Choosing Wisely in Pediatrics (Escogiendo Sabiamente en Pediatria)

Safely Doing Less

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Section of Pediatric Hospital Medicine

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Pediatrics

“Primum Non Nocere”

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Safely Doing Less

Safely Doing Less –
A Missing Component of the Patient Safety Dialogue
Schroeder et al, *Pediatrics*, 2011

"Often the best way to prevent avoidable harm from medical interventions is to avoid the interventions in the first place"

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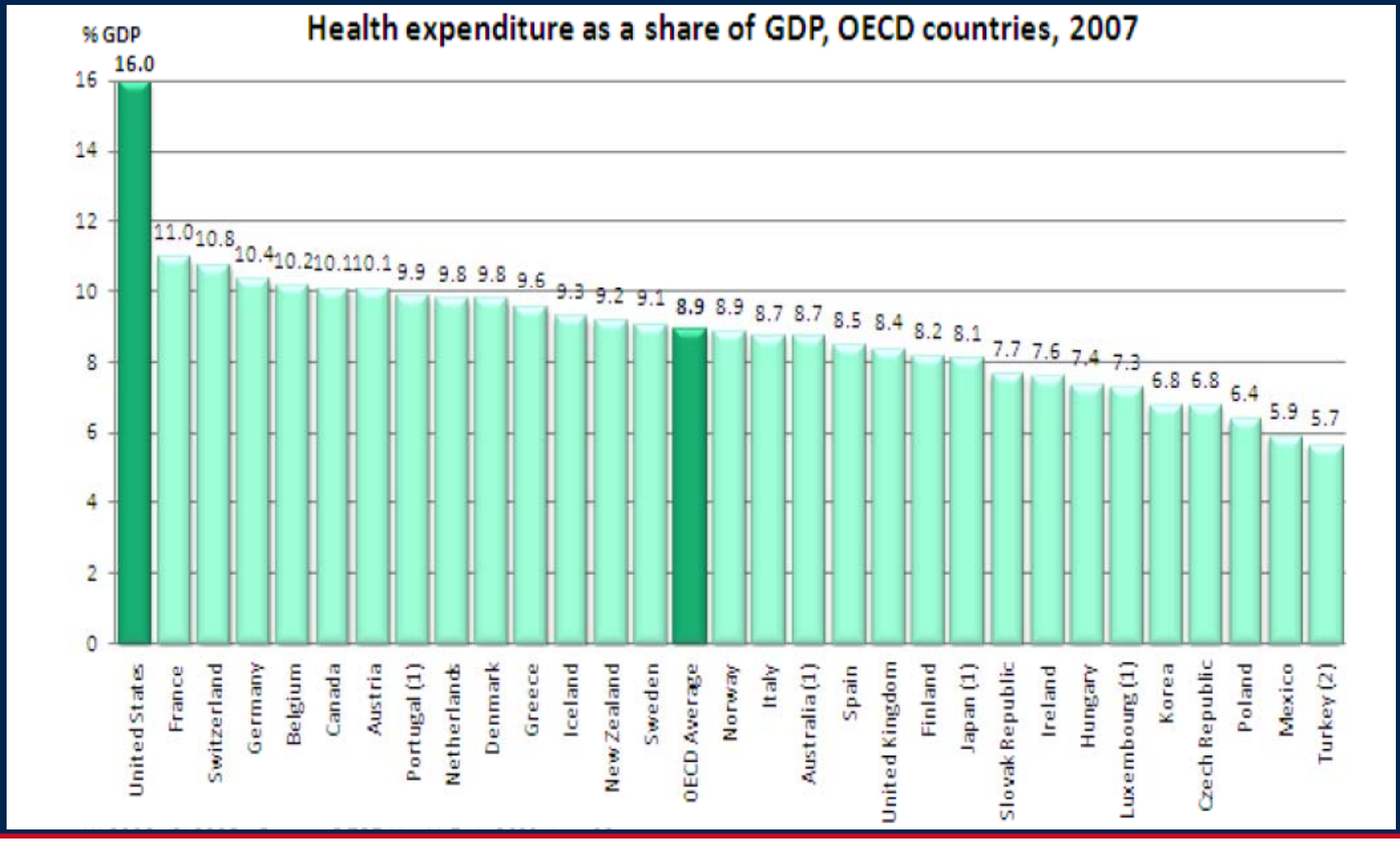
2007 Health Expenditures as a Share of GDP



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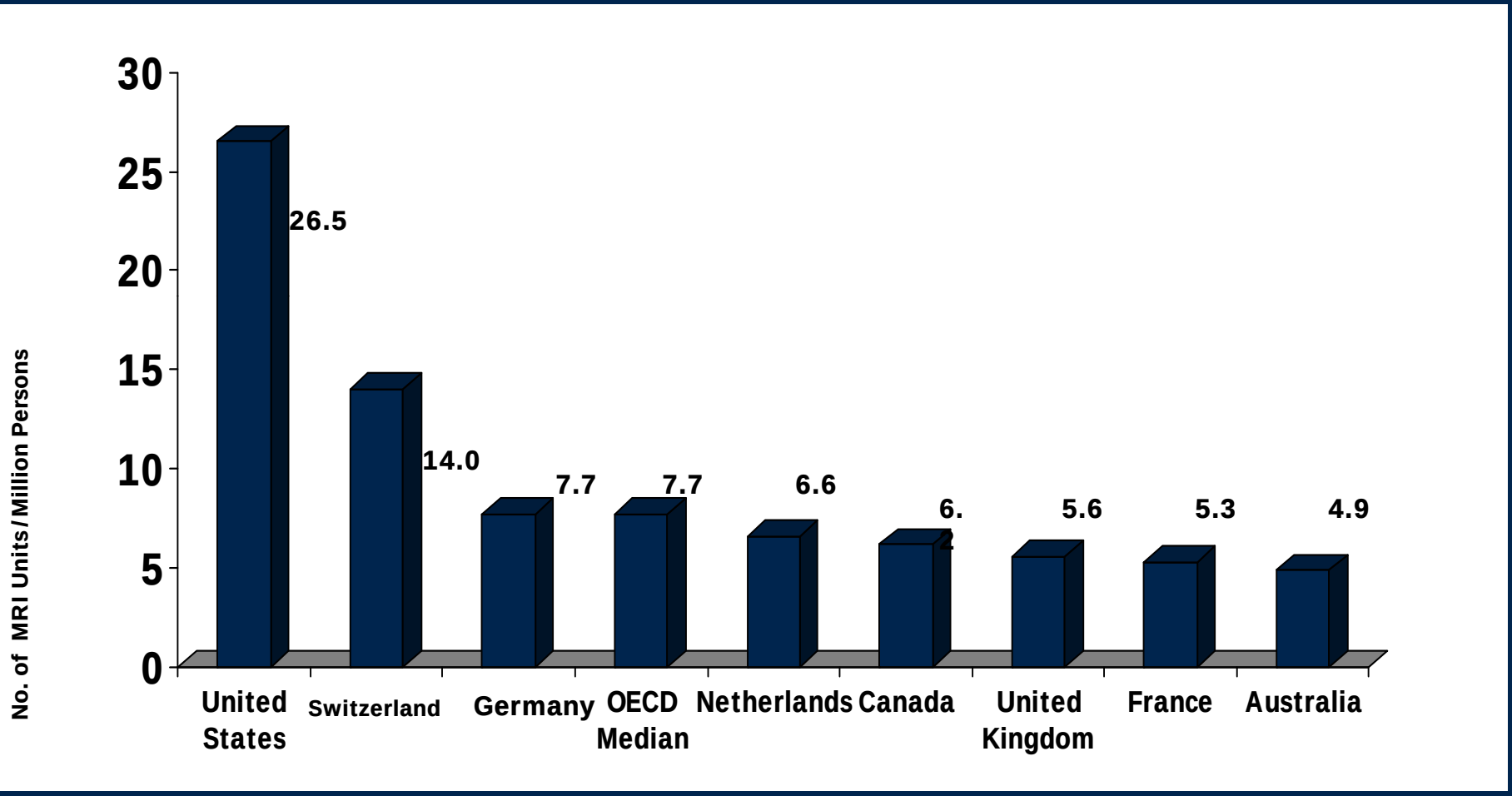
Number of MRI Units per Million Persons 2006



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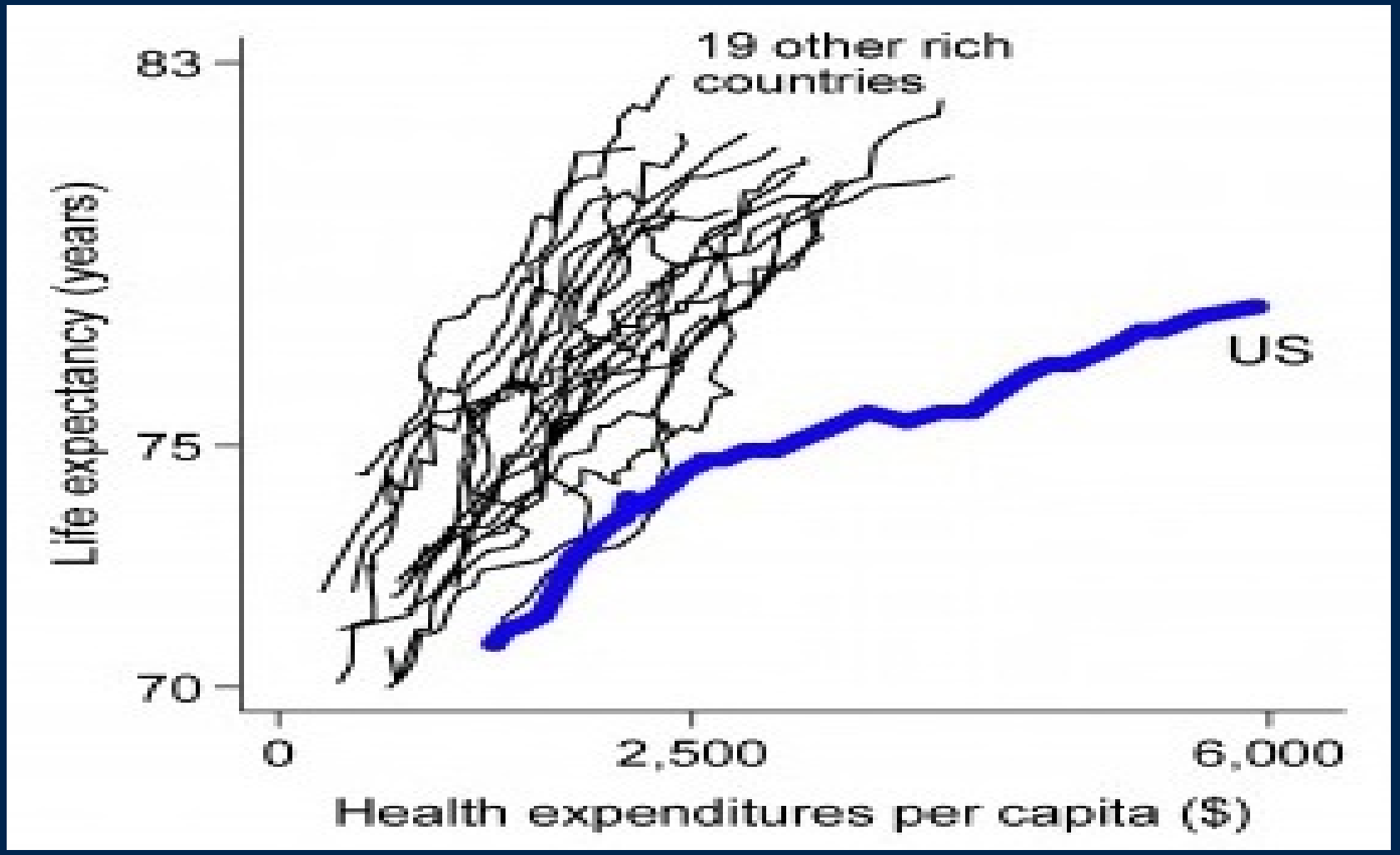

Kenworthy, Lane (July 10, 2011). "America's inefficient health-care system: another look". Consider the Evidence (blog).

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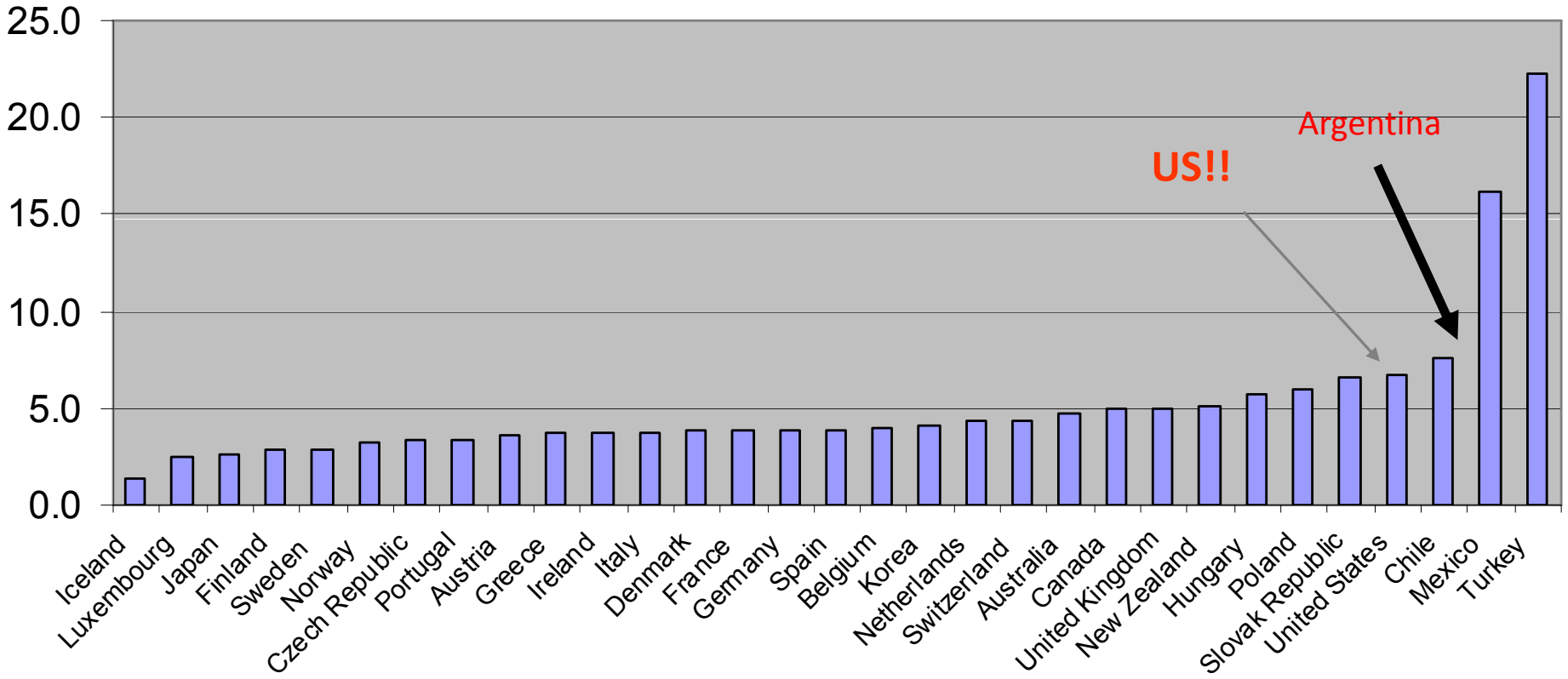
Infant mortality - 2006



OECD.org

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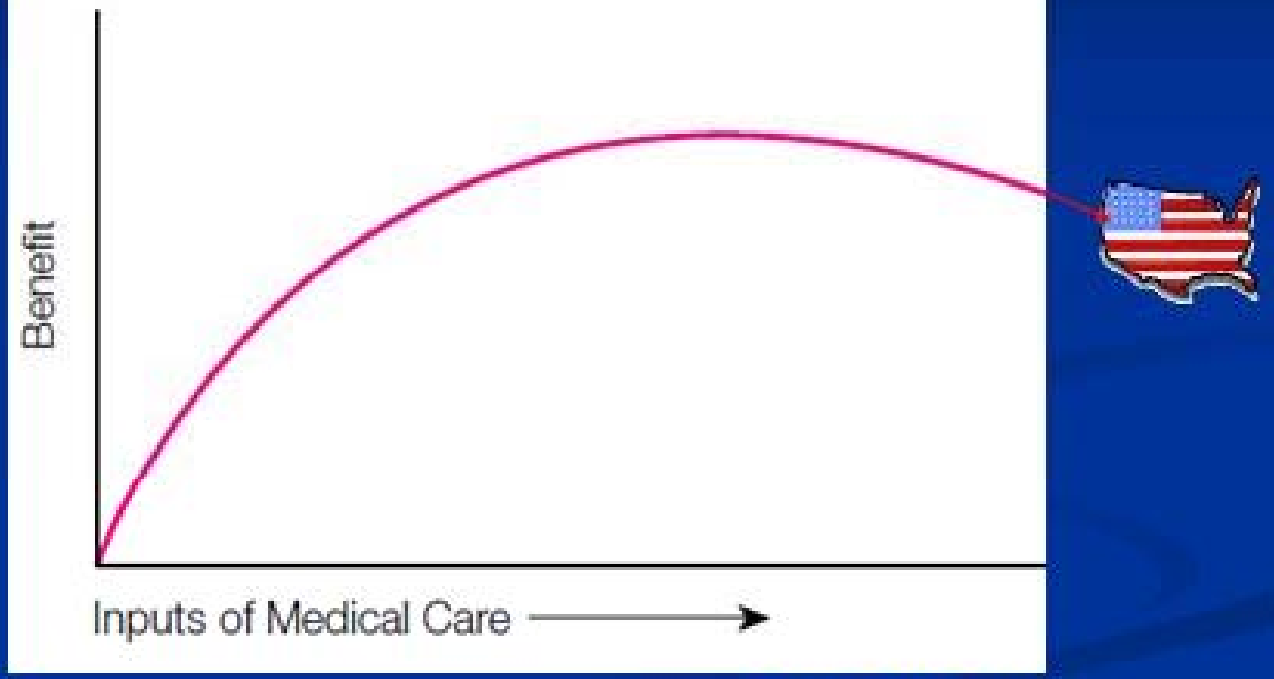
Figure 1. The Law of Diminishing Returns



Fisher, JAMA 1999

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Sobreuso

- La provisión de cuidados de salud en donde los riesgos exceden el beneficio, cuando el beneficio es escaso o negligente, o cuando pacientes completamente informados no aceptarían ser tratados. Incluye: Sobrediagnosis y Sobre-tratamiento

Sobre-tratamiento

- Tratamiento de condiciones que nunca causarían síntomas o morbilidad, es fútil, tiene mínima evidencia sobre su beneficio para la indicación específica, o es excesivo en relación a otros tratamientos aceptables y alternativos

Morgan DJ, Wright SM, Dhruva S. Update on Medical Overuse. JAMA Intern Med. 2014 Nov 3.

Drivers of Overuse

ERROR OF OMISSION

Died from sepsis
Killed by **infection**
>10 NY Times articles
New York Law

ERROR OF COMMISSION

Died from wisdom teeth extraction
- Nearly 70% unnecessary
Killed by **healthcare**
Scant media coverage

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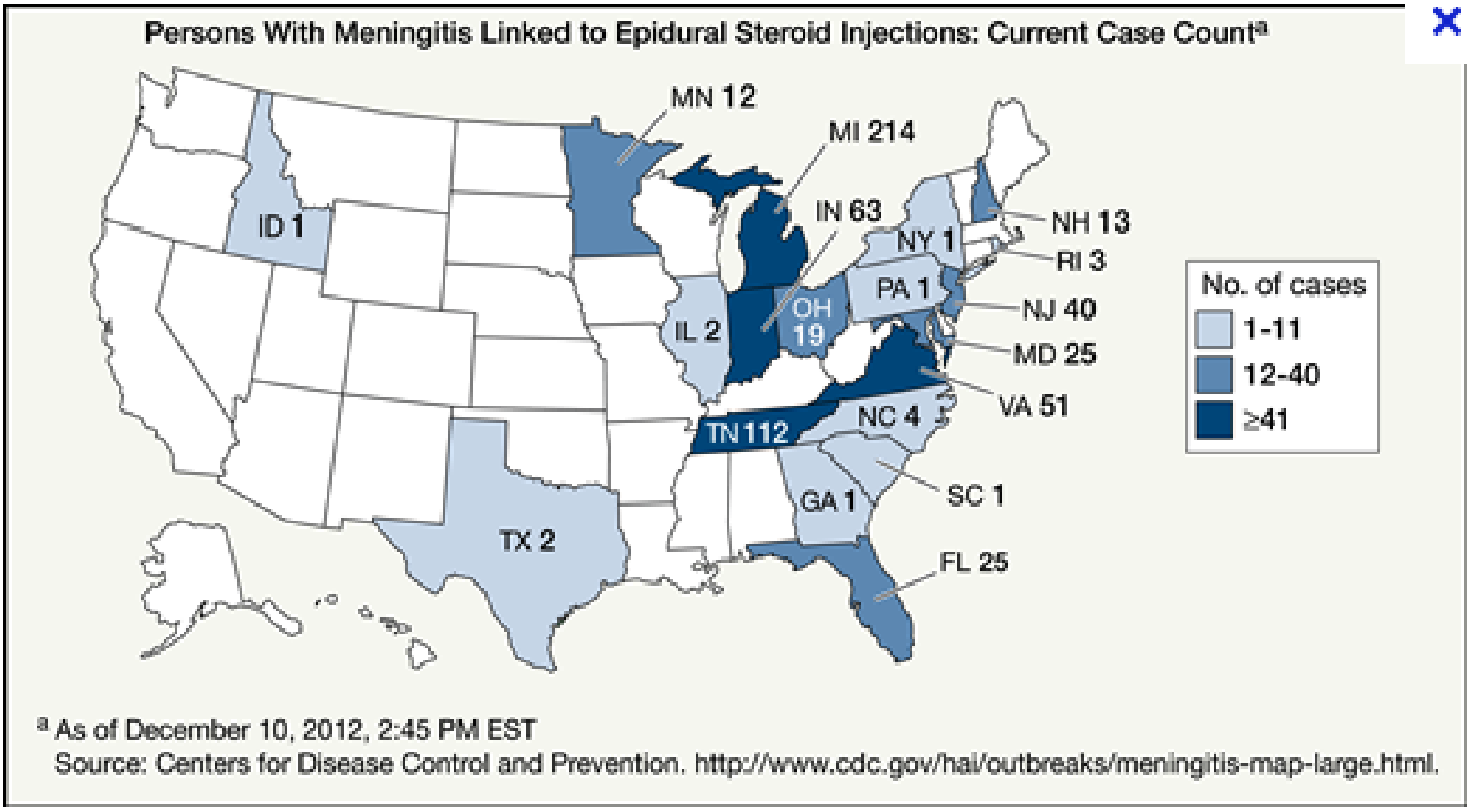

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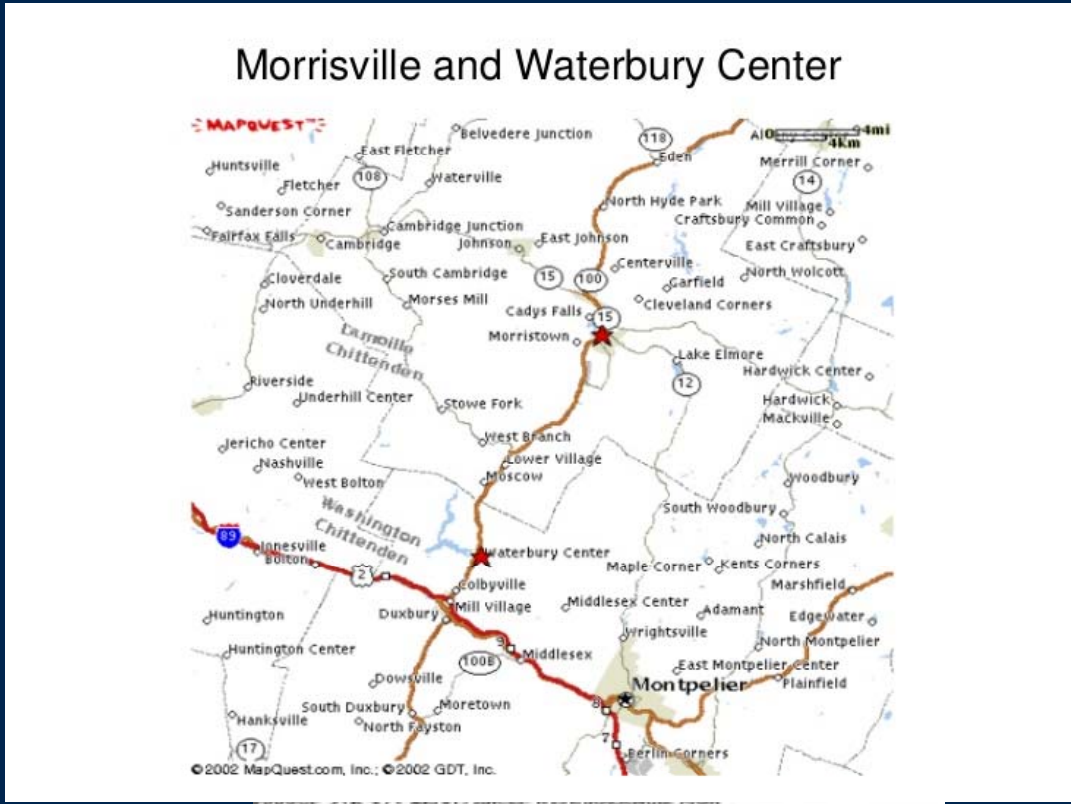
Availability – or "Supply sensitive care"

- Dartmouth Atlas – John Wennberg

  Unwarranted variation - a tale of 2 cities Middlebury tonsillectomies 7% versus Morrisville 70%



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Fear of litigation (Medicina Defensiva)

- Defensive medicine is not responsible for a significant amount of health care expenditure

- Tort reform has failed to decrease overuse or costs

  - Kavanagh KT, Calderon LE, Saman DM. The Relationship Between Tort Reform and Medical Utilization. J Patient Saf. 2013 Oct 7.

  - Thomas JW, Ziller EC, Thayer DA. Low costs of defensive medicine, small savings from tort reform. Health Aff (Millwood). 2010 Sep

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Patient/parents demands

Direct to consumer marketing

However:

Gogineni, K et al; Jama Oncology, 2/2015

Over 5000 patient encounters

Clinically inappropriate demands – 1 - 11%

Phyisicians acted on those demands less than <1% of the time

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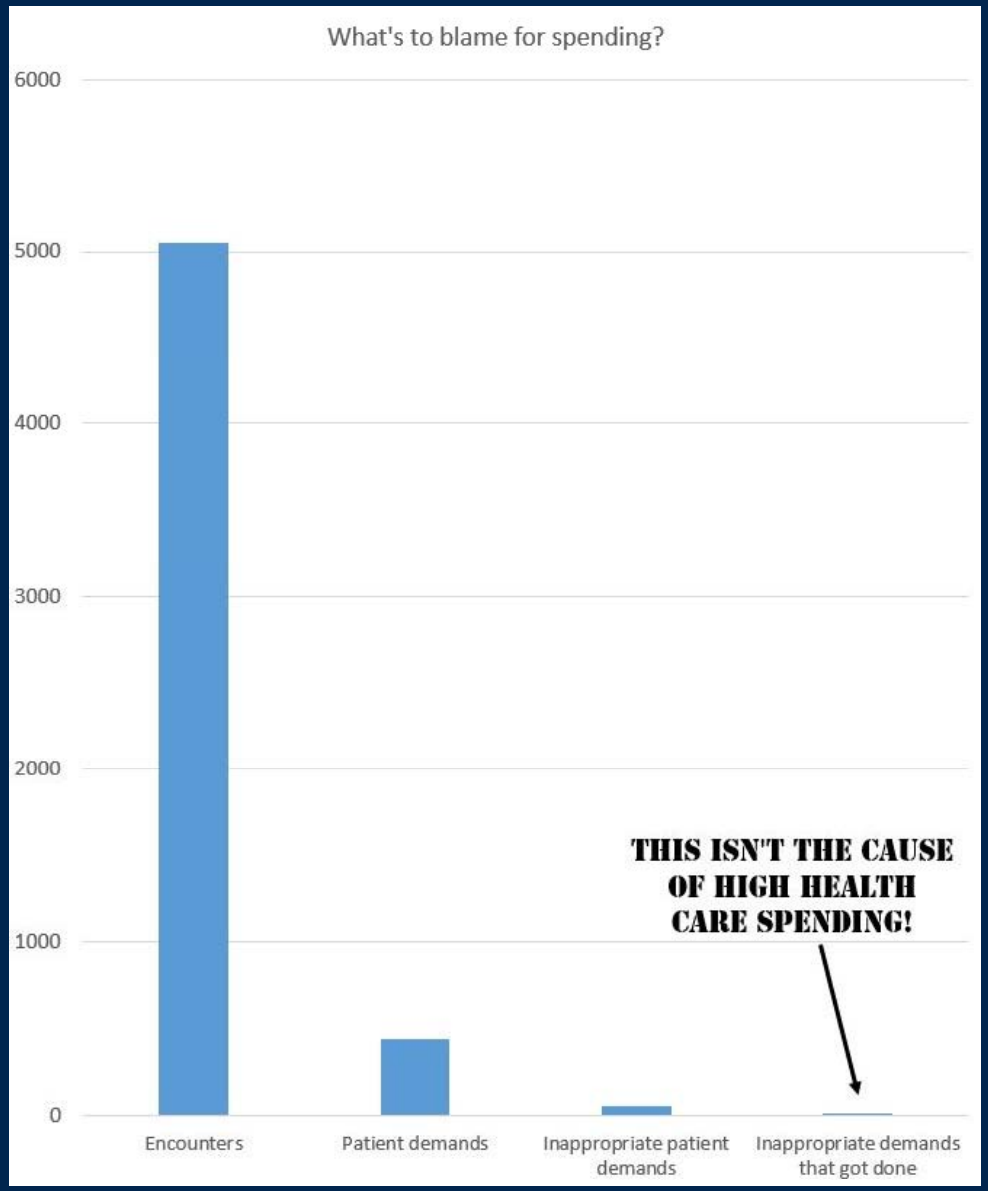

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How about pediatrics?

- Mangione-Smith R, McGlynn EA, Elliott MN, Krogstad P, Brook RH. The relationship between perceived parental expectations and pediatrician antimicrobial prescribing behavior. Pediatrics. 1999 Apr;103

- Karras DJ, Ong S, Moran GJ, Nakase J, Kuehnert MJ, Jarvis WR, Talan DA; EMERGEncy ID NET Study Group. Antibiotic use for emergency department patients with acute diarrhea: Prescribing practices, patient expectations, and patient satisfaction. Ann Emerg Med. 2003 Dec;42(6):835-42

Perceptions of parent desires for antibiotics are wrong > 2/3 of the time

Satisfaction scores don't correlate with prescribing or not prescribing antibiotics but rather to misperceptions of parental expectations

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Publication Bias (Prejuicio)

Negative studies are rarely published

Tamiflu – recommended by CDC, IDSA, AAP for treatment of influenza early in the course, stockpiled by US and several countries at a cost of billions of dollars

Tamiflu, Cochrane 2012:

- Small positive effect on symptom duration and complications
- "The authors have been unable to obtain the full set of clinical study reports or obtain verification of data from the manufacturer of oseltamivir (Roche) despite five requests between June 2010 and February 2011. "

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Ebell MH, Call M, Shinholser J. Effectiveness of oseltamivir in adults: a meta-analysis of published and unpublished clinical trials. Fam Pract. 2013 Apr;30(2):125-33

- 2 published 8 unpublished studies
- No difference duration of symptoms in elderly or adults with chronic disease
- No difference in complications such as hospitalization or pneumonia for anyone

Cochrane 2014 – full studies, including children

- Insufficient evidence of complication prevention or hospitalizations
- Significant adverse events, nausea, vomiting, psychiatric events and renal complications
    - Jefferson T, et al Cochrane Database Syst Rev. 2014 Apr 10;4

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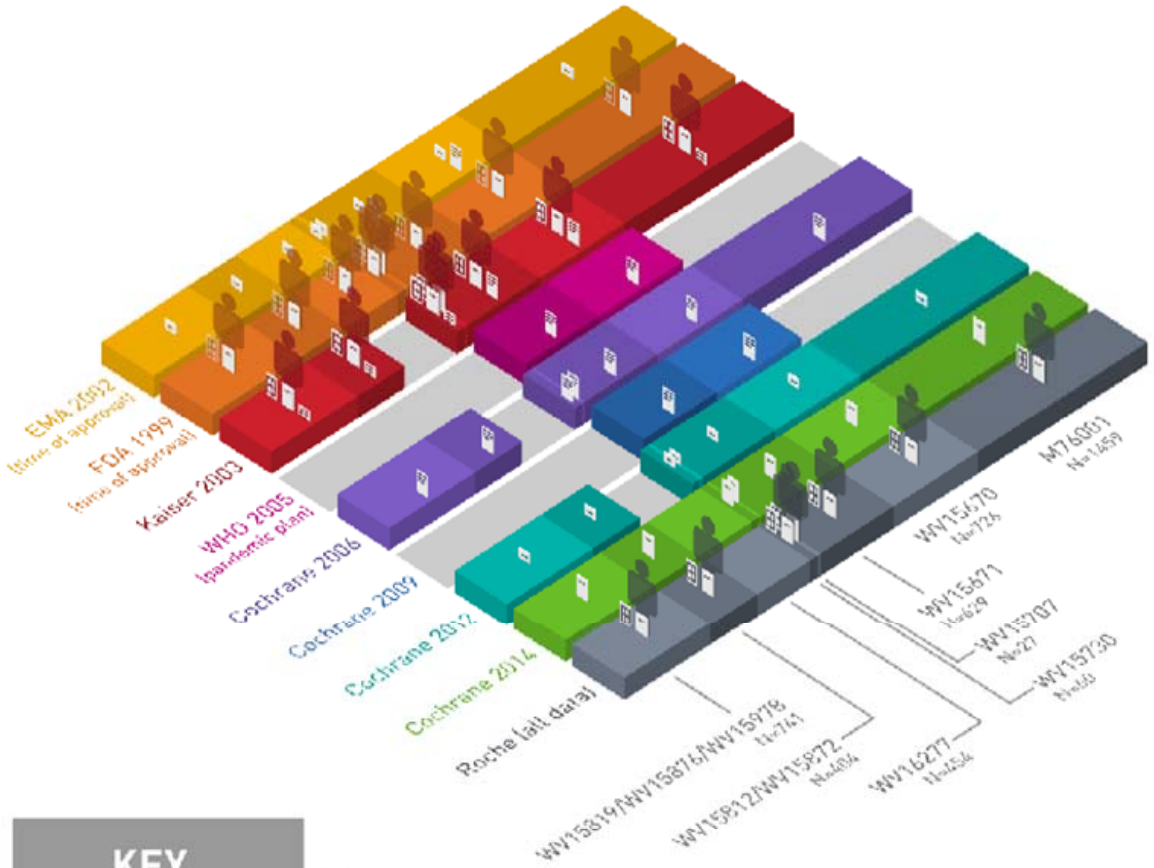
Tamiflu campaign

Tamiflu data: Who saw what when



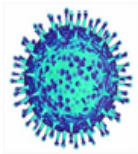
KEY

Trials included in reviews:

Width is proportinal to N

Information types available:

Individual patient data	Case report forms	Clinical study reports	Publications
	Full	Full	Journal Article
	Uncertain	Partial	Conference abstract



See all correspondence with the following organisations:

- Roche
- The World Health Organization (WHO)
- Centers for Disease Control and Prevention
- The European Medicines Agency
- The European Ombudsman
- National Institute for Health and Clinical Excellence

New! - Tamiflu timeline

- Pressure from colleagues – n's of 1

  "*We are constantly misled by the ease with which our minds fall into the ruts of one or two experiences*" Sir William Osler

- Errors of omission given more weight than errors of commission

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Medical education

- Fear of uncertainty (Miedo a la incertidumbre)
- Correct diagnosis and wide differential Dx is the standard
- Identifying rare disease and difficult Dx is rewarded

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Que es la Sobrediagnosis?

- Detección de condiciones que nunca hubiesen causado daño
- Detección de condiciones cuya detección no brinda ningún beneficio al paciente
- Detección donde los beneficios de su detección no son mayores al daño al paciente
- Un diagnóstico CORRECTO que no trae ningún beneficio al paciente, y solo puede causar daño

NO Diagnostico incorrecto NO falsos positivos

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When to suspect/how to prove

- Randomized trials (screening tests)
- Undetected conditions that did not cause harm
- Increasing incidence but no change in outcomes

When to suspect/how to prove

- **Randomized trials (screening tests)**
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RCT example: Canadian National Breast Screening Study

Table 1 Number of breast cancers diagnosed in mammography arm and control arm, by study year

Year of study	Mammography arm (n=44 925)		Control arm (n=44 910)	
	No of cancers detected	Mean size (cm)	No of cancers detected	Mean size (cm)
1	253	1.87	170	2.03
2	109	2.05	89	2.19
3	101	1.64	89	2.11
4	111	2.01	86	2.08
5	92	1.98	90	2.13
Subtotal years 1-5	666	1.91	524	2.10

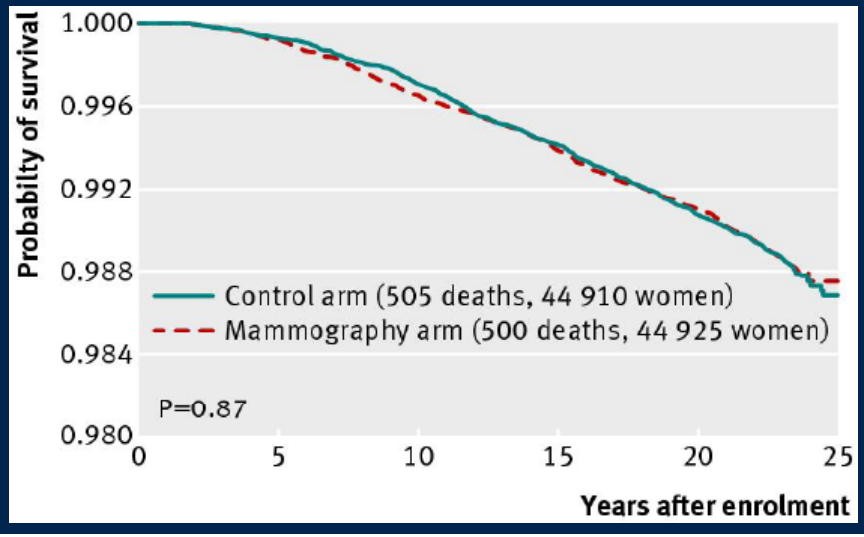

Fig 3 Breast cancer specific mortality, by assignment to mammography or control arms (all participants)

- Annual mammograms detected ~ 20% more breast cancer but did not save lives

Miller et al. BMJ. 2014 Feb 11;348:g366.

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Screening (for anything): Does it save lives?

Table 1. Screening effect on mortality for major diseases: meta-analytic evidence from Cochrane library and PubMed

Disease	Screening	Disease-specific death			All-cause death			Disease-specific death	All-cause death
		No. RCTs	Screening death/sample	Control death/sample	No. RCTs	Screening death/sample	Control death/sample	Risk estimate (95% CI)	Risk estimate (95% CI)
Abdominal aortic aneurysm	Ultrasound[12,a]	3	221/43211	405/43238	4	19960/57181	20280/57195	0.55 (0.35, 0.86)[f]	0.98 (0.96, 1.00)[f]
Breast cancer	Mammography[5,b]	3	404/119504	572/172649	3	4644/119897	5671/173061	0.90 (0.79, 1.02)[d]	0.99 (0.95, 1.03)[e]
	Mammography[5,c]	4	633/170048	746/136889	5	14355/128749	11839/116119	0.75 (0.67, 0.83)[d]	0.99 (0.97, 1.01)[e]
	Breast self-exam[6]	2	292/190691	295/197844				1.05 (0.90, 1.24)[d]	
Colorectal cancer	Fecal occult blood test (FOBT)[8]	4	1476/172734	1592/156908	4	53666/172734	48202/156908	0.84 (0.78, 0.90)[d]	1.00 (0.99, 1.01)[d]
	Flexible sigmoidoscopy[9]	5	Not given	Not given	3	Not given	Not given	0.71 (0.61, 0.81)[d]	0.99 (0.91, 1.07)[e]
Lung cancer	Chest X-ray[10]	4	710/42668	629/38635	4	4757/54477	9639/115672	1.11 (1.00, 1.23)[d]	1.01 (0.94, 1.08)[e]
	Chest X-ray + cytology[10]	2	256/10194	293/10233	1	493/4968	491/5072	0.88 (0.74, 1.03)[d]	1.03 (0.91, 1.15)[e]
	CT scan[8]	3	53/5704	38/4971	3	158/5704	107/4971	1.23 (0.81, 1.87)[d]	1.34 (0.93, 1.93)[e]
Ovarian cancer	CA-125[11]	2	127/45211	118/45281	1	2924/34253	2914/34304	1.08 (0.84, 1.38)[d]	1.00 (0.96, 1.06)[e]
Prostate cancer	Prostate-specific-antigen[3]	5	698/156157	1318/185185	4	22833/125024	35790/169832	1.00 (0.86, 1.17)[d]	1.00 (0.96, 1.03)[e]

Saquib, *Int J Epi* 2015

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What's wrong with screening tests?

- All cause mortality versus disease specific mortality
- Initial studies looking at screening tests used disease specific mortality
- "The patient doesn't care why they died they only care THAT they died "

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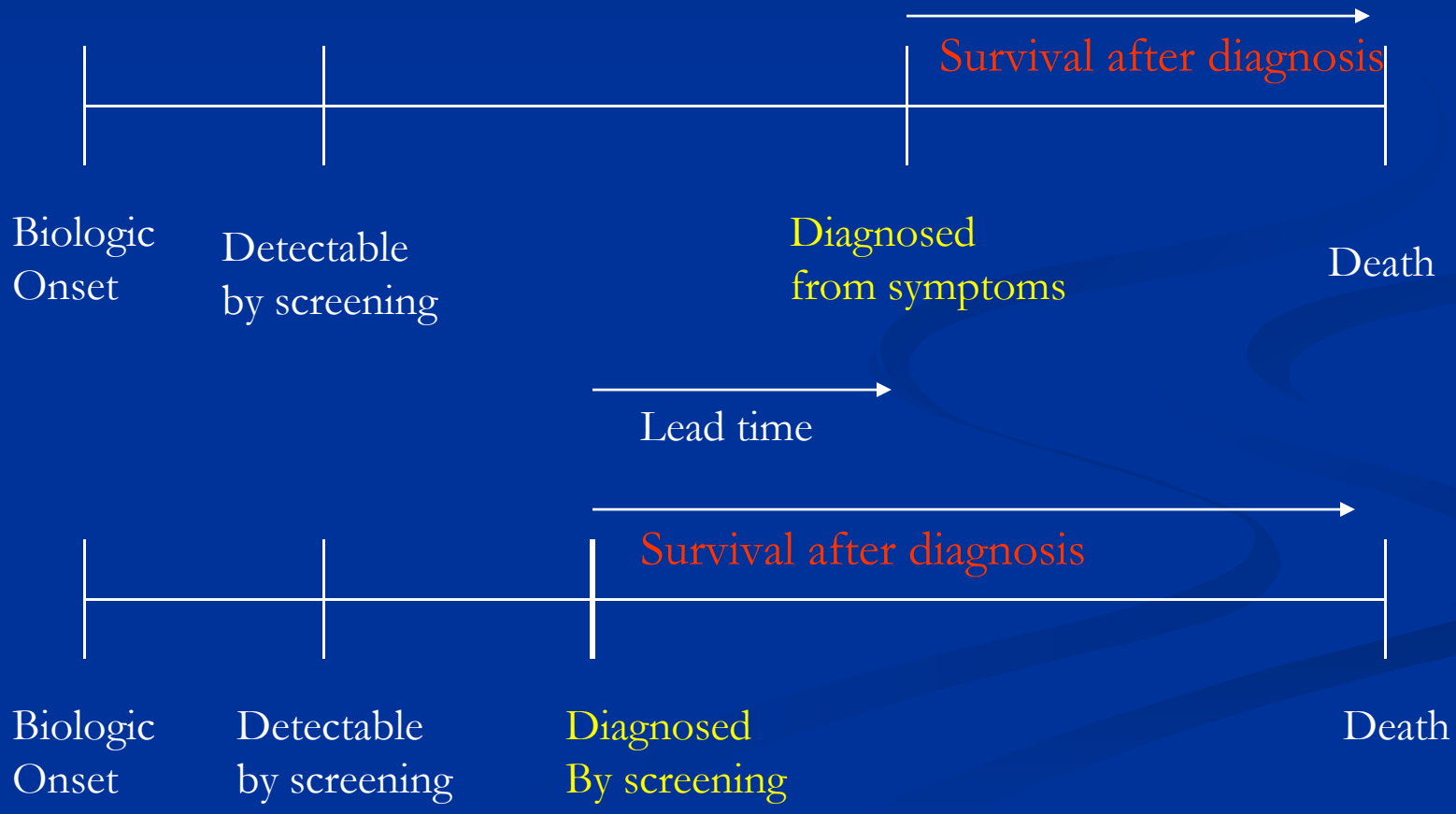
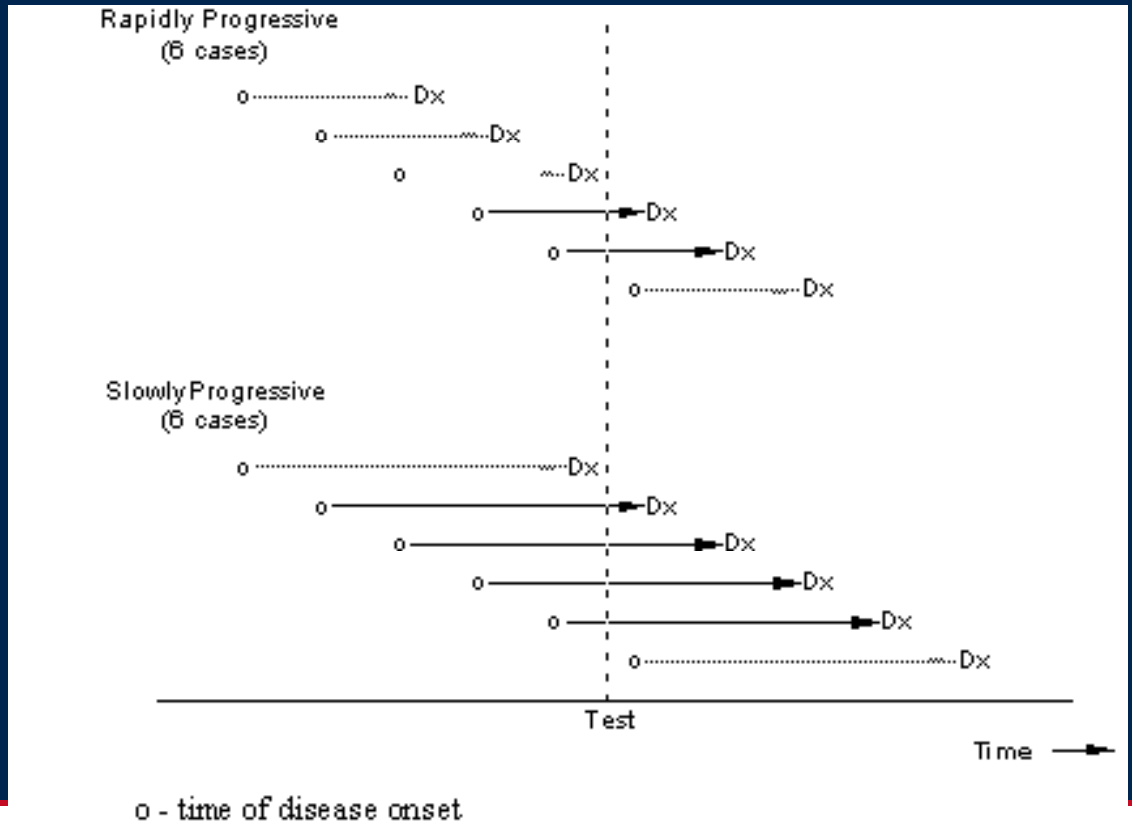
Lead time bias (Sesgo de Adelanto)

- A screening test can pick up a disease earlier and therefore *appear* to improve survival



Length-time bias
(Sesgo del tiempo de duracion)

- Screening tends to pick up disease that is more slowly progressive and milder.



acponline.com, 1999

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When to suspect/how to prove

- Randomized trials (screening tests)
- **Undetected conditions that did not cause harm**
- Increasing incidence but no change in outcomes

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Overdiagnosis

Prostatic Specific Antigen – (PSA)

Cancer Res. 1980 Jul;40(7):2428-32.
A prostate antigen in sera of prostatic cancer patients.
Papsidero LD, Wang MC, Valenzuela LA, Murphy GP, Chu TM.

- Early detection
- Screening recommended by medical societies before long term RCTs available
- 30 years later ……..

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Screening for Prostate Cancer: U.S. Preventive Services Task Force Recommendation Statement

Virginia A. Moyer, MD, PhD; and on behalf of the U.S. Preventive Services Task Force

Ann Intern Med. 17 July 2012;157(2):120-134

BENEFIT

- Results of 2 large RCTs - PLCO (Prostate, Lung, Colorectal, and Ovarian) Cancer Screening Trial and the ERSPC (European Randomized Study of Screening for Prostate Cancer) - NO DECREASE IN MORTALITY FROM SCREENING
- PSA screening and early treatment ranges from 0 to 1 prostate cancer deaths avoided per 1000 men screened

HARM from screening

- 80% false positive results almost all end up in biopsy
- Biopsy – pain, bleeding, infection

HARM from cancer treatment

- 90% have surgery
- 5 in 1000 will die within 1 month of surgery
- The majority have some type of complication related to the surgery
- Screen 1410 men and treat 48 cases of cancer to prevent one death

GRADE D RECOMMENDATION: DON'T SCREEN FOR PSA!!!!

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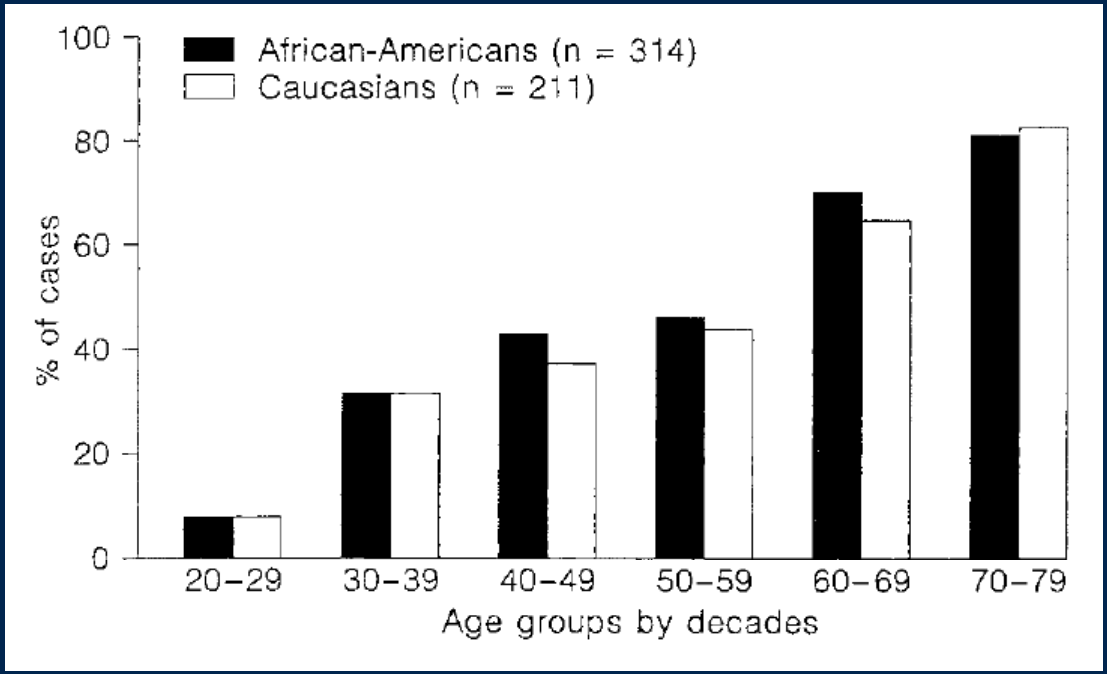
Natural history of undetected conditions: Prostate Cancer at autopsy



Sakr et al. Eur Urol. 1996;30(2):138-44. Review.

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When to suspect/how to prove

- Randomized trials (screening tests)
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- **Increasing incidence but no change in outcomes**

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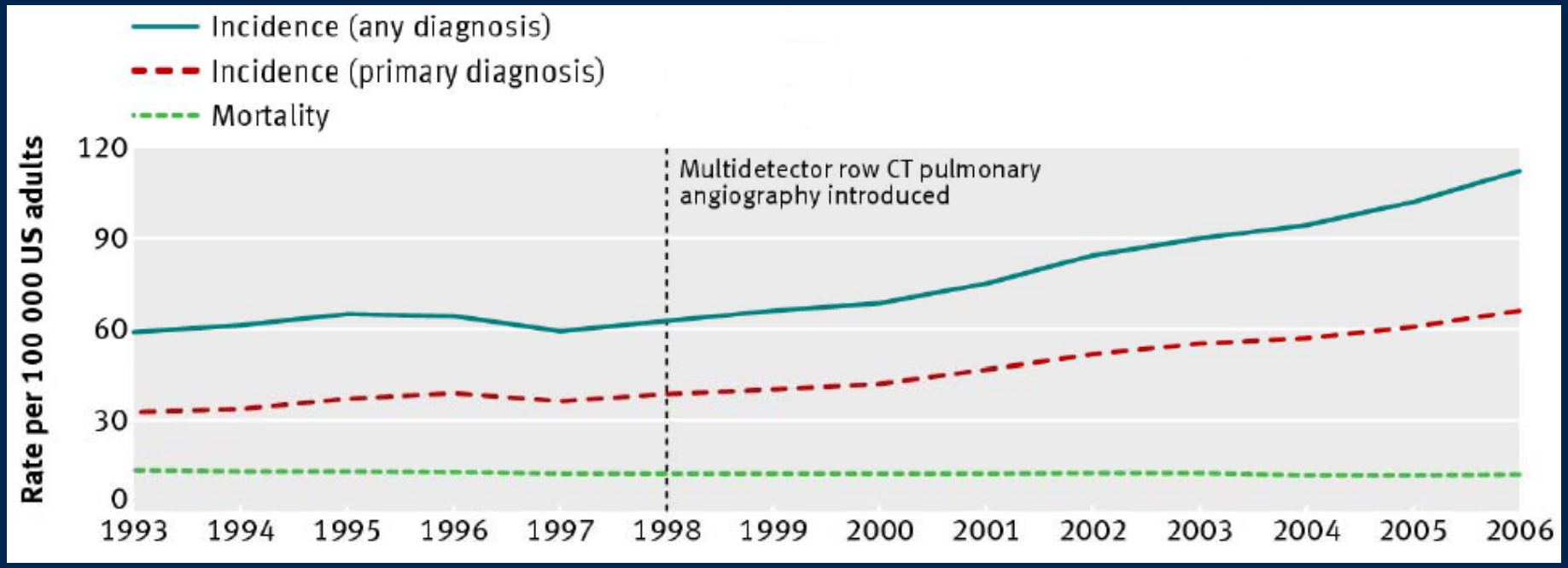
Increasing incidence, no change in mortality: pulmonary embolus



Weiner et al. BMJ. 2013. 347: f3368.

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PEDIATRICS®

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

Overdiagnosis: How Our Compulsion for Diagnosis May Be Harming Children

Eric R. Coon, Ricardo A. Quinonez, Virginia A. Moyer and Alan R. Schroeder

Pediatrics; originally published online October 6, 2014;
DOI: 10.1542/peds.2014-1778

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Diagnosis
Neuroblastoma
Bacteremia
Medium-Chain Acyl-CoA Dehydrogenase Deficiency
Hyperbilirubinemia
Vesicoureteral Reflux
Hypercholesterolemia
Food allergy
Gastroesophageal Reflux
Hypoxemia in bronchiolitis
Urinary Tract Infection
Aspiration
Attention Deficit Hyperactivity Disease
Cholelithiasis
Skull Fracture
Obstructive Sleep Apnea

Overdiagnosis – neuroblastoma

- Screening programs in various countries successful in early detection of neuroblastoma

TABLE 4. INCIDENCE OF STAGE 4 NEUROBLASTOMA AND MORTALITY AMONG CHILDREN WITH NEUROBLASTOMA DIAGNOSED BETWEEN 12 AND 60 MONTHS OF AGE.*

END POINT	CONTROL AREA	SCREENING AREA		
		ALL CHILDREN	PARTICIPANTS (SCREENED GROUP)	NONPARTICIPANTS
Stage 4 neuroblastoma				
No.	74	105	50	55
Incidence per 100,000 births (95% CI)	3.8 (2.9–4.6)	4.4 (3.6–5.3)	3.7 (2.7–4.7)	5.4 (4.0–6.8)
Death among children with neuroblastoma				
No.	24	33	17	16
Rate per 100,000 births (95% CI)	1.2 (0.7–1.7)	1.4 (0.9–1.9)	1.3 (0.7–1.8)	1.5 (0.8–2.3)

*All children were born between 1994 and 1999, and all cases of neuroblastoma were registered by June 30, 2001. There was no significant difference in the rate of either end point between the entire group offered screening and the control group or between the participants in the screening program and the control group. CI denotes confidence interval.

Schilling FH, NEJM 2002

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Screening for Neuroblastoma

- Almost universally screening increased incidence
- Nowhere did it decrease mortality
- In some countries the intervention group had a higher mortality rate and much higher incidence of morbidities
  - Woods WG, Gao R-N, Shuster J, Robison L, et al. Screening of infants and mortality due to neuroblastoma. N Engl J Med, 2002;346:1041–6.
  - Schilling FH, Spix C, Berthold F, et al. Neuroblastoma screening at one year of age. N Engl J Med 2002;

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Evidence – GER and PPIs

- From 2000 to 2005 the incidence of infants diagnosed with gastroeshopaheal reflux (GER) tripled (3.4 - 12.3%)

- The use of proton pump inhibitors (PPIs) doubled (31.5% - 62.6%).[36]

- Patients diagnosed with GER and treated with anti-reflux medication incurred 1.8 times higher healthcare costs in one study compared to healthy controls.

- Several studies including systematic reviews show that PPIs have failed to outperform placebo in infant reflux

Kothari S, Current medical research and opinion, 2009
Van der Pol RJ, Pediatrics, 2011
Higginbotham TW. The Annals of pharmacotherapy 2011

Harm – Acid suppresion

- NICU:
  - ↑ NEC, other infections, fatal outcomes in VLBW neonates [Terrin, *Pediatrics*, 2011]
- Pneumonia/LRTI
  - No benefit for GERD but 6-fold ↑ in LRTIs 12% vs 2% [Orenstein, *J Peds* 2009]
  - No benefit in kids with poor asthma control but ↑ in respiratory infections [Holbrook, JAMA 2012]
- C. Diff
  - Increased risk with PPIs and H2 blockers [Turco, *Aliment Pharmaco Ther* 2010]

KD and CAA background

AHA Scientific Statement

Diagnosis, Treatment, and Long-Term Management of Kawasaki Disease

A Statement for Health Professionals From the Committee on Rheumatic Fever, Endocarditis and Kawasaki Disease, Council on Cardiovascular Disease in the Young, American Heart Association

Endorsed by the American Academy of Pediatrics

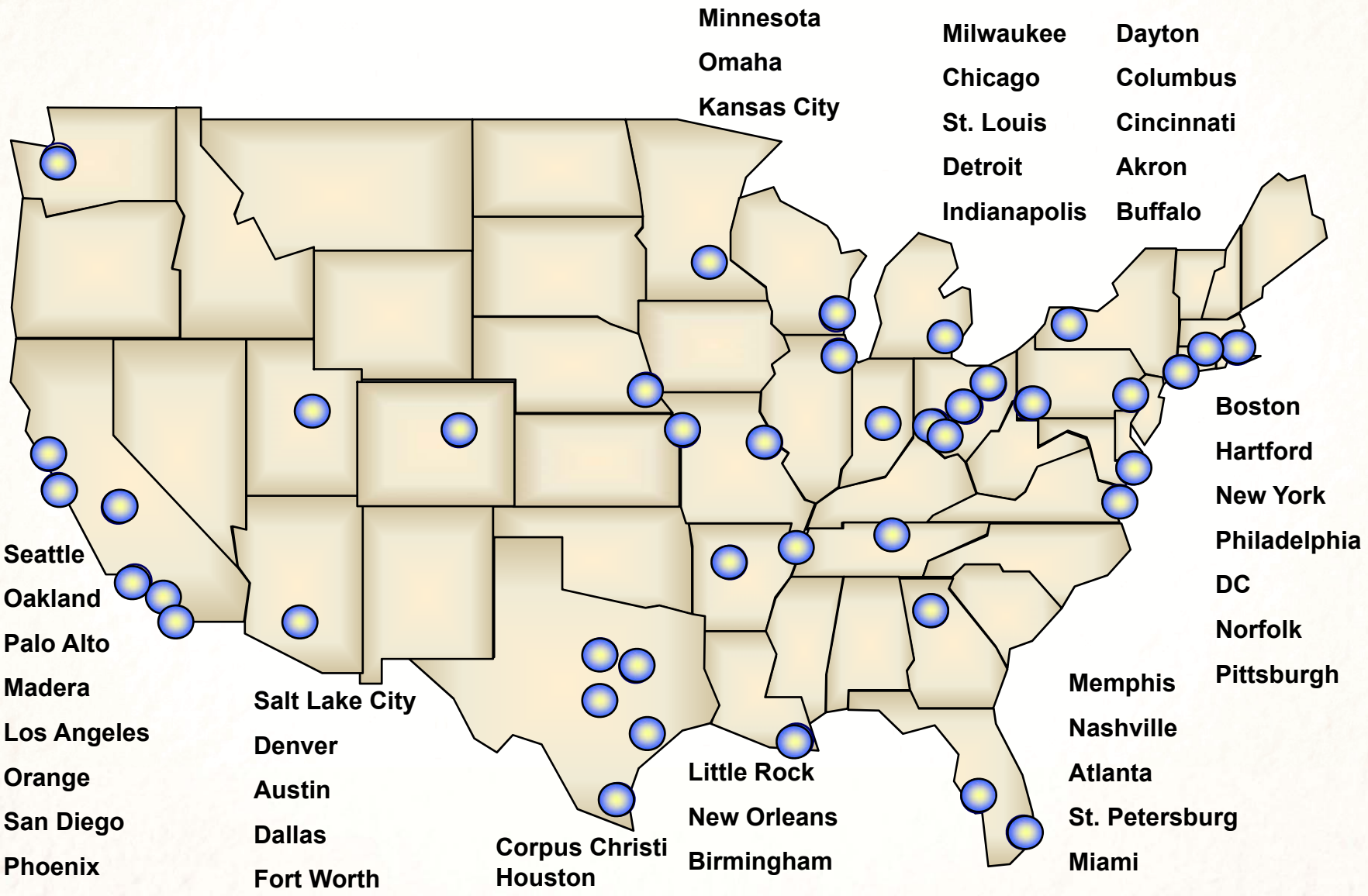
Jane W. Newburger, MD, MPH; Masato Takahashi, MD; Michael A. Gerber, MD; Michael H. Gewitz, MD; Lloyd Y. Tani, MD; Jane C. Burns, MD; Stanford T. Shulman, MD; Ann F. Bolger, MD; Patricia Ferrieri, MD; Robert S. Baltimore, MD; Walter R. Wilson, MD; Larry M. Baddour, MD; Matthew E. Levison, MD; Thomas J. Pallasch, DDS; Donald A. Falace, DMD; Kathryn A. Taubert, PhD

Newburger et al. *Circulation*. 2004 Oct.

CAA study

- Retrospective cohort
- Patients ≤18 years old
- Receiving care at PHIS hospitals
- Between Jan 2000-Dec 2014
- Diagnosis of KD and received IVIG

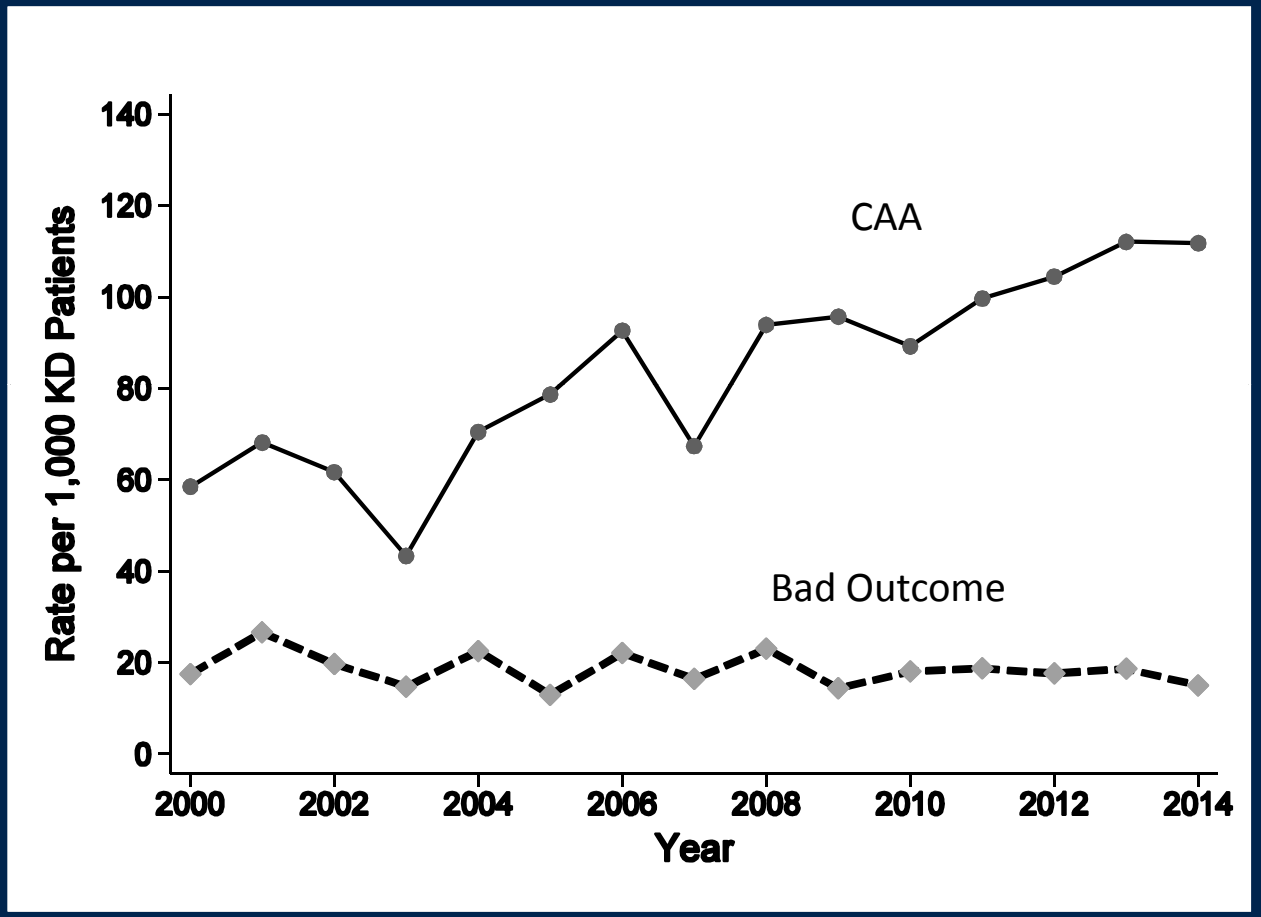
PHIS Hospitals



CAA Bad Outcome

- Mortality
- Diagnosis codes: cardiac arrest, heart failure, ischemic heart disease
- Procedure codes: angioplasty, CABG, heart transplant, CPR

CAA Results



1.06 (1.04-1.07)

0.99 (0.96-1.02)

N= 18,037 KD patients

Head injury study

- Retrospective cohort
- Children presenting for isolated head injury to PHIS hospitals
- ED, Observation, Inpatient
- Between Jan 2001-Dec 2014
- Excluded: pre-existing neurologic illness, non-accidental trauma

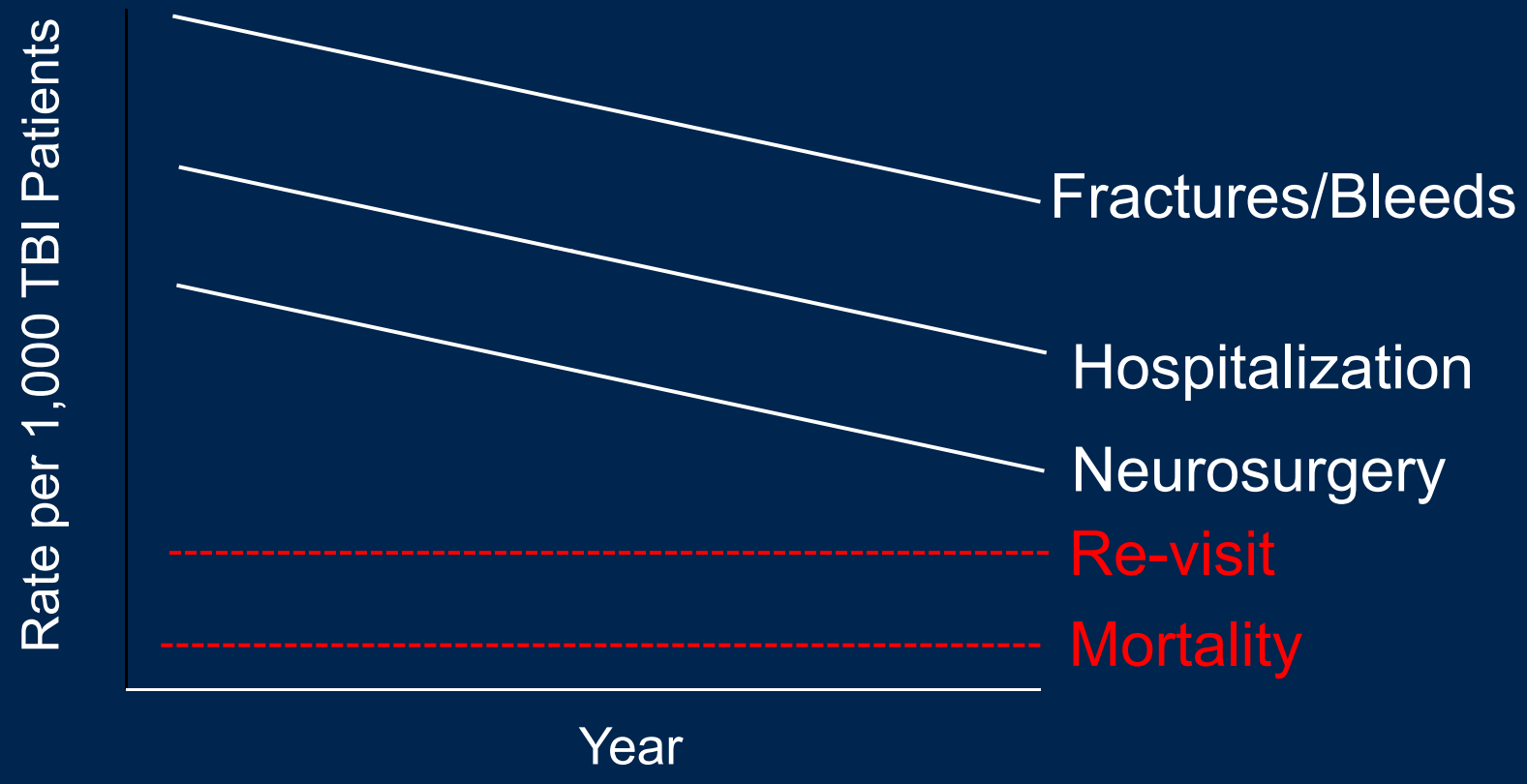
Head injury study: results

Trend of testing, abnormalities and outcomes among children with isolated head trauma, 2001-2014, N=263,591

	% change/year (95% CI)*
Head CT Imaging	-1.58 (-1.64 to -1.52)
Skull Fracture	-0.10 (-0.13 to -0.07)
Intracranial Bleed	-0.09 (-0.11 to -0.07)
Re-visit	-0.01 (-0.02 to +0.01)
Mortality	-0.0001 (-0.0025 to +0.0023)
Hospitalization	-0.21 (-0.24 to -0.18)
Neurosurgery	-0.018 (-0.023 to -0.012)

*Adjusted for age, gender, race, insurance type, presence of complex chronic condition, hospital level case mix index, clustering within hospitals

Head injury study: results



Choosing Wisely®

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Winding back the harms of too much medicine

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Society of Hospital Medicine – **Pediatric Hospital Medicine**

shm

Five Things Physicians and Patients Should Question

1 Don't order chest radiographs in children with uncomplicated asthma or bronchiolitis.

National guidelines articulate a reliance on physical examination and patient history for diagnosis of asthma and bronchiolitis in the pediatric population. Multiple studies have established limited clinical utility of chest radiographs for patients with asthma or bronchiolitis. Omission of the use of chest radiography will reduce costs, but not compromise diagnostic accuracy and care.

2 Don't routinely use bronchodilators in children with bronchiolitis.

Published guidelines do not advocate the routine use of bronchodilators in patients with bronchiolitis. Comprehensive reviews of the literature have demonstrated that the use of bronchodilators in children admitted to the hospital with bronchiolitis has no effect on any important outcomes. There is limited demonstration of clear impact of bronchodilator therapy upon the course of disease. Additionally, providers should consider the potential impact of adverse events upon the patient.

3 Don't use systemic corticosteroids in children under 2 years of age with an uncomplicated lower respiratory tract infection.

Published guidelines recommend that corticosteroid medications not be used routinely in the management of bronchiolitis. Furthermore, additional studies in patients with other viral lower respiratory tract infections have failed to demonstrate any benefits.

4 Don't treat gastroesophageal reflux in infants routinely with acid suppression therapy.

Antireflux therapy has been demonstrated to have no effect in reducing the symptoms of gastroesophageal reflux disease (GERD) in children. Concerns regarding the use of proton-pump inhibitor therapy in infants include an inability to definitively diagnose pediatric patients according to the established criteria of GERD, lack of documented efficacy of acid suppression therapy in infants and the potential adverse effects associated with acid suppression therapy.

5 Don't use continuous pulse oximetry routinely in children with acute respiratory illness unless they are on supplemental oxygen.

The utility of continuous pulse oximetry in pediatric patients with acute respiratory illness is not well established. Use of continuous pulse oximetry has been previously associated with increased admission rates and increased length of stay. The clinical benefit of pulse oximetry is not validated or well documented.

Journal of HOSPITAL MEDICINE www.journalofhospitalmedicine.com

ORIGINAL RESEARCH

Choosing Wisely in Pediatric Hospital Medicine: Five Opportunities for Improved Healthcare Value

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1. Don't order chest radiographs in patients with asthma or bronchiolitis
2. Don't use bronchodilators in children with bronchiolitis
3. Don't use systemic corticosteroids in children with lower respiratory track infections
4. Don't treat gastroesophageal reflux in infants with acid suppression therapy
5. Don't use continuos pulse oximetry routinely in children with acute respiratory illness unless they are on supplemental oxygen

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Evidence Pulse Oximetry

Bronchiolitis: extremely low mortality rate, has remained constant through out the years

Hospitalization – increased over 300% since the 1980

Pulse oximetry use – routine since late 70s and early 80s

Mallory MD, Pediatrics 2003, Shay DK, Journal of infectious diseases 2001

Pulse oximetry is the main determinant of admission and its use is associated with increased length of stay

Cunningham S. Archives of disease in childhood 2012,
Schroeder AR, Archives of pediatrics & adolescent medicine 2000

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Schuh S, et al. Effect of oximetry on hospitalization in bronchiolitis: a randomized clinical trial. JAMA. 2014 Aug 20

- Intervention: falsely increased the number of the pulse ox on patients with bronchiolitis in ER by 3%
  - Example 92% actual value - 95% shown to physician
  - Controls – 41% admitted
  - Intervention – 26% admitted

Hypoxia and outcomes

- Hypoxia is common in healthy infants
  - Hunt CE, et al J Pediatr. 1999;135(5):580-586.
- Even more so during sleep
  - Mok JY, et al, J Pediatr. 1986;108(3):365-37.
- What about in bronchiolitis?

Principi T et al. Effect of Oxygen Desaturations on Subsequent Medical Visits in Infants Discharged From the Emergency Department With Bronchiolitis. JAMA Pediatr. 2016 Feb 29.

- 118 infants discharged from the emergency department with pulse oximeters.
- Oxygen continuously recorded, but the alarm and display were disabled.
- Main outcome: unscheduled medical visits due to bronchiolitis.
  - 64% had desaturation (<90% x 1 minute)
  - 29 infants had sustained desaturations to 70% or less.
  - No difference in unscheduled medical visits or rehospitalization amongst infants with or without desaturations.

AAP Choosing Wisely

- Antibiotics should not be used for apparent viral respiratory illnesses (sinusitis, pharyngitis, bronchitis).
- Cough and cold medicines should not be prescribed or recommended for respiratory illnesses in children under four years of age.
- Computed tomography (CT) scans are not necessary in the immediate evaluation of minor head injuries; clinical observation/Pediatric Emergency Care Applied Research Network (PECARN) criteria should be used to determine whether imaging is indicated.
- Neuroimaging (CT, MRI) is not necessary in a child with simple febrile seizure.
- Computed tomography (CT) scans are not necessary in the routine evaluation of abdominal pain

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AAP Choosing Wisely #2

- Don't prescribe high-dose dexamethasone (0.5mg/kg per day) for the prevention or treatment of bronchopulmonary dysplasia in pre-term infants.
- Don't perform screening panels for food allergies without previous consideration of medical history.
- Avoid using acid blockers and motility agents such as metoclopramide (generic) for physiologic gastroesophageal reflux (GER) that is effortless, painless and not affecting growth. Do not use medication in the so-called "happy-spitter."
- Avoid the use of surveillance cultures for the screening and treatment of asymptomatic
- Infant home apnea monitors should not be routinely used to prevent sudden infant death syndrome (SIDS).

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American Academy of Family Physicians

- #11 Don't prescribe antibiotics for otitis media in children aged 2–12 years with non-severe symptoms where the observation option is reasonable

- #12 Don't perform voiding cystourethrogram (VCUG) routinely in first febrile urinary tract infection (UTI) in children aged 2–24 months

- #14 Don't screen adolescents for scoliosis

www.choosingwisely.org

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What else can we do to avoid overuse or overdiagnosis?

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There are NO benign interventions

- Fever treatment evidence of harm
  - Several epidemiologic studies, metanalysis and at least one RCT showing association between acetaminophen use and asthma
    - McBride JT. , et al, Pediatrics. 2011 Dec;128(6):1181-5

- Rest – really?
  - Thomas DG, et al Benefits of strict rest after acute concussion: a randomized controlled trial. Pediatrics. 2015 Feb;135(2):213-23. doi: 10.1542/peds.2014-0966. Epub 2015 Jan 5. PubMed PMID: 25560444.
    - Strict rest vs. usual activity – no clinically significant difference in neurocognitive or balance outcomes
    - Strict rest – less school attendance
    - Strict rest – self reported longer duration of symptoms

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There are NO unquestionable practices

Prasad, V et al, Decade of Reversal: An Analysis of 146 Contradicted Medical Practices ,Mayo Clin Proc. n August 2013;88(8):790-798

- Analyzed all articles published in a decade 2001 to 2011 in a high impact journal
- Looked at articles that tested established therapies vs. new ones or tested standard of care
- Of 363 articles which tested standard of care 146 were reversals (40.2%), only 38 % reaffirmed it

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Speaking of Dogmas

- Society of General Internal Medicine Choosing Wisely Recommendation #2:

  -Don’t perform routine general health checks for asymptomatic adults.

  - Bloomfield HE, Wilt TJ. Evidence Brief: Role of the Annual Comprehensive Physical Examination in the Asymptomatic Adult. 2011 Oct. VA Evidence-based Synthesis Program Evidence Briefs.

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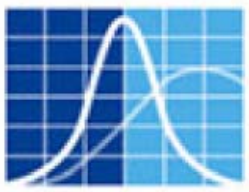
CHICAGO JOURNALS



SHEA
The Society for Healthcare Epidemiology of America

Are Well-Child Visits a Risk Factor for Subsequent Influenza-Like Illness Visits?
Author(s): Jacob E. Simmering, MS; Linnea A. Polgreen, PhD; Joseph E. Cavanaugh, PhD; Philip M. Polgreen, MD, MPH
Source: *Infection Control and Hospital Epidemiology*, Vol. 35, No. 3 (March 2014), pp. 251-256
Published by: The University of Chicago Press on behalf of The Society for Healthcare Epidemiology of America

- Office visits increased odds of having ILI 1.5 times
- This translated to additional 778,974 cases of ILI per year in US

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Summary – next steps

- Connect physicians with the cost of healthcare
  - Price lists, EMR cost warnings
- Disconnect reimbursement from utilization
  - Compensate MDs for how they do, not what they do
  - ACO's

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Next steps (cont'd)

- Remind our patients and our trainees:
  - Unanticipated harms
  - Constantly reevaluate what we accept as standard of care
  - Redefine "conservative"
  - Uncertainty, unknowns are OK
    - Do things to make the patient better, not to get an answer
    - If in doubt, do less

> "No human being is constituted to know the truth, the whole truth, and nothing but the truth; and even the best of men must be content with fragments, with partial glimpses, never the full fruition."
>
> Sir William Osler

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Resources

- Websites:
  - www.lowninstitute.org
  - www.choosingwisely.org
- Medical Societies
  - APA – Healthcare Value SIG – 1/2015
  - Value Curriculum for Pediatrics – Stanford-Duke
- Journals
  - JAMA - Less is More
  - Hospital Pediatrics – Bending the Value Curve - trainees
- Books
  - Overdiagnosed – Gilbert Welch
  - Overtreated – Shannon Brown-Lee

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“Primum Non Nocere”

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"One of the first duties of the physician is to educate the masses not to take medicine."

Sir William Osler

Thank you !!!

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