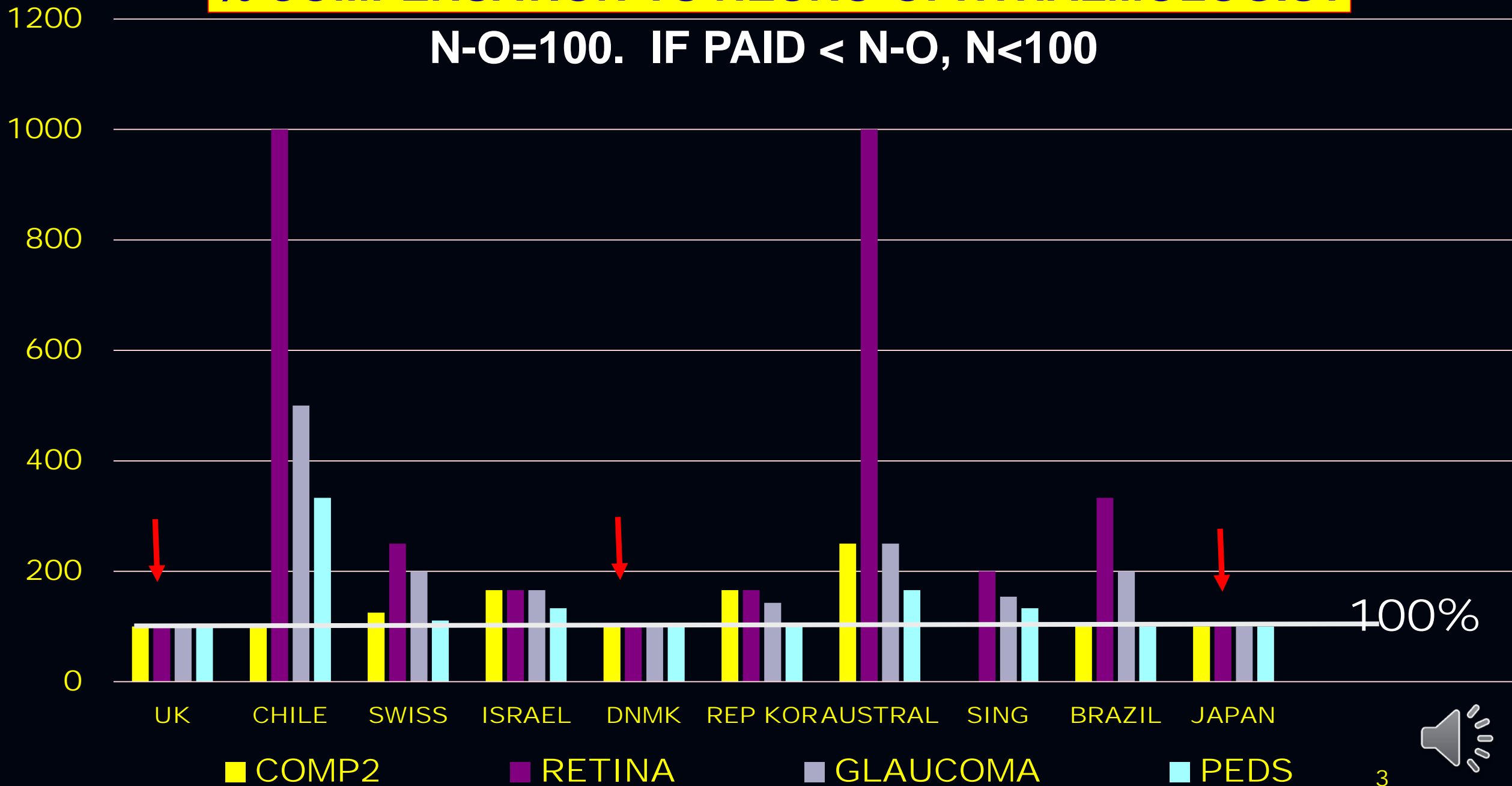
* Data for Singapore not known to respondent





% COMPENSATION VS NEURO-OPHTHALMOLOGIST

N-O=100. IF PAID < N-O, N<100





ARE REFERRALS & APPROVALS REQUIRED TO SEE A NEURO-OPHTHALMOLOGIST?

NATION	YES/NO	NATION	YES/NO
UK	NO	REP KOREA	NO
CHILE	NO	TURKEY	NO
HONG KONG	YES/NO	AUSTRALIA	NO
FRANCE	NO	SINGAPORE	NO
SWITZERLAND	NO	CANADA	NO
ISRAEL	NO	BRAZIL	NO
DENMARK	NO	JAPAN	NO
		INDIA	NO



IF A NEURO-OPHTHALMOLOGIST ORDERS A CT OR MRI SCAN, IS PREAUTHORIZATION REQUIRED?

NATION	YES/NO	COMMENT
UK	NO	
CHILE	YES	ONLY FROM HEAD OF DEPT OF N-O
HONG KONG	NO	
FRANCE	NO	
SWITZERLAND	NO	
ISRAEL	YES/NO	SELF PAY NO HMO-YES
DENMARK	NO	



IF A NEURO-OPHTHALMOLOGIST ORDERS A CT OR MRI SCAN, IS PREAUTHORIZATION REQUIRED?

NATION	YES/NO	COMMENT
REP KOREA	NO	
TURKEY	NO	
AUSTRALIA	NO	
SINGAPORE	NO	
CANADA	NO	IF NEED EXPEDITED, NEURORADIOLOGY APPROVES
BRAZIL	NO	NO IF HAS INSURANCE
JAPAN	NO	
INDIA	NO	





Are there characteristics of the practice of neuro-ophthalmology in your nation that you think are an advantage to what you know of the practice of your United States colleagues?



AUSTRALIA

- “The autonomy to order tests and investigations that we feel to be appropriate without needing authority.”



SWITZERLAND #1

- **“10 Years ago, a sophisticated reimbursement system was implemented that is quite unique. It is not technical procedures, but rather time that physicians spend with their patients. For neuro-ophthalmologists, this represents a major advantage.”**



SWITZERLAND #2

- “ It is a paradise to practice neuro-ophthalmology. Hence I moved here...”





Are There Impediments To Practicing Neuro-ophthalmology In Your Country That You Think Are Not Seen By Physicians In The United States?

- Chair of Ophthalmology at major European University who trained here:
 - *No, the problems of neuro-ophthalmologists in the US are a nightmare!”*





So What Did We Learn?

- Why referrals?
- Why approval of scans?
- Would it not make sense for at least certain ICD-10 codes be exempt from referrals to certain specialties?
 - (Optic Neuritis/Neuro-Ophthalmologist)
- Would it not make sense to exempt certain specialists from need for approvals for certain scans
 - (Neurosurgeon /MRI brain)



WHAT DID WE LEARN-II

- Maybe there are other models by which to compensate some types of physicians?



- **The ACO Train is not derailment or rerouting proof**
- **Change can and will occur**



JAMA 8/16/16

- Kevin Schulman, MD and Barak Richman JD, PhD - Duke University

Reassessing ACO's and Health Care Reform

- “Based on 3 published evaluations of the ACO program, the experiment so far has failed to produce needed efficiencies.”
- “Given the uncertain benefits and the definite costs of the ACO strategy, these studies suggest that it is time for Medicare to reject the ACO hypothesis and end its interest in hospital-led strategies in health care.”





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PROBLEM

- Adequate recruitment & retention
- Identifying those patients who are the 5% and getting them into the right hands early enough to alter the outcome and cost of their care



RAPID ACCESS TO THE DMV





Case:

System Failure in Targeting Right Clinician

- **21 yo girl**
 - **Headaches (classic migraines)**
 - **3 episodes in 3 years of visual dimming for seconds while taking a hot shower**
 - **No visual complaints**
 - **No tinnitus**



21 yo girl

- Sent by PCP to optometrist
- Field: some mild arcuate changes in one eye
- OCT: diffuse thinning OU
- Optometrist looks in, sees “papilledema”
- Tells PCP to send girl for MRI and spinal tap



21 yo girl

- **MRI negative except for “mild Chiari malformation”**
- **Optometrist sends patient to neurologist**
- **Spinal tap done in wrong position for measuring ICP**
 - **LP not necessarily benign if Chiari**
 - **Opening pressure normal at 15 cm**



21 yo girl

- Optometrist starts her on one gram daily of acetazolamide
- He follows her with serial fields, fundus exams, and OCTs
- She does not improve



Case: 21 yo girl

- He refers her to a neurosurgeon for surgical treatment
- Neurosurgeon thankfully experiences cognitive dissonance and insists she see a neuro-ophthalmologist



Our final diagnosis

- Bilateral Optic disc hypoplasia with colobomas and migraines
- No evidence of disc edema or raised ICP
- *All avoided if expedient referral from PCP to N-O made (if PCP knew to whom and how to send patient).*



As the new health care model permeates...

- Initial contacting caregiver

~~POP~~



NP or PA

- Delay in diagnosis/Increased cost
- Missing clinical windows



And anyway...

- **Isn't the increasing public awareness and access to disease-specific information going to increase their demand for timely access to the right subspecialist?**



THE POINT

- The sickest need their care from the best trained *for their specific problem.*



- “Midway upon the journey of our life, I found myself within a forest dark, for the straightforward pathway had been lost.”
- *Dante Aligheri, The Divine Comedy*



WHAT TO DO???

- **Certainly need to at least treat shortage specialties/cognitive specialists like primary care physicians, or at least, stop taxing them to further support PCP's**





Problem:

RECRUITMENT/RETENTION

- Models most used to pay and allocate expenses in academia* makes no sense for some specialties
- Blended overhead models may exacerbate problem.
- **PRINCIPLE IS YOU MAY NEED A DIFFERENT MODEL FOR SHORT SUPPLY SPECIALITIES**
- *And in some private group practices as well






OTHER COMPENSATION MODELS

- Capitate N-O?





OTHER POTENTIAL COMPENSATION MODELS

- Hourly compensation
 - Perfectly valid
 - Complex to administer



OTHER POTENTIAL COMPENSATION MODELS

- Simplest solution is a fair, post-practice expense straight salary model which is the prevailing model in other nations
 - Can adjust to cost of living
 - Can have productivity adjustment +/-





WOULD IT NOT MAKE SENSE?

- **Have CMS or other federal agency delineate short supply specialties?**
 - **Grant federal support**
 - **Administered as a grant to a university or health care delivery system solely for this purpose**
- **States could have complementary programs for specialties with regional shortages**





OK, assume we solved the first problem
The specialists we need are out there

- **We now anticipate being able to compensate rheumatologists, endocrinologists, infectious disease, and even neuro-ophthalmologists in a way that permits us to recruit and retain ...**





SECOND PART OF PROBLEM

- **How do we get the patients who need them into their hands fast enough to impact outcomes and costs?**



ANSWER

- A new specialty,
- ***THE REFERRALIST***





The Referralist

- **Almost all health care is delivered locally**
- **Need a panel of senior, experienced local doctors who have been around and know their area and its providers, and their individual expertise and interests.**
 - **Some Referralists will be PCP, some specialists**
 - **They will function as a team/panel to best improve care**





The Referralist

- **Experienced referralist will be able to steer the patient to the people who are likely the right providers and will be keyed in to arranging emergent consultation when necessary**





The Referralist

- Isn't this a perfect job for a senior physician who wants to wind it down at the end of their practice years?
- They know local environment.
- Trick is to support them with AI
- This lets them send patient to the right DMV




DMV=DISEASE MAVEN



DELINEATION OF PANEL OF CERTIFIED SPECIALISTS (DISEASE MAVENS) FOR EACH DIAGNOSIS

- PCP DOES NOT NEED REFERRALIST
- Examples from the 95%
 - Lupus- Rheumatologist
 - Duodenal ulcer- GI person-
 - Macular Degeneration- Retina Specialist
 - Gradual visual loss- Comp. Ophthalmologist
- PCP NEEDS REFERRALIST
- Examples from the 5%/DMV
 - Rheumatologist interested in Cogan's syndrome
 - GI person experienced in Whipple's Disease
 - Retina specialist interested in retinal vasculitis
 - Acute visual loss with pain moving the eye- N-Ophth



- 
- Disease MaVens will know that the Referralist has reliably steered them cases who need help quickly and will therefore expedite visit
 - ***NO APPROVALS / PRECERTS SHOULD BE REQUIRED!***



CHRONIC CARE OF SLE PATIENT ON PLAQUENIL


- **EXISTING MODEL**
 - NP or PA
 - PCP IF PROBLEM
 - RHEUMATOLOGY IF CRISIS OR DECISION POINT
 - OPHTHALMOLOGY **AFTER** VISUAL LOSS
- **REFERRALIST-DMV MODEL**
 - RHEUMATOLOGY AS DMV FOR THIS DISEASE
 - OPHTHALMOLOGY DMV: **BEFORE** VISUAL LOSS



65 yo diabetic with complete pupil sparing third nerve palsy

- Referralist contacted
- Urgent consult with N-O arranged
- N-O Determines no workup required.





Disease MaVen seeing a patient with a disease that they are certified for needs no preauthorization:

- **To call consults**
- **To order labs and imaging**
- **To prescribe meds in their expertise**
- **To do list of standard procedures for their field**






Model Evolves into

- Patient has at least one Disease MaVen for each serious/unusual illness
- PCP (or Extender) for all other medical issues





Maybe 95% of patients will not need to be “covered” by this model

- But those with unknown, rare, or chronic serious illness should be





ANOTHER POINT

- **Are we forcing Academic Medical Centers to abandon or defocus on their core missions?**





CONCLUSION

- **The US health care delivery system seems to have functional blindness, or at least, a disconnection from reality, when it comes to several in-demand specialties, one example of which is N-O, and needs take action to allow for patient access.**



MY HOPE

- “From a little spark may burst
a flame.”

Dante Alighieri, The Divine Comedy





Thank You AAO and NANOS

- Thank the Hoyt Selection Committee
- Professional thank yous to:
 - Peter Savino
 - Norm Schatz
 - Sue Benes
 - Roger Turbin







Q:DO YOU BELIEVE IN GOD?

"I am an intelligenceological existential atheist. I believe that there is intelligence in the universe with the exception of certain parts of New Jersey"

- ***WOODY ALLEN, SLEEPER***

