

Articles that Could Change the Way You Practice: The Tennessee Edition



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Disclosures

- In the past 12 months, I have no relevant financial relationships with the manufacturers of any commercial products or providers of commercial services
 - I do not intend to discuss an unapproved/investigative use of a commercial product or device in my presentation
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Who has time to read articles?

Pride and Prejudice by Jane Austen

(ultra-condensed by Anu Lahtinen)

Mr. Darcey: Nothing is good enough for me.

Ms. Elizabeth Bennet: I could never marry that proud man.

They change their minds.

The end

Despite everything....

- Pediatricians in Tennessee continue to provide excellent care.
- Come together to learn and support each other.
- Thank you for inviting me to be a part of this!

Fluoroquinolone Antibiotics and Tendon Injury in Adolescents

Ross RK et al. *Pediatrics*. 2021;147:e2020033316.

- In 2008, the FDA placed a black-box warning about the risk of tendon injury on fluoroquinolone antibiotics
- How much do I knee-d to worry about the risk to load-bearing joints in my growing teen patients?



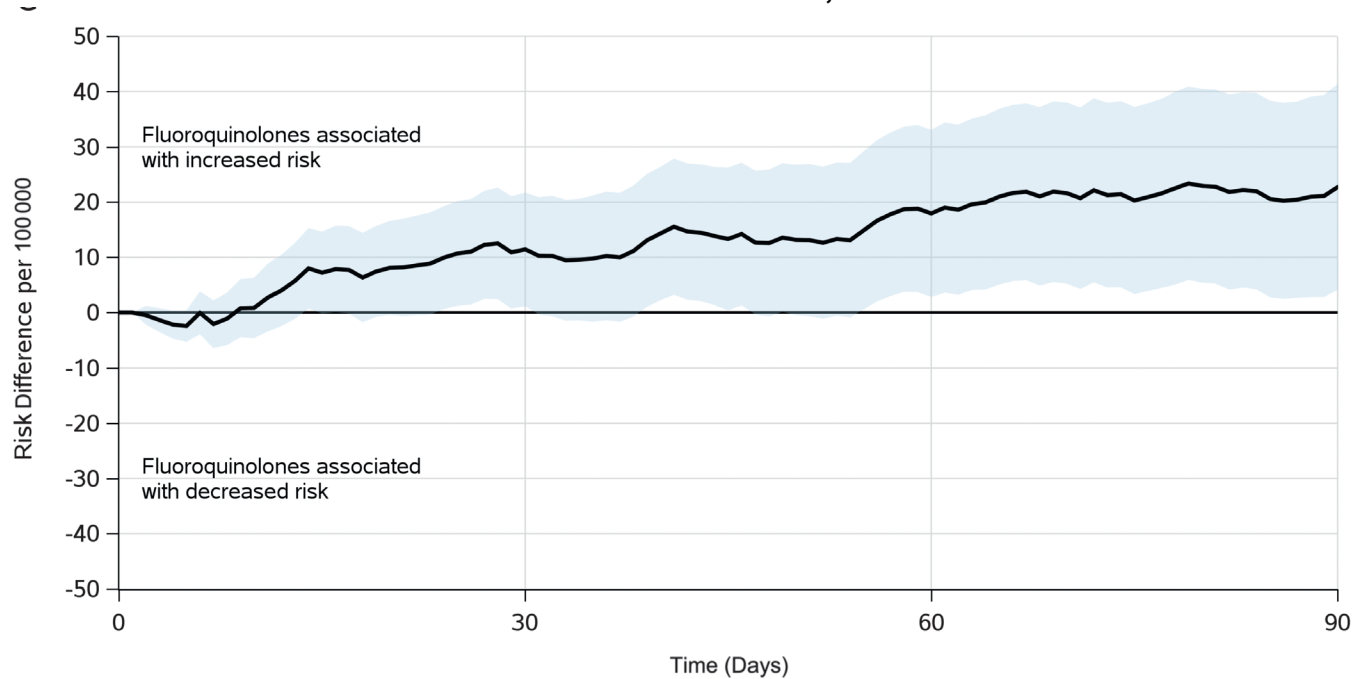
Fluoroquinolone Antibiotics and Tendon Injury in Adolescents

Ross RK et al. *Pediatrics*. 2021;147:e2020033316.

- Methods
 - MarketScan Commercial Claims and Encounters database from 2000-2018, subjects 12-18 years
 - 4.4 million teens, 7.6 million antibiotic treatments, 3.6% for fluoroquinolones

Fluoroquinolone Antibiotics and Tendon Injury in Adolescents

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Fluoroquinolone Antibiotics and Tendon Injury in Adolescents

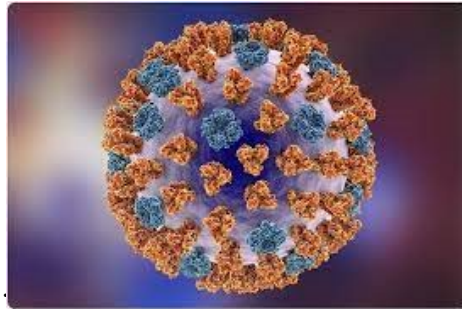
Ross RK et al. *Pediatrics*. 2021;147:e2020033316.

- The overall risk:
 - >50,000 adolescents treated for 1 additional tendon rupture to occur
 - 4,400 adolescents treated for 1 additional case of tendonitis
- Opportunity for shared decision making!

Influenza Antiviral Treatment and Length of Stay

Campbell AP et al. *Pediatrics*. 2021;148:e2021050417.

- I do everything I can to make sure my patients get vaccinated, but what else can I do for patients that get influenza? How effective are antiviral medications?



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Influenza Antiviral Treatment and Length of Stay

Campbell AP et al. *Pediatrics*. 2021;148:e2021050417.

- Methods
 - FluSurv-NET- large surveillance network, 2010-2013
 - Testing at the discretion of the clinical team

Influenza Antiviral Treatment and Length of Stay

Campbell AP et al. *Pediatrics*. 2021;148:e2021050417.

- Median time from symptom onset to admission: 1 day (range: 0-2 days)
- Median LOS: 3 days (range: 2-22 days)
- Median time of antiviral (oseltamivir) from admission: 1 day (-1 to 10 days)

Influenza Antiviral Treatment and Length of Stay

Campbell AP et al. *Pediatrics*. 2021;148:e2021050417.

- Treatment within 2 days of symptom onset was associated with shortened hospital stay by about a day, including for higher-risk patients treated in the ICU
- Benefit seemed to be gone by 3 days after symptoms

Recommendations

- In case it flew by you, CDC and AAP recommend antiviral drugs for
 - confirmed or suspected flu in children with severe, complicated, or progressive illness
 - High risk of complications, including
 - <5 years
 - Asthma, diabetes, heart, or lung disease

Evidence-informed milestones for developmental surveillance tools.

Zubler JM et al. *Pediatrics*. 2021;149:e2021052138.



Surveillance



Screening

Evidence-informed milestones for developmental surveillance tools.

Zubler JM et al. *Pediatrics*. 2021;149:e2021052138.

- Screening alone will not identify all cases
- We know there are delays, barriers, and disparities in referral and treatment for developmental and behavioral issues
- Developmental surveillance is central to what we do as pediatricians
- Other than the period right before the board exam or thinking about our own children, ages at development is hard to remember

Evidence-informed milestones for developmental surveillance tools.

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Evidence-informed milestones for developmental surveillance tools.

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- Subject matter experts identified milestones at the age that $\geq 75\%$ would demonstrate the milestone based on open-ended questions and provided information about what to do if there is a concern.

Evidence-informed milestones for developmental surveillance tools.

Zubler JM et al. *Pediatrics*. 2021;149:e2021052138.

- 159 milestones – a reduction of about 25% across age categories
- Categories
 - Social-Emotional
 - Language and communication
 - Cognitive
 - Motor

Evidence-informed milestones for developmental surveillance tools.

Zubler JM et al. *Pediatrics*. 2021;149:e2021052138.

- My favorite milestone:
 - “Asks to go play with children if one are around, like “Can I play with Alex?” (4 years)



Evidence-informed milestones for developmental surveillance tools.

Zubler JM et al. *Pediatrics*. 2021;149:e2021052138.

- Putting these into practice
 - Communication tool linked to decision making
 - Not necessary to use all
 - Fosters continuity
 - Does not replace screening

Tennessee Trivia Time!

How many states border Tennessee?

What are they?



Alabama
Arkansas
Georgia
Kentucky
Mississippi
Missouri
North Carolina
Virginia

Bonus: Which other state has 8 borders?

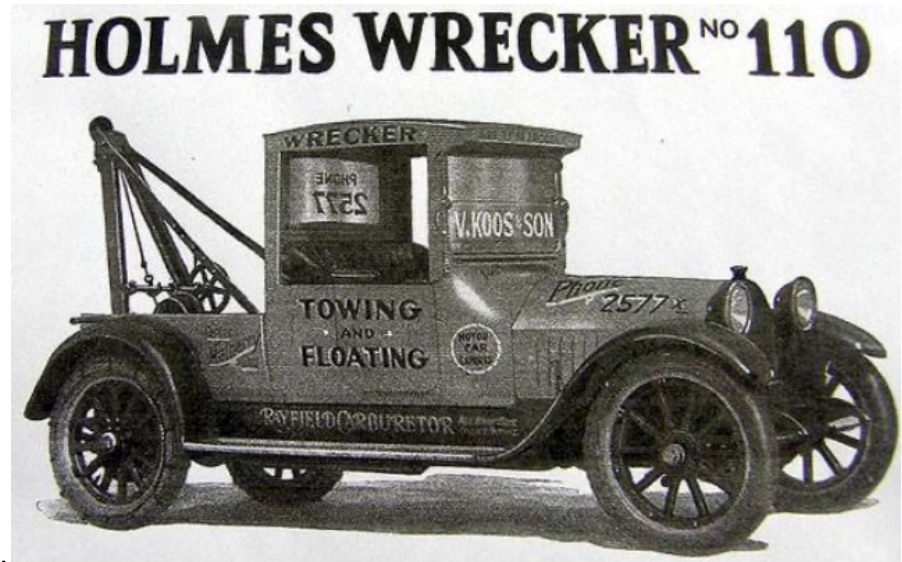
Missouri



Tennessee Trivia Time!

Which of the following was invented in Tennessee?

- A. Country music
- B. Whiskey
- C. The Tow Truck



Tennessee Trivia Time!

What is the most popular ticketed attraction in Tennessee?

A. Dollywood

B. Graceland

C. Tennessee Lady Vols Basketball



Bonus – How many #1 hits has Dolly had on the Billboard country music charts?

25



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Pediatric Firearm Injury Mortality Epidemiology.

Andrews AA et al. *Pediatrics*. 2022;149:e2021052739.

- What new information is available about firearm injury that could inform my counseling efforts?

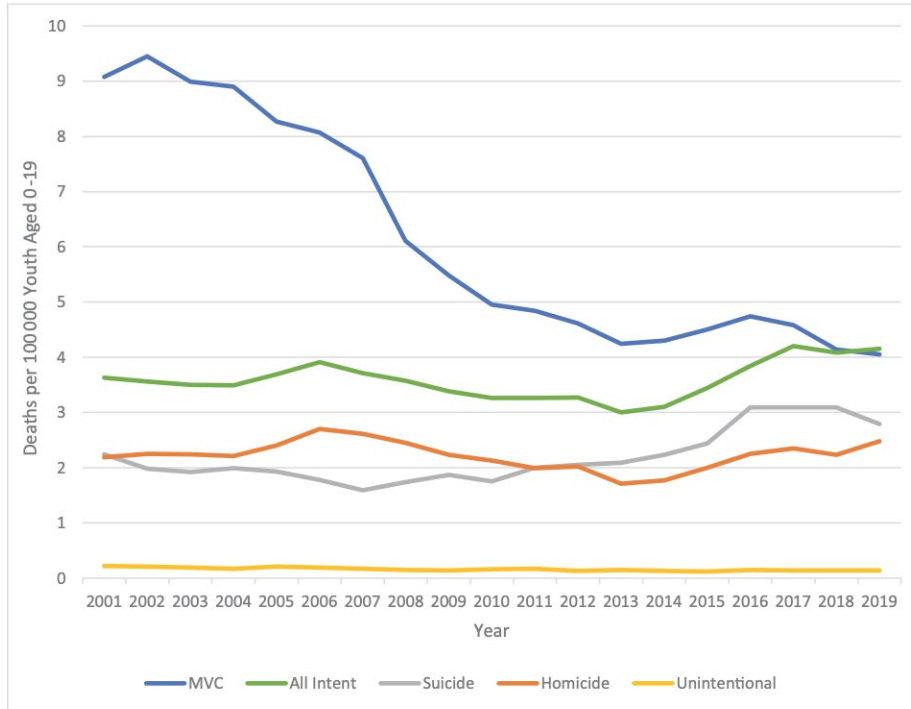
Pediatric Firearm Injury Mortality Epidemiology.

Andrews AA et al. *Pediatrics*. 2022;149:e2021052739.

- Methods
 - 0-19 years
 - Mortality data from the CDC
 - Compared to Motor vehicle collision (MVC) mortality rate

Pediatric Firearm Injury Mortality Epidemiology.

Andrews AA et al. *Pediatrics*. 2022;149:e2021052739.



Implications

- Counseling
- Practice and community interventions
 - Lock boxes
- Advocacy

AAP Resources: Gun Safety Campaign Toolkit

- <https://www.aap.org/en/news-room/campaigns-and-toolkits/gun-safety/>

Firearm Safety for Families



Studies show children are naturally curious, even about a firearm they've been warned not to touch.



Kids are safer when: Firearms are in a lockbox or safe, unloaded. Ammunition is locked away separately.



Kids are safest when: firearms are stored outside the home.



Child Opportunity Index and Changes in Pediatric Acute Care Utilization in the COVID-19 Pandemic.

Fritz CQ et al. *Pediatrics*. 2022;149:e2021053706.

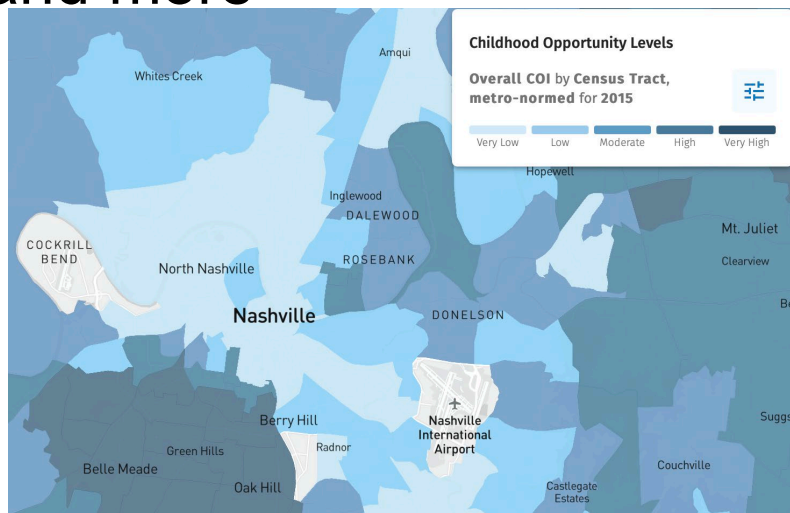
- At the start of the COVID-19 pandemic, our pediatric emergency departments and hospitalizations dropped dramatically.
- I think families with more resources were able to stay away.



Childhood Opportunity Index

<https://www.diversitydatakids.org/child-opportunity-index>

- 29 indicators at the census tract level: education, green space, healthy food availability, and more
- A social determinant of health
- Time for terms I am picky about:
 - SDOH
 - Social Risk Factors
 - Social Needs



Child Opportunity Index and Changes in Pediatric Acute Care Utilization in the COVID-19 Pandemic.

Fritz CQ et al. *Pediatrics*. 2022;149:e2021053706.

- Methods
 - Pediatric Health Information System (PHIS)
 - 0 –17 years with ED encounters, observation status, or inpatient,
 - March 2017-March 2021

Child Opportunity Index and Changes in Pediatric Acute Care Utilization in the COVID-19 Pandemic.

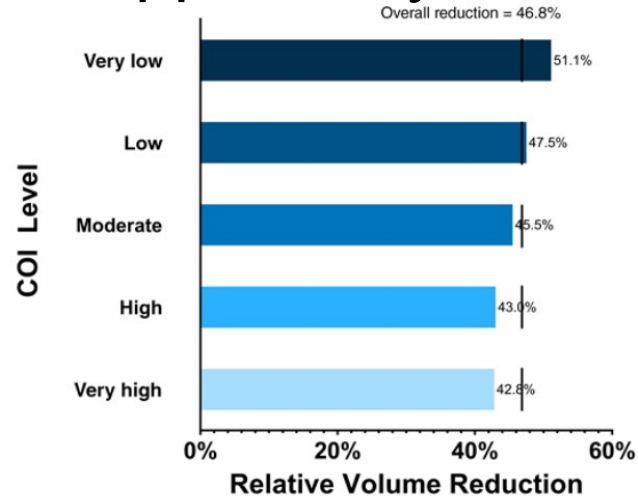
Fritz CQ et al. *Pediatrics*. 2022;149:e2021053706.

- ~47% reduction in volume during the pandemic
- The drop disproportionately was among those with a low Childhood Opportunity Index

Child Opportunity Index and Changes in Pediatric Acute Care Utilization in the COVID-19 Pandemic.

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- The drop disproportionately was among those with a low Childhood Opportunity Index (a surprise!)



Child Opportunity Index and Changes in Pediatric Acute Care Utilization in the COVID-19 Pandemic.

Fritz CQ et al. *Pediatrics*. 2022;149:e2021053706.

- What happened?
 - Change in access (public transportation, family couldn't leave essential work)?
 - Change in healthcare seeking behaviors?
 - Change in epidemiology of diseases?
 - How do we ensure equitable access to care moving forward?
-

A Multisite Collaborative to Decrease Inappropriate Antibiotics in Urgent Care Centers

Nedved A et al. *Pediatrics*. 2022;150:e20221051806

- Dedicated pediatric urgent care centers seem to be taking off. There is even an academic Society of Pediatric Urgent Care.
- Is this new field engaging in quality improvement to decrease antibiotic overuse?



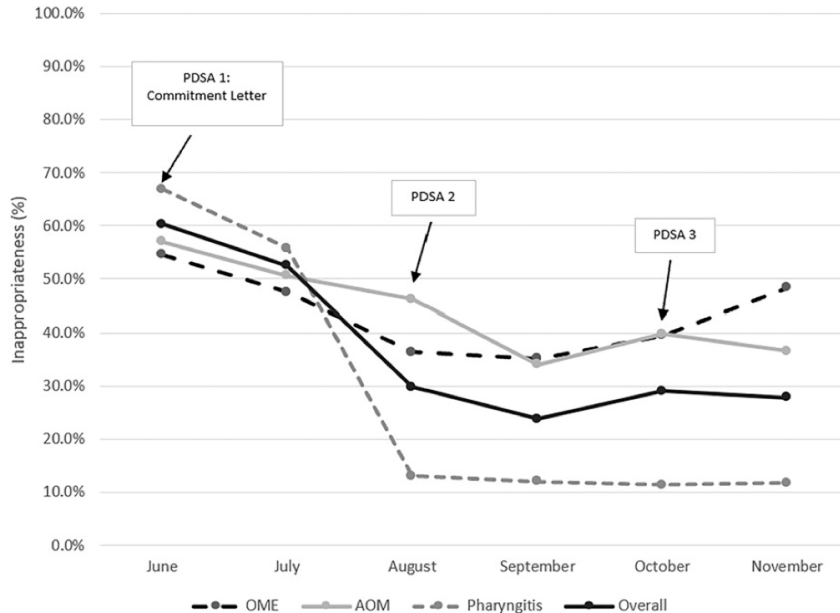
A Multisite Collaborative to Decrease Inappropriate Antibiotics in Urgent Care Centers

Nedved A et al. *Pediatrics*. 2022;150:e20221051806

- Society of Pediatric Urgent Care recruited 20 centers (157 clinicians)
- Focus on acute otitis media, otitis media with effusion, and pharyngitis
- Decrease inappropriate antibiotic prescribing by 20% from June-December 2019

A Multisite Collaborative to Decrease Inappropriate Antibiotics in Urgent Care Centers

Nedved A et al. *Pediatrics*. 2022;150:e20221051806



PDSA #1 – commitment

Later Interventions

- Communication training
- Provider education
- Delayed prescribing
- Parent engagement
- Social media

A Multisite Collaborative to Decrease Inappropriate Antibiotics in Urgent Care Centers

Nedved A et al. *Pediatrics*. 2022;150:e20221051806

- Lessons
 - Welcome to the field of urgent care!
 - Another demonstration that we can reduce unnecessary antibiotics
- The big issue – to be addressed in the future (I hope) - sustainability

Clinical Practice Guideline Revision: Management of Hyperbilirubinemia in the Newborn Infant 35 or More Weeks of Gestation

Kemper AR et al. *Pediatrics*. 2022;150:e202205889

What is new in the new guidelines?



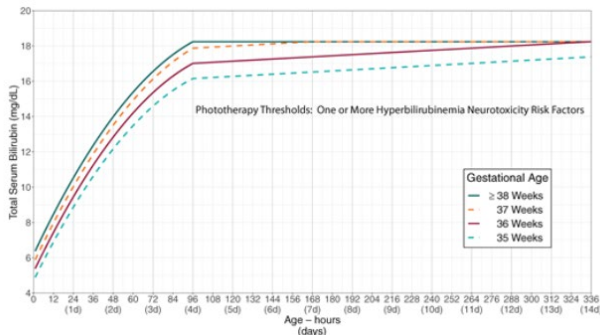
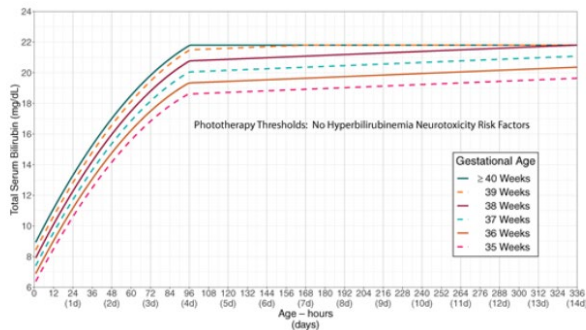
Clinical Practice Guideline Revision: Management of Hyperbilirubinemia in the Newborn Infant 35 or More Weeks of Gestation

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- Obtain a TcB or TSB prior to discharge from the newborn nursery
- Consider hyperbilirubinemia risk factors
 - Gestational age (in the treatment curves!)
 - Albumin 3.0 g/dL
 - Isoimmune hemolytic disease, G6PD deficiency, or other hemolytic conditions
 - Sepsis
 - Significant clinical instability in the previous 24 hours

Clinical Practice Guideline Revision: Management of Hyperbilirubinemia in the Newborn Infant 35 or More Weeks of Gestation

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Clinical Practice Guideline Revision: Management of Hyperbilirubinemia in the Newborn Infant 35 or More Weeks of Gestation

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- Follow-up after discharge based on how close to needing phototherapy
- Specific guidance about phototherapy, including home phototherapy
- New thresholds for exchange transfusion and a new term, “escalation of care” for infants within 2 mg/dL of needing a transfusion. **IT IS A MEDICAL EMERGENCY.**

Clinical Practice Guideline Revision: Management of Hyperbilirubinemia in the Newborn Infant 35 or More Weeks of Gestation

Kemper AR et al. *Pediatrics*. 2022;150:e202205889

- Be sure to be specific about
 - Follow-up care (arrange it!)
 - Educate families
 - Provide relevant lab data, including time and result of most recent bilirubin level

What have we learned?

- Consider shared decision-making because the risk of tendon injury after fluoroquinolone antibiotics is low
- Think about influenza antiviral treatment early
- New milestones can help with developmental surveillance
- The risk of firearm injury mortality is an important topic for your practice – and you can help
- The Childhood Opportunity Index is an easily available measure of social determinants of health
- QI partnerships can decrease inappropriate antibiotic use
- There are new hyperbilirubinemia guidelines that can help target and improve care to reduce the risk of kernicterus



A word about *Pediatrics*

- This is our journal
- We are always working to make it even more helpful and engaging
- Please be an active partner in what we do

Please also come visit us at the NCE – for more fun and merriment, and probably a song

Questions



"We'd now like to open the floor to shorter speeches disguised as questions."



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