## Objectives:

By the end of this session, the learner will:

- Review a number of recent practice changing publications
  - Understand Evidence Based Medicine are changing our methods of care
- Encourage a skeptical mindset toward the medical literature

## Randomized trial of peanut consumption in infants at risk for peanut allergy.

- RCT of 640 infants (4-11 months) with Hx: severe eczema, egg allergy, or both
- Skin prick testing: divided by response: no wheal vs 1 to 4 mm wheal
- Consume vs avoid peanuts until 60 months of age.

#### • RESULTS

Group Prevalence of peanut allergy at 60 months

Initially negative: Avoidance 13.7% vs Consumption 1.9% (P<0.001).

• <u>Initially positive</u>: Avoidance 35.3% vs Consumption 10.6% (P=0.004).

No significant differences in serious adverse events.

#### - CONCLUCIONS

 Early introduction of peanuts significantly decreased the frequency of peanut allergy among high risk children.

N Engl J Med. 2015 Feb 26;372(9):803-13. doi: 10.1056/NEJMoa1414850. Epub 2015 Feb 23.

## ↑in Celiac Disease Risk With Gluten Introduction After Age 6 Months: Systematic Review & Meta-Analysis

 SR & MA of 15 studies timing of gluten introduction and breastfeeding on the risk of developing celiac disease.

#### CONCLUSION:

• <u>Delay (>6 months) Gluten → 25% ↑in</u> <u>Celiac Disease risk</u>

Early (4-6 months) gluten introduction (risk ratio [RR], 1.25; 95% CI, 1.08-1.45).

No effect of breastfeeding on CD risk (OR, 0.55; 95% CI, 0.28-1.10)

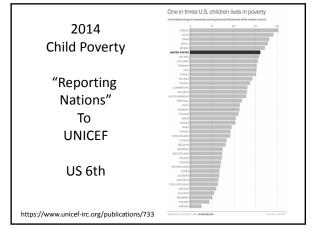
J Pediatr. 2015 Oct 20. pii: S0022-3476(15)01045-8. doi: 0.1016/j.jpeds.2015.09.032.

# Infant Animal Exposure reduced Asthma Risk

- Swedish cohort study association between early exposure to dogs and farm animals and the risk of asthma in from 1/1/01 – 12/31/10
- Dog exposure during the first year of life →

   √ irsk of asthma in school-aged children (OR, 0.87; 95% CI, 0.81-0.93) and in >/= 3 years (HR, 0.90; 95% CI, 0.83-0.99) but not in children < 3 years (HR, 1.03; 95% CI, 1.00-1.07).</p>
- Farm animal exposure → ↓ risk of asthma in both school-aged children and preschool-aged children (OR, 0.48; 95% CI, 0.31-0.76, and HR, 0.69; 95% CI, 0.56-0.84), respectively.
- Tell Parents DOGS may lower asthma risk

JAMA Pediatr. 2015 Nov;169(11):e153219



# <u>AAP</u>: Clinicians Should Screen Children for "Food Insecurity"

- ~ 20% of U.S. children live without consistent access to adequate food
- Clinicians should screen their patients/families for "food insecurity"
- Food-insecure homes → poorer overall health & more hospitalizations, and is associated with adverse cognitive, behavioral, and emotional outcomes.
- A two-question screen
- 1. Within the past 12 mo, we worried whether our food would run out before we got money to buy more. (Yes or No)
- 2. Within the past 12 mo, the food we bought just didn't last and we didn't have money to get more. (Yes or No)
- Resources for providers who identify food-insecure patients:
- 2-1-1: http://www.211.org/
- Food Hub: <a href="http://healthyfoodbankhub.feedingamerica.org/">http://healthyfoodbankhub.feedingamerica.org/</a>
- Ask your local congressperson
  - AAP Policy Statement: http://pediatrics.aappublications.org/content/136/5/e143

## Online help for Alcoholics

"Reddit is an entertainment, social news networking service, and news website" Reddit's community submits content. Registered users vote on submissions organizing posts to determine position on the pages → submissions with the most positive votes appear on the main page or the top of a category

- --Reddit's <u>"StopDrinking"</u> pages have > 30,000 subscribers, most of whom describe it as "their most helpful tool in their fight against alcohol."
- --StopDrinking has no coherent philosophy on addiction and recovery
- --Volunteer led forum, including most important parts of an effective support program: <u>daily check-ins, round-the-clock support, and activities like virtual book</u>

<u>clubs</u> that offer alternatives to social drinking. https://www.washingtonpost.com/news/the-intersect/wp/2016/01/05/the-su-choosing-over-aa/

## 2016 USPSTF: Aspirin for Primary Prevention of ASCVD & CRC

- 50-59 Years: Low-dose aspirin for primary prevention of CVD and CRC who have a 10% or greater 10-year CVD risk, are not at increased risk for bleeding, have a life expectancy of at least 10 years, and are willing to take low-dose aspirin for at least 10 years (B; net benefit moderate).
- 60-69 Years: Low-dose aspirin for primary prevention of CVD and CRC in adults aged 60 to 69 years who have a 10% or greater 10-year CVD risk should be an individual one. (C; net benefit small).
- Younger than age 50 or over age 70: The current evidence is **insufficient** to assess balance of benefits and harms of aspirin use for the primary prevention of CVD and CRC. (I; Insufficient)

Ann Intern Med. doi:10.7326/M16-0577.

## Aspirin for **Primary Prevention App**

- · Brigham and Women's Hospital: free app -calculates risks & benefit of aspirin on 10 year atherosclerotic cardiovascular disease risk.
- This app, called **Aspirin-Guide**, is free.
- Input: Age, total and HDL-cholesterol, SBP, smoking status, and diabetes
- The app → the patient's 10 year risk for cardiovascular events and bleeding risk.

## Behavioral Activation Equivalent to **CBT** for Depression

- 221 Randomized to BA vs CBT; Rx controlled
- BA: Identify "LOOPS" of thought → Social Isolation → Depression
- BA non-inferior to CBT (PHQ-9: 8.4 v 8.4, p=0.89)
- Adverse events > in CBT vs BA (non-sig)
- CBT-Advanced degree/training; BA-no advanced training
- BA, a simpler psychological treatment than CBT, can be delivered by lower cost providers

www.thelancet.com 7/22/16

## Behavioral Activation Equivalent to **CBT** for Depression

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### **BA Apps:**

Mood Coach (VA): Motivates + Activities Moodivate(alone) & **Behavioral Apptivation (Therapist)** MoodTools (uses BA & CBT) →TRAC iCBT (TRAP → TRAC, voice enabled)

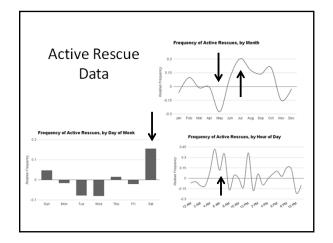
## Suicide Rate Increase

- Suicides in the U.S. increased 24% from 1999 to 2014
- National Center for Health Statistics:
- 1999-2006, ~1%/year; 2006-14 ↑ 2% annually (recession)
- Suicide rate in males was 3 times > in females (20.7 vs 5.8 per 100,000).
- AGE: Highest in men > aged 75 and in women aged 45-64.
- <u>Children</u> (10–14) rates low, but had ↑ (200% in females, 37% in males)
- Adolescents: 65.1% Dx behavioral disorder, 26.3% mood disorder, 3.8% psychotic disorder, & 4.8% "other"
- Most frequent Method-- Men: firearms; Women, poisoning.

http://www.cdc.gov/nchs/products/databriefs/db241.htm & Children and Youth Services Review;

## Text for *Help*: 741741 Crisis Text Line

- · Non-Profit 24/7 texting service
- Top issues depression, anxiety, suicidal ideation, family issues, and romantic relationships, substance abuse, sexual health, sexual abuse, and eating disorders.
- Text how you feel to 741741 & trained Volunteer Crisis Counselor move "hot moment" to a cool moment
- > 80% of Texters < 25 Years
- ~ 30 Million Texts since 2013
- Ave: 10 "Active Rescues"/day
- · Nancy Lubin TED talk



#### 2009 Oropharyngeal exercises on patients with moderate obstructive sleep apnea syndrome

- 31 patients with moderate OSAS: 3 months of daily (~30 min) sham therapy (n = 15, control) or a set of oropharyngeal exercises (n = 16)
- OP Exercises involving the tongue, soft palate, and lateral pharyngeal wall.

#### Outcomes:

- No significant change occurred in the control group in all variables.
- Oropharyngeal Exercise patients significant <u>decrease</u> (P < 0.05) in: -Neck Circumference (39.6 +/- 3.6 vs. 38.5 +/- 4.0 cm),
  - -Apnea-hypopnea index: 22.4 +/- 4.8 vs. 13.7 +/- 8.5 events/h)
  - -Snoring Frequency, Snoring Intensity -Daytime Sleepiness, Sleep Quality
- Am J Respir Crit Care Med. 2009 May 15;179(10):962-6

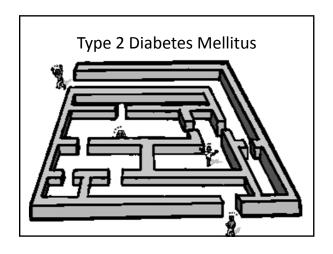
## 2015: Effects of Oropharyngeal Exercises on Snoring

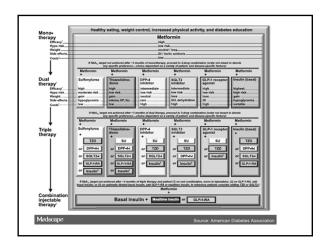
- **RCT** over 3 months of **39 patients**; Control: nasal dilator strips plus respiratory exercises vs. Intervention: oropharyngeal (OP) exercises.
- Both groups were similar at study entry.
- No significant changes occurred in the control group
- Compared to Control OP Exercise group had significant  $\underline{\textit{decrease}}$  in
- --<u>Snore Index</u>: 99.5 (49.6-221.3) vs 48.2 (25.5-219.2); *P* = .017 and
- --<u>Total snore index</u> (total power of snore/h), 60.4 (21.8-220.6) vs 31.0 (10.1-146.5); *P* = .033
- CONCLUSIONS: "Oropharyngeal exercises are effective in reducing objectively measured snoring and are a possible treatment of a large population suffering from snoring."
- Chest. 2015:148(3):683-691

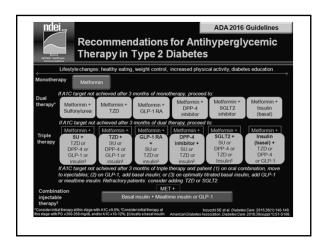
## 2015 SR & Meta Analysis on Oro-Pharyngeal Exercises for OSA

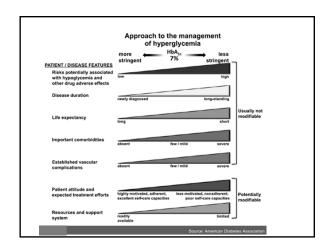
- 9 studies exercises on snoring and/or sleepiness
- Apnea-hypopnea indices (AHI)  $\downarrow$  from **24.5** ± 14.3/h to **12.3** ± 11.8/h, P < 0.0001.
- <u>Lowest O2 saturations</u> improved from **83.9**  $\pm$  **6.0% to 86.6**  $\pm$  **7.3%**, MD 4.19% (95% CI 1.85, 6.54), P = 0.0005.
- Snoring  $\downarrow$  14.05% ± 4.89% to 3.87% ± 4.12% of total sleep time, P <
- <u>Epworth Sleepiness Scale</u> decreased from **14.8**  $\pm$  **3.5** to **8.2**  $\pm$  **4.1**.

- Current literature demonstrates that OP exercises ↓ apnea-hypopnea index by ~ 50%. Low O2 saturation, snoring, and sleepiness outcomes improve in adults.
- Sleep. 2015 May 1;38(5):669-75. doi: 10.5665/sleep.4652.







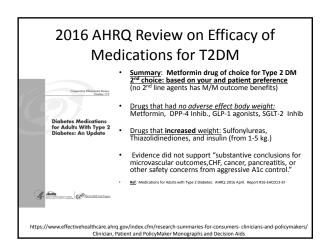


## Tight control T2DM & Outcomes

- Meta Analysis of 19 RCT's (~ 85,000)
- Compared with standard care vs intensive treatment:
- Intensive -> 

  √ risk of Non-fatal MI [(RR)

  0.90, CI: 0.83-0.96]
  - BUT NOT:
- <u>Non-fatal stroke</u> (RR 0.96, CI 0.86-1.07), <u>CV mortality</u> (RR 1.00, CI 0.90-1.11) or <u>All-cause mortality</u> (RR 1.00, CI 0.94-1.06)
  - <u>Diabet Med.</u> 2016 Mar;33(3):280-9



## 2016 ADA Guidelines



- <u>Screening for T2DM</u>: all age >/= 45, hypertension, on atypical anti-psychotics or HIV medications, those with BMI >/= 25 or, if of Asian descent, at BMI >/= 23.
- Hemoglobin A1c frequency: The ADA "should depend on the clinical situation" and at least twice a year and quarterly if therapy has been changed.
- Glucose Self Monitoring: Patients on "intensive insulin regimens" or those on an insulin pump should consider testing pre-prandial. "Evidence is insufficient to determine when to prescribe SMBG." No evidence on frequency.
- <u>Lipids</u>: ADA supports AHA recommendations on statin using 10 year risk calculator.
- <u>Aspirin</u>: For both women and men, low dose (82 milligrams per day) of aspirin therapy over the age of 50 for the primary prevention of heart disease when the atherosclerotic cardiovascular risk is greater than 10%. For both T1DM & T2DM.
- Hypertension: The ADA's current goal is a <u>systolic < 140</u>, and a <u>diastolic < 90</u>. 1<sup>st</sup> line:
   ACE or ARB (but not both) 2<sup>nd</sup>: Thiazides. <u>Lower systolic pressures are not currently evidence based.</u>

 $(http://care.diabetesjournals.org/content/suppl/2015/12/21/39. Supplement\_1.DC2/2016-Standards-of-Care.pdf)\ .$ 

## 2016 ADA Guidelines: Rx



- Metformin 1<sup>st</sup> line for all 2<sup>nd</sup> Line:
- DDP 4 inhibitors  $\uparrow$  incretin activity, which  $\downarrow$  glucagon release that leads to  $\uparrow$  insulin secretion, &  $\downarrow$  gastric emptying; (alogliptin (Nesina), linagliptin (Tradjenta), sitagliptin (Januvia), saxagliptin (Onglyza))
- <u>GLP1 agonists</u>  $\uparrow$  insulin secretion,  $\downarrow$  glucagon secretion, and  $\downarrow$  gastric emptying; (albiglutide (Tanzeum), exenatide (Byetta/Bydureon), dulaglutide (Trulicity), liraglutide\* (Victoza)& (Saxenda-for weight loss w/o diabetes)
- SGLT-2 inhibitors ↑ glucose excretion in the urine; (canagliflozin (Invokana), dapagliflozin (Farxiga), empagliflozin (Jardiance)
- 3<sup>rd</sup> Line: Long acting and regular insulin, sulfonylureas, (SU), and thiazolidinedione (TZD) can be added, but no morbidity and mortality benefit & may -> harm.
- SURGERY: "Bariatric surgery considered for adults whose BMI is >35 kg/m2"

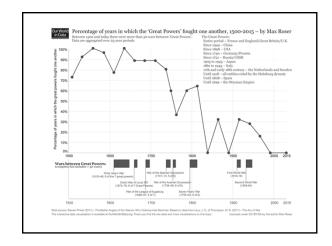
## 2014 World "More dangerous than it has ever been"

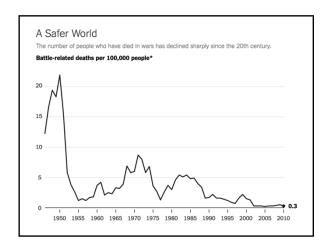
Martin Dempsey, Chair Joint Chiefs

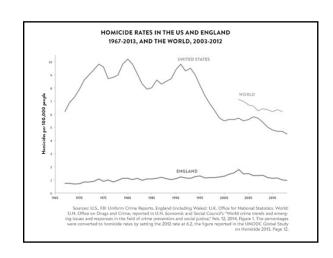
## Terrorism:

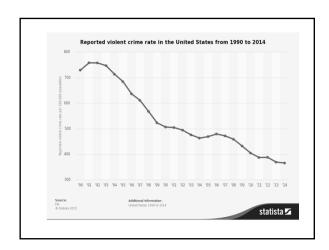
the use of violence and intimidation in the pursuit of political aims.

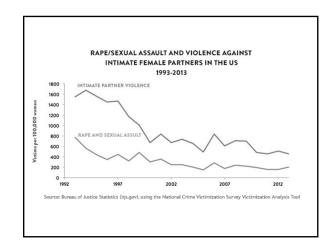
- · San Bernardino
- Orlando
- AA Community
- Nice
- Paris
- Syria

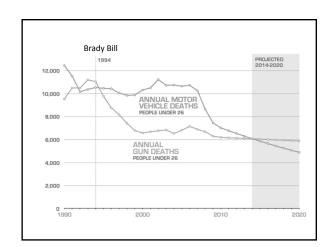
















## Perspective

• 2005-2015: 71 US Killed Terrorism

> 301,000 US Killed by Gun Violence --40% "Crime related"

7 Children/Teens Killed by guns/DAY • 2015:

• 2015: A Toddler shoots someone every 7 days

31% Kill self, 5% kill others 40% injure self, 24% injure others

Ref: CDC: 2015

Screen Kids, Teens, Encourage Safety

American Heart Association & American College of Cardiology Guidelines on Duration Dual AntiPlatelet Therapy (DAPT) in CAD

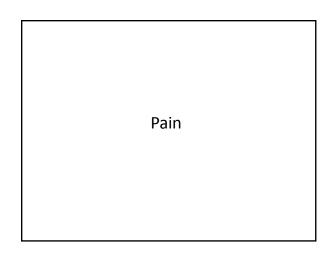
- DAPT —> "a tradeoff between ↓ ischemic risk and ↑ bleeding risk"
- Between 6 12 Months of DAPT (FDA Alert)
- <u>Stable ischemic heart disease</u> (SIHD) & <u>drug-eluting stent</u> (DES): DAPT x 6 months
- SIHD w/bare-metal stent (BMS), DPAT for a minimum of 1 month
- CABG, DPAT complete 12 months of therapy after ACS
- STEMI treated with fibrinolytic therapy, DPAT for a minimum of 14 days and ideally 12 months
- Aspirin (81 mg daily) should be continued indefinitely in CAD
- J Am Coll Cardiol. 2016;():. doi:10.1016/j.jacc.2016.03.513

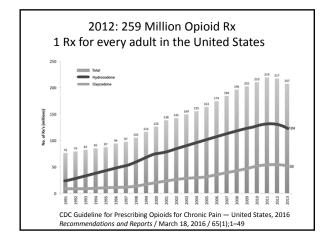


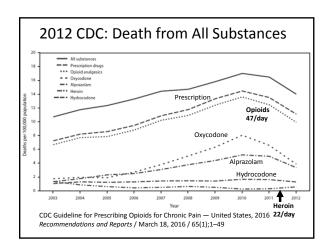
# Understanding <u>Over-diagnosis</u> How Mammography Increases Dx of Cancer, But Does Not Decrease Mortality

- Over-diagnosis: Screening → ↑rate of cancer diagnosis but have no positive effect on patient's health or mortality.
- Retrospective cohort > 16 million women ≥ 40 years of age.
- 55,000 (0.35%) were diagnosed with breast cancer; 10 year follow-up for 95%.
- Each 10% increase in rate of breast cancer screening was associated in an increase in breast cancer diagnosis RR=1.16; 95% CI: 1.13-1.19.
- No decrease in 10 year breast cancer mortality was found.
- The majority of cancers Dx were considered "small" (≤ 2cm); → increase in stage 0-2 breast cancer diagnosis
- But no change in stage 3-4 breast cancer.
- Large screening programs do not decrease diagnosis of more dangerous tumors & have no impact on mortality BUT have a significant increase in diagnostic morbidity (biopsies, repeat imaging, angst).

JAMA Inter Med. 2015; July 6 [epub]







## **Opioid Overdose Survivors** Receive Repeat Opioid Rx

- 2,848 Adults with nonfatal opioid OD
- Stratified by morphine-equivalent dosage (MED)
- Large (≥100 mg), Moderate (50 to <100 mg), Low (<50 mg)
- <u>Time to repeated overdose</u>
- At 299 days, opioids dispensed to 91% of patients after overdose
- 7% (n = 212) had a repeat opioid overdose.

At 2 years, the incidence of repeated overdose was:

Large MED: 17% (95% CI, 14% to 20%) Moderate MED: 15% (CI, 10% to 21%) Low MED: 9% (CI, 6% to 14%)



Ann Intern Med. 2016 Jan 5;164(1):1-9. doi: 10.7326/M15-003

	Injectable (and intranasal- IN) generic <sup>1</sup>	Intranasal branded	Injectable generic*	Injectable generic	Auto-injector branded				
Brand name		Narcan Nasal Spray			Evolo Auto-Injector				
Product comparison									
	* 0 6				<b>1</b>				
FDA approved Labeling includes instructions for layperson use	X (for IV, IM, SC)	x x	х	х	x x				
Layperson experience	×		х		×				
Assembly required	×		x	×					
Fragile	×								
Can titrate dose	×		×	×					
Strength	1 mg/ml.	4 mg/0.1 ml.	0.4 mg/ml. OR 4 mg/10 ml.	0.4 mg/ml.	0.4 mg/0.4ml.				
Total volume of kit/package	4 mg/4 mL	8 mg/ 0.2 mL	0.8 mg/2 ml. OR 4 mg/10 ml.	0.8 mg/2 mL	0.8 mg/0.8 mL				
Storage requirements (All protect from light)	Store at 59-86 °F Fragile: Glass.	Store at 59-77 °F Excursions from 39-104 °F	Store at 68-77 °F Breakable: Glass.	Store at 68-77 °F Breakable: Glass.	Store at 59-77 °F Excursions from 39-104 °F				
Cost/kit <sup>4</sup>	55	SS	s	s	555*				
		Prescript	ion variation	•	•				
Refills	Two	Two	Two	Two	Two				

	Injectable ( intranasal-	and IN) generic <sup>1</sup>	Intranasal branded <sup>2</sup>	Injectable generic <sup>8</sup>	Injectable generic	Auto-injector brander
Rx and quantity	#2 2 mL Luer-Jet** Luer-Lock needleless syringe plus #2 mucosal atomizer devices (MAD-300)		#1 two-pack of two 4 mg/0.1 mL intranasal devices	#2 single-use 1 mL vials OR #1 10mL multidose vial PLUS #2 3 mL syringe w/ 23-25 gauge 1-1.5 inch IM needles	#2 single-use 1 mi vials PLUS #2 3 mi, syringe m/ 23-25 gauge 1-1.5 inch IM needles	#1 two-pack of two 0: mg/0.4 mL prefiled auto-injector devices
Sig. (for suspected opioid overdose)	Spray 1 ml (1/2 of springe) into each nostrii. Repeat after 2-3 minutes if no or minimal response.		Spray 0.1 mL into one nostril. Repeat with second device into other nostril after 2-3 minutes if no or minimal response.	Inject 1 ml, in shoulder or thigh. Repeat after 2-3 minutes if no or minimal response.	inject 1 ml. in shoulder or thigh. Repeat after 2-3 minutes if no or minimal response.	Inject into outer thigh as directed by English voice-prompt system. Place black side firmly on outer thigh and depress and hold for seconds. Repeat with second device in 2-3 minutes if no or minimal response.
			Ordering	information		
How supplied	Box of 10 Luer-Jet™ prefilled glass syringes		Two-pack of single use intranasal devices	Box of 10 single-dose fliptop vials (1 ml) OR Case of 25 multi-dose fliptop vials (10 ml)	Box of 10 single-dose fliptop vials	Two pack of single use auto-injectors * 1 trainer
Manufacturer	IMS/ Amphastar	Teleflex (IN adapter)	Adapt Pharma	Hospira	Mylan	katéo
Web address	Amphastar. com	Teleflex. com	Narcannasalspray.com	Hospira.com	Mylan.com	Evzio.com
Customer service	800-423- 4136	866-246- 6990	844-462-7226	877-946-7747	724-514-1800	855-773-8946
NDC	76329- 3369-01	DME- no NDC	69547-353-02	00409-1215-01 (1 ml) 00409-1219-01 (10 ml)	67457-0292-02	60842-030-01
laypersons. (Naloxone H As of 1/12/16, Narcan Hospira has an addition injection, USP, 0.4 mg/l "There is considerable p	ICI Injection, USP, Nasal Spray has b mai naionone pro mi. Carpuject <sup>™</sup> Lu rice variance for upons are availab	2mg/2mt, Min- een approved by duct, which is no er Lock Glass Syr each product- lo- le-visit manufac	cet Prefilled syringe with 21 Ga the FDA, but is not yet publicly	and take-home naioxone use ber \$2-69) ide specific local pricing.	76329-1469-1 (10 pack) and 7	8329-1469-5 (25 pack) ble. ( Nalosone Hydrochloride

## CDC: 1/3 of Out Patient Antibiotic Rx "Inappropriate"

- CDC 184,000 ambulatory care visits 2010–2011 national antibiotic Rx rates
- 506 antibiotic Rx/1000 patients annually; 353 were deemed "appropriate" based on national guidelines
- $\underline{\text{Respiratory infections}} \ (\text{e.g., URI, sinusitis}) \ \text{accounted for 221 antibiotic}$ Rx/1000, but just 111/1000 were appropriate (1/10)
- Sinusitis diagnosis associated with most antibiotic Rx/ 1000 (56 antibiotic Rx, then otitis media (47 antibiotic Rx), then pharyngitis (43 antibiotic Rx)
- JAMA. 2016;315(17):1864-1873
- HARM: C. diff, Diarrhea, ↑ Rx in Future... Children with ABX exposure < 2 Yr have greater risk of childhood obesity and T2DM risk Gastroenterology: 2016, 151(1): 120-129.e5



#### Antibiotics Given More Than Wanted

- MMWR survey of US consumers &1500 healthcare providers
- >50% of healthcare providers believe patients expect antibiotics during a visit for a viral illness
- $\sim\!25\%$  of consumers actually expect them
- · 20% of consumers obtained Antibiotic Rx from source others (grocery stores, friends & family, or leftovers from a previous illness)

MMWR / July 24, 2015 / Vol. 64 / No. 28



## **Best Evidence Antibiotic Guidelines**

- Sinusitis: (A.A.of Otolaryngology-Head and Neck Surgery Foundation (AAO-HNSF))

  - Wiral thinosinusitis when \$7\$ last < 10 days and do not worsen

    Acute bacterial rhinosinusitis when \$7\$ last < 10 days, or worsen within 10 days after initial
    improvement (double worsening)
- Otitis Media (AAFP Practice Guideline 2013):

- Pain control
  Antibiotics for severe signs or symptoms (moderate or severe otalgia/otalgia for > 48 hours or T
  >/=37° [102.2\*F]) in children 6 24 months
  Antibiotic for <u>bilateral</u> AOM in 6-24 months of age without severe signs or symptoms.
  For nonsevere unliateral AOM in children for months to 23 months of age, or nonsevere AOM (either unliateral or bilateral) in children 24 months of age or older, antibiotic therapy OR observation offered with close follow-up (inchanism to ensure antibiotic therapy if the child worsens or fails to improve within 48 to 72 hours of onset of symptoms)
- Pharyngitis: (Modified Centor Score)
  +1: Fever, Tonsilar Exudates, Ant Cervical Nodes, ABSENCE Cough, Age <15; 0--15-44; -1 > 44 years
- Interpretation:
  -1, Or 1 point(s) No antibiotic or throat culture necessary (Risk of strep. <10%)
  2 or 3 points Rapid Strep & ONLY treat with an antibiotic if positive (Risk of strep. 32% if 3 criteria, 15% if 2)
- 4 or 5 points Rapid Strep OR Empiric Treatment (Risk of strep. infection 56%)

### How to NOT Give Antibiotics

- 1. <u>Identify patient's (parent) concern</u>. "What are you worried about & what do you think you may need?"
- 2. <u>Verbalize your exam</u>. State out loud: "Ears are normal, throat is a little red, lungs are clear... I suspect you have a viral infection that will resolve in a few days." (Patient Educ Couns (2010), doi:10.1016)
- 3. <u>Delay of antibiotic Rx.</u> most studied and effective method. Tell your patients: I suspect you have a viral infection which will get better over next 7-10 days. If you are not <u>improving</u> by Friday morning, call office and I may call in an Rx.

(Cochrane Database Syst Rev. 2004 18;(4):CD004417).

## How NOT to Give Antibiotics

4. Symptom control. Very best evidence offers:

--Fever/aches: Acetaminophen (15 mg/kg) PLUS an NSAID like | Ibuprofen (10 mg/kg) together every 6 hours (alternating doses ↑ risk of overdose)

--Nasal Congestion & Cough due to post nasal drip: Oral or nasal déconcertants.

--Cough not due to post nasal drip: Honey alone or mixed w/lemon juice, every hour or two

--<u>To shorten viral URI Duration:</u>
Zinc *Acetate* Lozenges q 4 hours
Pelargonium sidoides 30 gtts TID

 What does NOT work: antibiotics for: URI's, bronchitis, sinusitis; cough medications (including codeine), Echinacea, Vitamin C, anti-histamines

## Zinc Lozenges: Meta Analysis

- 3 RCTS on zinc acetate (75 mg/d) lozenges for common cold
- · Zinc acetate lozenges shortened duration of:
- Illness by > 24 hours
- Nasal discharge by RRR=34% (95% CI: 17% to 51%),
- Nasal congestion 37% (15% to 58%), Scratchy throat 33% (8% to 59%), Cough by 46% (28% to 64%), Myalgia by 54% (18% to 89%)
- There was no difference in the duration of headache and fever.
- · Zinc Lozenge at least 4/day, dissolved in mouth

BMC Fam Pract. 2015; 16: 24

<u>Br J Clin Pharmacol.</u> 2016 Jul 5.

doi: 10.1111/bcp.13057

<u>Cochrane DSR; 2013</u>

<u>Jun 18;(6):CD001364</u>

Not Zn Acetate

## **Practice Changers**

## **Stop** ICS's in COPD

- •<u>Methods:</u> > 100,000 patients w/COPD on inhaled corticosteroids (ICS) x 5 five years
- Compared "severe pneumonia" and ICS use.
- •<u>Outcomes</u>: 14,000 developed "severe pneumonia"
- Patients who stop their ICS had ↓ rate Pneumonia (rate ratio [RR], 0.63; 95% CI, 0.60-0.66) vs those on ICS.
   Stopping ICS → Risk ↑4 months after stopping
- •<u>Conclusions</u>: COPD patients on chronic ICS were at higher risk of developing pneumonia than those not; <u>Stop if able</u>

Ref: Chest 2015; 148: 1177

## Single Dose Dexamethasone Not Inferior to Prednisone in Mild to Moderate Asthma

- <u>Methods</u>: RCT~ 380 adult patients
- Dexamethasone 12 mg (two 6 mg tablets) x 1 dose vs Prednisone 60 milligrams/day x 5 days.
- •Outcomes evaluated by telephone at 2 weeks.
- •Outcomes:
- •Relapse in Dex 12.1% vs 9.8% in Pred (non-inferior)
- •Hospitalization relapse 3.4% in Dex vs 2.9% Pred (NS)
- Adverse effects were the same in both groups.
- •Conclusion: Single dose of oral Dext 12 mg not inferior to 5 days of prednisone at 2 weeks

  Ann Emerg Med. 2016 Apr 14. pii: S0196-0644

## Therapeutics US for OA Knee

- SR of 10 RCT's (645 patients) of Therapeutic Ultrasound on OA
- TU: Use of sound waves above human hearing; "stimulating" or provoking tissue
- <u>Pain</u>: TU  $\rightarrow$   $\downarrow$  Pain (SMD = -0.93, 95%, CI = -1.22 to -0.64).
- Physical function, TU  $\rightarrow$  improved WOMAC physical function score (SMD = -0.37, 95% CI = -0.73 to -0.01
- No adverse events caused by TU in any trial.
- Therapeutic ultrasound is beneficial & safe for reducing knee pain and improving physical functions in patients with knee osteoarthritis
- Home Rx (\$75-150) 15 minutes/day
- Clin Rehabil. 2015 Oct 8. pii: 0269215515609415

## Consumption of spicy food inversely associated with risk for death

- Prospective cohort of ~500,000 men & women U.S. & China over 7 years: consumption of Spicy Foods on Total and Cause Specific Mortality
- · After adjusting for variables, hazard ratios for

- $\frac{HR}{1\mbox{-}2}$  days per week-- 0.90 (95% CI, 0.84 to 0.96)
- 3-5 days per week-- 0.86 (0.80 to 0.92)
- 6-7 days per week-- 0.86 (0.82 to 0.90)
- This inverse association was also true for ischemic heart disease, cancer and lung disease.

BMJ. 2015 Aug 4;351:h3942

## Watching cooking shows correlates with obesity

- Survey of 501 <u>females</u> (20–35) how obtained information on new recipes, cooking habits, weight and height.
- Obtaining information from print, online, or inperson sources was not associated with ↑ BMI.
- Obtaining information from cooking shows and social media correlated with higher BMI (p < 0.05)
- Watching cooking shows & cooking from scratch("doers") was associated with higher BMI (p < 0.05) vs "viewers"
- Promoting healthy foods on cooking shows may be one way to positively influence the weight status of "doers" as well as "viewers."

## Summary

- Introduce nuts, gluten, eggs, fish & pets early
- Screen for Food Insecurity & Where to Refer
- Use Tech: Alcohol Abuse, Behavioral Activation, ASA
- Child/Teen Safety: Gun, Text for Crisis (741741)
- Snoring Exercises

## Summary

- DM: Screen BMI >/= 25/23, Metformin 1st
- DAPT ~ 6 Months 12 Months
- · Understand Over Diagnosis
- · Prescribe Naloxone
- · Appropriate Antibiotic Use; Zinc Acetate
- · Add Some Hot Sauce at least 3 times a week

## Top 10: EBM Updates From The Medical Literature

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## Low-dose Spironolactone: Treatment for Osteoarthritis related Knee Effusion



- RCT of 200 (>/=) 40 with unilateral knee effusion (exam and US) related to OA X 2 week
- Effusion=Fluid > 4 mm;
   Complete resolution= ↓ to < 4-mm thickness
   Partial improvement ↓ but not < 4 mm.

	<u>Full</u>	<u>Partial</u>	No Response
Group 1: 50 patients spironolactone 25 mg/d     Group 2: 50 patients ibuprofen 1200 mg/d     Group 3: 50 patients cold compress 2 times/d     Group 4: 50 patients placebo.	66%	20%	14%
	25%	12%	64%
	28%	14%	58%
	6%	10%	84%

- Spironolactone 25 mg/day may decrease knee effusion from OA
- <u>J Rheumatol.</u> 2016 Apr 1. pii: jrheum.151200