America Is Awash In Opioids And Urgent Action Is Critical, According To Former CDC Director

Drug Overdose Epidemic Called A Horrifying Crisis

“One of the most heartbreaking problems I’ve faced as CDC director is our nation’s opioid crisis. Lives, families, and communities continue to be devastated by this complex and evolving epidemic.” That’s how the former CDC Director characterized the phenomenal increase in drug overdose deaths before resigning on Inauguration Day.

Just how bad is the opioid epidemic?

Recent publications by the CDC have provided details of the epidemic through 2015 which is the latest full year of compiled data. The New York Times reported in April and again in June 2017 on estimated data it has...
all the way from Abraham Lilienfeld in the early days to Diane Lauderdale in more recent times. The song was accompanied with pictures of the past presidents dug up from the SER archives. The audience was elated and offered a standing ovation.

On Thinking

In using the framework Think. Teach. Do to underline the importance of thinking in epidemiology, Harlow urged his audience to think about their strengths, how they can improve upon their professional development, how they can contribute to epidemiology both inside and outside of SER, and finally how they can engage with the community to bring about more impact in public health. It was a presentation well aligned with a consequentialist vision of epidemiology.

On Teaching

On the teaching element of the framework, Harlow focused on encouraging colleagues to convey the value of epidemiology to scientists in other disciplines, to other epidemiologists through the means afforded by SER, and to serve early stage investigators by being outstanding mentors.

In highlighting the importance of doing, Harlow described some of the SER accomplishments in the past year and urged attendees to ask themselves what they can do to further the work of SER.

50 Years We’ve Loved Our Epi

The session closed in an upbeat celebratory manner with the refrain from Harlow’s new song—“50 Years We’ve Loved Our Epi”. He managed to cycle through more than 30 pictures of former SER presidents while playing his song and giving a shout out to each president. He concluded with a series of tableaux with the pictures of all 50 past SER presidents.

Readers will be able to access the song played by Harlow to the melody of “50 Ways To Leave Your Lover” on the SER website in the near future.

He kindly provided the lyrics for The Epi Monitor shown below:

When I was young
My mentor Noel explained to me
The gift of data,
But confounding no one sees
We’ve come so far
In how we judge causality

We’ve all had,
50 years to love our Epi,
50 years to love our Epi

Our students ask us how we’ve Changed over the years

We say we’re more than
Food-borne outbreaks at the Fair

We’ve spanned the globe
In leading studies far and near

We’ve all had,
50 years to love our Epi,
50 years to love our Epi
Approximately 19 children a day die or are medically treated for a gunshot wound in an Emergency Department in the US. That is one of the sobering statistics to be found in the twin publication of a new report and a commentary on firearm injury published in Pediatrics.

The authors, Katherine Fowler and colleagues at CDC and Sarah Bacon at the University of Texas, Austin, of the report call it the most comprehensive examination of current firearm-related deaths and injuries among children in the United States to date. An accompanying commentary by Eliot Nelson from the University of Vermont, asserts that 1 out of every 7 children age 1 to 19 who died of anything died of a gunshot wound – homicide, suicide, or unintentional firearm injury. It is the third leading cause of death among all children 1 to 17. Stated bluntly, firearm injury is “an all too common way of death for children and youth in the United States.” Stated succinctly, “firearm injury is a plague,” according to the commentary.

- On average, nearly 1300 children (1297) died each year in the US between 2012-2014 and 5,790 were treated for gunshot wounds
- Firearm related deaths are the third leading cause of death overall in children 1-17 and the second leading cause of injury related death (behind only car crashes).
- Some 91% of firearm deaths of children 0-14 years among all high income countries worldwide occur in the US.
- Homicides accounted for 53%, suicides for 38%, unintentional firearm deaths for 6%, legal intervention or undetermined intent for 3% of firearm deaths between 2012-2014
- Firearm homicide death rates are highest in the District of Columbia and in Louisiana.
- The majority of these children described above are boys 13-17, African American in the case of firearm homicide, and white and American Indian in the case of firearm suicide.
- Homicide rates have decreased in recent time periods while suicide rates have been on an upward trend.
- Firearm homicides tend to occur at higher rates in the south and parts of the Midwest.

Prevention

At the community level, prevention efforts called for in the commentary are child access prevention laws and comprehensive background check requirements which have been shown to reduce certain types of firearm deaths. Finally, the commentary states “the underfunding of research on gun violence remains inexcusable; we must continue to demand support commensurate to the policy brief on...
They’ll face new challenges With Trump’s health strategy

We’ve gotta thank Abe, babe
And the great John Snow, y’know
How about Art to start
There’s more than we know
Let’s thank the two Al’s, pals
And that devlish old Lew, too
We gotta bring on Leon, dude
Just listen to me
Let’s call out the Sax, Max
Don’t forget about Milt, Wilt
We’re thinkin about Liz, Tiz
That’s only a few
Let’s not forget Ken, then
And the great Pat Buffler
Don’t forget about Kap, Chap

There’s many more too
We’ve watched our students
Grow to be our legacy
They’ll keep us growing
With new methodology
They’ll face new challenges
With Trump’s health strategy
They’ll bring a new,
50 years to love our Epi,
50 years to love our Epi
So as we celebrate
Our decade number five
Let’s not forget the ones
That helped us to survive
We’ve named a few today
But there are many more of we,
Who made up
50 years to love our Epi,
50 years to love our Epi

Let’s firmly thank Sherm, man
And our own Sandro, bro
Don’t forget about Mike, Ike
And Mary Haan too
We gotta shout out Julie, Hoolie
And our own Louise, please
Don’t forget about Szklo, y’know
Gotta thank a few more
Let’s thank our own Carol, Hogue
And our own Louise, please
Let’s rave about the Daves
And Malcolm Maclure
Bring up the slim, Tim
And the great Germaine, dame
Don’t forget about Les, Tess
And the Di’s on each end

We’ve named a few today
But there are many more of we,
Who made up
50 years to love our Epi,
50 years to love our Epi

Asked about the SER meeting overall,
Harlow told the Monitor, “The meeting was largest in SER history and featured cutting edge methods, historical reflections, and many special sessions that reflected on the contributions epidemiologists have made over the past 50 years. It was truly a special meeting for all.”

Firearm cont’d from page 3

on firearm violence prevention currently in preparation by the International Joint Policy Committee of the Societies of Epidemiology is expected to address this research deficit.
compiled for 2016. The startling increases are only getting worse, according to the Times investigation. To better grasp the magnitude and slope of the epidemic curve, the Times compared the increases in drug overdose deaths to those from other well-recognized problems. The table below reveals that since 1990, all of the comparison conditions have actually decreased while drug overdoses have increased by more than 500%!

<table>
<thead>
<tr>
<th>Cause of death</th>
<th>1990 Deaths</th>
<th>2015 Deaths</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car accidents</td>
<td>44,600</td>
<td>37,757</td>
<td>Decrease</td>
</tr>
<tr>
<td>Guns</td>
<td>36,943</td>
<td>35,763</td>
<td>Decrease</td>
</tr>
<tr>
<td>HIV</td>
<td>27,256</td>
<td>6,465</td>
<td>Decrease</td>
</tr>
<tr>
<td>Drug overdoses</td>
<td>8,413</td>
<td>52,404</td>
<td>Increase &gt;500%</td>
</tr>
</tbody>
</table>

The NY Times predicts based on their extensive investigation of the overdose deaths likely to be reported for 2016 that the number will be 62,497. If this occurs, it will be the single largest one year increase in overdose deaths. Said the Times in April, “It’s the worst drug overdose epidemic in American history, spurred by rising drug abuse, increased availability of prescription opioids and an influx of potent synthetics like fentanyl and carfentanil.”

The paper quotes heroin researcher Dan Ciccarone of the University of California, San Francisco, “…It’s horrifying. It’s not even the magnitude—it’s the steepness at which it’s climbing.”

According to Frieden, control and prevention efforts must include the following:

Rescue people whose lives are at immediate risk
- Administer naloxone to reverse overdoses in progress
- Increase access to naloxone among first responders
- Expand training programs on naloxone
- Increase access to medication-assisted treatment
- Train more providers to offer this treatment
- Support law enforcement to reduce the supply of drugs

Prevent opioid use disorder from developing
- Improve how doctors prescribe opioids for pain treatment
- Make better use of prescription monitoring programs
- Increase awareness of risks and benefits for persons given the drugs
Epi News Briefs

CDC Updates Best Estimate For The Risk Of Birth Defects After Zika Infection In Pregnant Women

In the largest study to date of completed pregnancies with lab-confirmed Zika infections, CDC reports that approximately 5% of fetuses and infants had possible Zika-associated birth defects. The data were collected from pregnancy and infant registries established by CDC in US territories over a 16 month period January 2016 thru most of April 2017. The estimate may be low since for the risk early in pregnancy since most of the infections studied had symptom onset or lab testing in the second and third trimesters.

The study involved 2,549 completed pregnancies, including both live births and pregnancy losses. Among a subset of pregnancies with more specific lab testing, the percentage of possible Zika-associated outcomes was 8% in the first, 5% in the second, and 4% in the third trimester. These included not only brain abnormalities but other neural tube defects, eye abnormalities, or CNS dysfunctions. Among completed pregnancies, most women (61%) were symptomatic, and 38% were symptomatic.

The 2,549 completed pregnancies produced 122 possible Zika-associated birth defects, essentially as many in the asymptomatic women (4%) as in the symptomatic women (5%). Most (108) of these 122 cases of birth defects were brain abnormalities or microcephaly.

These data suggest that Zika infection anytime during pregnancy can be associated with birth defects and monitoring is considered essential to make sure the appropriate interventions can be applied for the care of the infants.

"...approximately 5% of fetuses and infants had possible Zika-associated birth defects."

Flu Kills More Than 100 Children And Adolescents Each Year

According to a study published recently in Pediatrics by CDC investigators, estimated child and adolescent deaths associated with influenza averaged greater than 100 per year between 1976 to 2007. In the more recent time period, deaths ranged from 37 annually to 358 in 2009 during the pandemic.

In looking at how effective vaccination was in protecting against death, the authors found that overall vaccine efficacy was 65%. Among children with high risk medical conditions, the efficacy was lower at 51%. According to surveillance data, most deaths occur in unvaccinated children.

The conclusion from the study was that vaccination protects both children with and without underlying high risk conditions and that both groups should be vaccinated. The protection was present for most seasons.

The report is in the May issue of Pediatrics 2017;139(5):e20164244

"...child and adolescent deaths associated with influenza averaged greater than 100 per year..."
Eleven Blue Men Revisited —— Mystery Illness Solved

A fascinating story of how one elderly woman’s illness came to be diagnosed accurately is told in a recent NY Times magazine article (June 22). The scenario is this one—a healthy 93 year old woman takes ill one Saturday with an aching back and a fever. Caretakers suspected an infection of some kind but found no evidence to support it. The woman appears to be getting better but not really. The doctors are at a loss to diagnose her illness.

Her older son from out of town shows up at the hospital to visit his mother thinking she might be near the end of her life. He remembers something he knew and makes a joke wondering if her illness might be caused by flying squirrels since she had removed such rodents from her attic the previous autumn. Having no real knowledge about this but on the off chance that there might be something to this, the son looks up the illness on the hospital computer and finds a CDC report linking flying squirrels with epidemic typhus. The doctors think the patient’s symptoms might be a good fit, treat the woman with the right antibiotic, and she recovers. Lab test confirm the diagnosis. This is reminiscent of reading about medical mysteries in Berton Roueche’s Eleven Blue Men! It is worth a quick read for all the intriguing details at:

https://tinyurl.com/ybalsvyp

“"This is reminiscent of reading about medical mysteries in Berton Roueche’s Eleven Blue Men!"
**Died:** William Satariano, on May 28 of lymphoma at age 70. He was Professor of Epidemiology and Community Health Sciences and Director of Undergraduate Health Programs at UC Berkeley School of Public Health. He was trained as a sociologist and credited with pioneering the field of social epidemiology at UC Berkeley. Art Reingold, head of epidemiology at Berkeley, said “Bill was smart, funny, self-deprecating, and inevitably willing to lend a hand…He will be deeply missed by his colleagues, students, family, and many, many friends.”

**Awarded:** Douglas Wiebe, with the 2017 $5,000 Rothman prize for the best paper published in Epidemiology in 2016. The paper is entitled “Mapping Activity Patterns to Quantify Risk of Violent Assault in Urban Environments,” and appeared in January 2016. Dr. Wiebe is an Associate Professor of Epidemiology at the University of Pennsylvania Perelman School of Medicine and a Senior Fellow at the Center for Injury Research and Prevention.

**Featured:** Sean Hennessy, Professor of epidemiology, in Penn Medicine News, as the senior author of a new study design that can be useful in studying drugs that have a rapidly increasing or decreasing trend in consumption. Published in Epidemiology, the paper uses a new “trend-in-trend” design. According to Hennessy “…it’s looking at trends in the frequency of outcome as a function of trends in the frequency of exposure. Even when there are unmeasured factors that are different between groups and those factors affect the outcome, --this study will give the correct answer.”

**Honored:** Loretta DiPietro, George Washington University epidemiologist, with a Citation Award from the American College of Sports Medicine. In recognizing her, the President of the College said award winners “are selected for their leadership and contributions in the areas of research and scholarship, clinical care, administrative or educational services. We’re happy to recognize Dr DiPietro’s tremendous accomplishments.” Dr DiPietro is currently chair of the Department of Exercise and Nutrition Sciences. She was one of the first graduate students in exercise epidemiology at Yale.
Kaiser Permanente Southern California’s Department of Research and Evaluation (R&E) conducts high-quality, innovative translational research that benefits the health of its members and the communities from which they come. At Kaiser Permanente, research helps us learn what we need to do to provide better care for our members and promote better health in the community. More than 350 people work at the Pasadena, California-based Department of Research & Evaluation. The department is the primary hub of research for Kaiser Permanente Southern California, supporting research by full-time faculty members as well as medical center-based clinician researchers.

**RESEARCH ASSOCIATE**

The Department of Research and Evaluation is seeking research project managers and senior research project managers interested in managing medium to large scale epidemiologic research studies. To apply for these open positions, please visit see the Kaiser Permanente job website: http://www.kaiserpermanentejobs.org/jobs.aspx and search using one of the following job numbers in the keyword field:

- 554489 - research project manager positions
- 554472 - senior research project manager positions

Please also email your CV to allan.slatkin@kp.org.

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To apply for these open positions, please visit see the Kaiser Permanente job website: http://www.kaiserpermanentejobs.org/jobs.aspx and search using one of the following job numbers in the keyword field:

- 579791 - infectious disease or cancer epidemiologic research positions
- 586259 - vaccine safety and effectiveness epidemiologic research positions

Please also email your CV to allan.slatkin@kp.org.

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- 504498 - Research Associate II
- 586824 - Research Associate IV

Please also email your CV to allan.slatkin@kp.org.

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The deadline for applications to be submitted is October 15, 2017 but the search remains open until the positions are filled. The anticipated start date is July 1, 2018. Informal inquiries may be submitted to episearch@ph.ucla.edu.

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