



EpiMonitor

Epidemiology for Epidemiologists

A monthly update covering people, events, research, and key developments

Editor's Note:

This month, we are presenting a look at the future of public health with an eye toward defining accountability, integrating AI and building the workforce. From there we move on to the issue of public health communications with a piece from our sister publication – *Your Local Epidemiologist*. We've also included highlights from the field such as a surge in Dengue and an Ebola vaccine. Finally, in light of the surge in West Nile virus in mosquitoes in the Las Vegas area, we've reached back into our archives for a piece from the 2016 Zika outbreak.

We continue to provide you with our popular monthly crossword feature, Notes on People, an overview of what we read from the public media, and a listing of upcoming epidemiology events. Finally, don't miss the Job Bank offerings this month. We have some fantastic opportunities advertised on our website.

Did you miss last month's issue? Read it here: <https://tinyurl.com/mryz2nf8> **or here:** <https://tinyurl.com/5dk3debm>

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The Future of Public Health: Defining Accountability, Integrating AI, and Building the Workforce

Author: Madeline Roberts, PhD, MPH

This month, Health Affairs devoted an entire issue to address the question “How might we reimagine what it takes to protect and promote the public’s health?” American public health is a sprawling cacophony of a system comprising over 3,300 state and local health departments, a fact in which lie both opportunity (troves of local data for tailoring interventions) and logistical minefields (to which any public health worker who experienced the pandemic can attest).

Jonathan Samet and Ross Brownson deem the public health system an “optimistic misnomer” and propose a post-pandemic-informed upgrade of Public Health 3.0, the framework developed by Karen DeSalvo and colleagues in 2017. They identify seven elements to move the ball forward for US public health: accountability; politicization and polarization; climate change; equity; data sciences; workforce; and communication.

As an epidemiologist, I have an inordinate appreciation for clearly defined terms. The term “accountability” is ubiquitous in post-pandemic discussions, and rightly so, however, it is not often accompanied by a description of optimal execution within the context of public health. Samet and Brownson offer this fantastic operational definition:

“Ideally, achieving **public health accountability involves tracking a set of agreed-to measures** across a continuum that begins with resources, moves to capacities, and extends to outcomes, and doing so at levels that reach from

local to national, and even global.” This idea of accountability can take the form of data sharing and reporting public health program impacts.”

The backbone of public health is data-driven and perhaps data-driven accountability is one way to build back public trust. One salient example of this kind of accountability that comes to mind is the Office of National Drug Control Policy (ONDCP) [Dashboard](#), which, among other things, provides publicly available data on non-fatal overdoses (a predictor of overdose fatalities) to guide community response to the opioid crisis. This dashboard was created to publicly demonstrate the progress of the ONDCP toward fulfilling federal opioid response plans.

One outside external factor that continues to undermine public health efforts is misinformation and disinformation. Evidence points toward strategies such as audience segmentation for tailored messages, [gain-framing messages](#), and [data-based storytelling](#) as effective communication tools for public health messaging.

Addressing misinformation through community members is also gaining traction. The [iHeard STL tracking and response program for health information](#) from Washington University in St. Louis asks over 200 adults on a weekly basis what they’ve heard that week, then tracks and disseminates the results of how health data is spreading within the community via a [dashboard](#). Similarly, the New York City Department of Health and Mental Hygiene created a [Misinformation Response Unit](#) to monitor for and respond to misinformation by

- Future cont'd on page 3

collaborating with over 100 community partners who were able to couch accurate science in culturally appropriate messaging.

Perhaps the only thing more ubiquitous in public health discussions than accountability is artificial intelligence, and its role in reimagining public health cannot be overlooked. [Monica Bharel and coauthors](#) make the case that integrating novel technology into a field is most effective when it assists in executing daily tasks; they note, “Ultimately, AI, including generative AI, is just a tool, similar to a vaccine or genomic surveillance.” Three core public health capabilities for which AI is well-suited include public communication (i.e., quickly creating a range of public health messages in a number of languages and literacy levels), mitigating administrative burden and thereby optimizing workforce performance, and culling novel insights from data. EpiMonitor has previously reported on the epidemiological challenges of AI [here](#), among them, inaccuracies, perpetuating inequity, and often a lack of *a priori* research questions.

In addition to external stressors such as disinformation and distrust, perhaps the biggest internal challenge to contend with in the effort to reimagine public health is workforce attrition and morale. EpiMonitor has previously written about [the state of the public health workforce](#), which was dwindling prior to the pandemic and desperate in its aftermath. A study from 2017 to 2021 found that by 2021, [49% of all state and local public health workers staff had left](#) their posts, and that turnover was highest among those with the shortest tenure (5 years or less). For younger workers, pay was the number one impetus for considering job separation. Other factors contributing to job separation included job-related stress, burnout, and hostility toward public health workers.

The current moment necessitates innovative approaches to rebuild the public health workforce. [The Rollins Epidemiology Fellowship](#) is a two-year service-learning opportunity for recent MPH graduates, which has successfully contributed to reinvigorating Georgia’s public health workforce. Program leaders attribute the success of the program to:

- commitment from both the Rollins School of Public Health Dean and the Georgia Commissioner of Health,
- offloading the burden of program administration from the public health department to the academic institution,
- providing fellows with both an academic mentor and a site supervisor, and
- consistent funding (in this case largely from philanthropic foundations).

EpiMonitor has previously reported on similar programs partnering academic/research institutions with state and local health departments at both [Yale University](#) and [UC Berkeley](#).

Another innovative approach to governmental public health workforce building comes from the [Minnesota Public Health Corps](#), part of the newly established Public Health AmeriCorps. The initial year demonstrated the program is potentially scalable to ameliorate public health workforce burden and increase capacity, particularly attracting younger and more diverse workers to public health.

Ultimately, reimagining public health involves more than merely reconstructing existing frameworks; it demands dynamic, forward-thinking approaches that address current and emerging challenges. The issue of

accountability, integrated with data-driven practices, holds potential to enhance public trust and program efficacy. Combating misinformation through tailored, culturally sensitive communication strategies delivered by trusted community messengers is essential. Innovative fellowships and programs offer promising solutions to rebuilding a robust public health work force, and utilizing artificial

intelligence to streamline daily operations can optimize workers' time and expertise. And as Samet and Brownson articulate, "By its name and what it does, public health is inherently political." Its reimagining must not shy away from but rather embrace this reality to protect and promote the health of the public effectively.

■

Do you have an idea for an EpiMonitor article?

We love epidemiology and welcome thoughtful and timely contributions to the field. A review of our past newsletters is the best gauge for the type of content we publish.

Please submit your full article as a Word document; submissions should be 800-1000 words. Please include who you are, your current affiliation, and any relevant background, including your qualifications to write on your chosen topic. Conflicts of interest—current or potential, financial or favor—must be disclosed. We read all submissions; if your submission is selected, you will receive an email from our Research Director.

We are also looking to highlight the work of local and state health departments. If you work in this capacity or know of exciting, exceptional work being done in these areas, we want to hear from you! Contact madeline@epimonitor.net to set up an email Q&A, or you can submit for consideration an article about your work.

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Find the Trusted Messengers

H5N1 is a fantastic case study of some lessons I learned during Covid-19

Author: Katelyn Jetelina, PhD, MPH

NOTE: This article was originally printed in our sister publication [Your Local Epidemiologist](#) (YLE) on May 30, 2024

There is no question that the information landscape has dramatically changed in the 21st century. Information is no longer dictated by authorities but networked by peers. This means the old-school approach to information diffusion—a top-down trickle from ivory towers—does not work with many groups. In fact, it sometimes backfires.

This cannot be more apparent than with bird flu (H5N1). Higher-risk people who need the information don't trust the messenger (i.e., the government), and worse, the information is unresponsive to their needs on the ground.

There is really only one answer: Find, equip, partner with, and support trusted messengers.

A new way of thinking

When I started this newsletter a few years ago, I naively thought I was talking to “Joe on the corner”—reaching directly into households. That was until I surveyed YLE readers and saw the audience was “trusted messengers.” These are readers directly involved with their communities—education boards, non-profits, teachers, physicians, businesses, hospitals, scientists, media, and religious leaders—craving actionable, understandable, and useful information quickly to curate further for their networks. Eventually, YLE information would reach “Joe on the corner” through key mediators.

In other words, YLE is simply a small node in a massive grassroots information diffusion network system.



While this network is largely invisible, it's incredibly powerful. Trusted messengers are trusted precisely because they are in the community. They understand pain points, reality, and tradeoffs people must make daily. They refuse to be helicopters—swooping in when they need something and retreating quickly. Rather they are:

1. **Believable**—Genuine, transparent, and motives are clear.
2. **Relatable**—They can hang. Their background, skills, and experiences overlap with the target audience.
3. **Credible**—They bring useful knowledge and skills that others don't have.

This is important to understand not only in relation to COVID-19 but also to literally all other public health topics today—whether it's emergency response or “peacetime” public health challenges.

H5N1 couldn't be a better example

I don't consider H5N1 (bird flu) to be under control. We are flying blind: We don't know how this virus is spreading, where it is spreading, and if it's becoming better at infecting humans.

The major challenge is that those at risk, and with whom we need cooperation to stop H5N1 from becoming a pandemic, trust the government and institutions the least:

- Agriculture workers in rural areas
- Undocumented workers
- Health and wellness groups that drink raw milk

There are many reasons for lack of trust: Their values don't align, there are language barriers,

some have been burned before, public health leaders have vilified them, and some have legitimate concerns about their livelihood being impacted. It shouldn't be shocking that few are volunteering to test for H5N1. Others are even actively going against advice, like buying *more* raw milk.

A core of the response should be finding, equipping, partnering with, and supporting the people they trust the most. This could be their physicians, places of worship, EMTs, unions, or migration centers. Unfortunately, this idea is largely put by the wayside in many conversations I'm a part of. Everyone's focused on the science, which is important, but equally important is the behavioral aspect of information diffusion for effective public health implementation.

I'm afraid we are making the same mistakes we did during Covid-19. (Vaccines don't equal vaccinations.)

The same can be said about really any “peacetime” topic in a world of misinformation

Misinformation was named the top global health threat in the coming years. Vaccines, climate change, women's health, wellness—it's *everywhere*.

But the solutions being proposed are underwhelming. For example, some suggest that all we need to do is find the magic wand—the perfect word or phrase for an awareness campaign—and everyone will suddenly trust the information and get their routine vaccinations.

This line of thinking is a fantasy. We live in a new world where the information landscape has dramatically changed. The problem isn't the information supply—there is way too much. We must work on the demand side—actively finding trusted nodes in communities, understanding how they get their health information, hearing their concerns from a place of empathy, communicating nuance, and 100% leaning into it.

This is hard, messy, complex work—and it's not sexy to fund. But we will continue to spin our wheels until we find and support sustainable models for trusted messengers to translate and

disseminate public health information.

Bottom line

It's beyond time that we change our approach to public health information diffusion: Find, equip, partner with, and support trusted messengers. Not just as H5N1 may become an emergency and not just as an afterthought. But rather as a core part of our work every day. This is where and how public health will make an impact. ■

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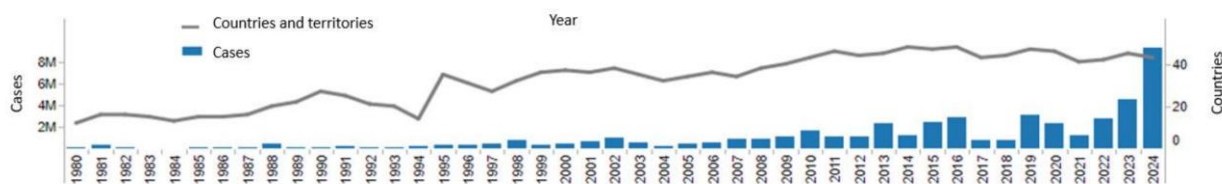
Highlights and Footnotes from the Field: Dengue Surge, Preventive Ebola Vaccine Program, Longitude Prize Awarded

Author: Madeline Roberts, PhD, MPH

Dengue Surge

Pan American Health Organization (PAHO) and the WHO reported that as of June 18 the number of reported [dengue cases in 2024 surpassed annual historical maximums for all previous years](#). The Region of the Americas have reported 9,386,082 cases of dengue to date this year (approximately half of which are laboratory confirmed) compared to 4,617,108 cases recorded in all of 2023. Of 4,630,669 laboratory confirmed cases, 4,529 cases were fatal for a case fatality rate of 0.048%. Virtually all case fatalities in the Region of the Americas occurred in six countries and were highest in Brazil, followed by Argentina, Peru, Paraguay, Colombia, and Ecuador.

Figure 1. Total number of reported cases of dengue and number of countries and territories, 1980 – 2024 (up to EW 23) in the Region of the Americas.



Source: Adapted from the Pan American Health Organization. PLISA Health Information Platform for the Americas, Dengue Indicators Portal. Washington, D.C.: PAHO; 2024 [cited 13 June 2024]. Available from:

[/data/index.php/en/mnu-topics/indicadores-dengue-en.html](https://www3.paho.org/data/index.php/en/mnu-topics/indicadores-dengue-en.html)

<https://www3.paho.org>

The WHO emphasized the need for early diagnosis and proper clinical management of suspected cases of dengue at the primary health care level to mitigate progression to severe forms of dengue and death, as well as to alleviate the burden on hospitals and intensive care units. Community messaging should focus on eliminating mosquito breeding sites, knowing the symptoms of dengue and what to do and where to go when symptoms arise. The WHO also developed a [Global Dengue Surveillance Dashboard](#).

Gavi Launches Preventive Ebola and Other Vaccine Programs in Lower-Income Countries

Gavi, the Vaccine Alliance, introduced four [new vaccines available for lower-income countries via application](#): preventive Ebola, human rabies for post-exposure prophylaxis, multivalent meningococcal conjugate, and hepatitis B birth dose. Gavi's stated mission is to quickly provide impactful vaccines to lower-income nations, its core partners in this work are the World Health Organization, UNICEF, the World Bank and the Bill & Melinda Gates Foundation. The Alliance aims to expand its portfolio in the second half of this decade, contingent on successful fundraising. The move to make a preventive Ebola vaccination normative in the highest-risk countries is powerful and historic. Gavi will also aid lower-income countries in routine administration of human rabies vaccine,

Dr Sania Nishtar, CEO of Gavi stated, "Gavi's ability as an Alliance to protect health and save lives hinges on its ability to ensure vaccines are accessible, as quickly as possible, to who that need them the most. The new programmes...demonstrate the impact of this work. For example, Ebola is a terrible disease that can lay waste to whole communities. In one decade we have been able to progress from having no approved vaccines during a deadly outbreak, to having a global stockpile that has helped cut down cases and deaths – and now vaccines even used preventively to protect those at highest risk."

Preventive Ebola vaccination marks an advance in global health security, enabled by the WHO's Strategic Advisory Group of Experts on Immunization's recent recommendation of two licensed Ebola vaccines. This decision, based on new data on vaccine effectiveness and protection duration, supports the preventive vaccination of high-risk populations, especially frontline health workers. Additionally, the new multivalent meningococcal vaccine, MenFive®, protects against five serogroups and is critical for sub-Saharan Africa. Human rabies vaccines for post-exposure prophylaxis and the hepatitis B birth dose vaccine also address significant public health threats, with Gavi facilitating their broader implementation to save lives and prevent disease spread.

Longitude Prize Awarded for Urinary Tract Infection Point-of-Care Test

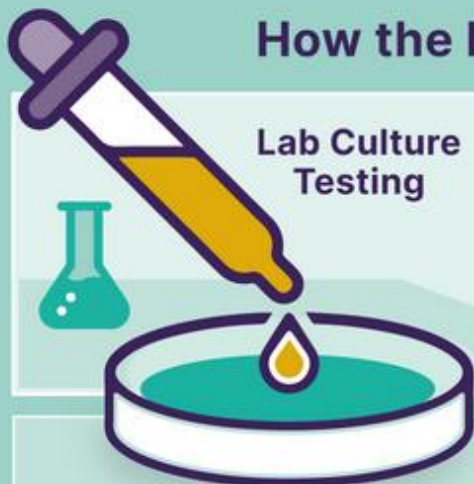
[The Longitude Prize](#) on Antimicrobial Resistance (AMR) awarded £8 million (approximately 10 million US dollars) to [Sysmex Astrego](#) for the PA-100 AST System, a rapid, point-of-care test for urinary tract infections (UTI). The test aims to eliminate the 2-3 day wait for lab test results as well as "just in case" prescribing, which contributes to antibiotic resistance.

In 2014, the challenge was issued to innovators and inventors to develop "an affordable, accurate, rapid and easy-to-use test for bacterial infections to allow health professionals to administer the right antibiotic at the right time." Ten years later, the PA-100 AST System can, from a 400 microliter sample of urine, determine bacterial infection in 15 minutes and accurately identify the appropriate antibiotic for treatment within 45 minutes.

See how the PA-100 AST System works [here](#). View a five-minute clip on the winners, Sysmex Astrego, [here](#).

The inception of the Longitude Prize was in 1714 Britain "for a practical and useful method to determine longitude to an accuracy of half a degree." It is now aimed at ameliorating global health problems and is managed by Challenge Works, a Nesta enterprise.

How the PA-100 AST System compares



Lab Culture Testing



A urine sample is taken by a health worker or medic and sent to a lab - perhaps in a hospital - to be analysed.

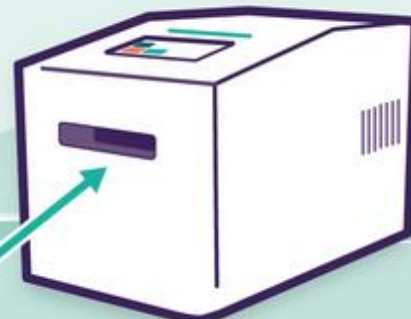
This process can take **two or three days**, but sometimes as many as five.

This is too long for most health workers, medics and patients to wait for treatment.

This testing method can result in **unnecessary antibiotic prescriptions** based on symptoms rather than on a test result.



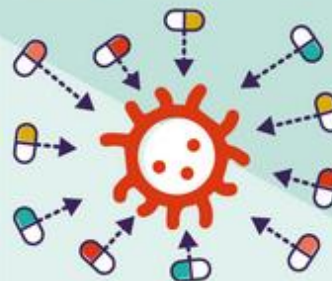
PA-100 AST System



A sample of urine is taken by a health worker or medic and added to a special cartridge.

The cartridge is inserted into an analyser unit small enough for a doctor's office.

The analyser unit identifies whether a bacterial infection is present **within 15 minutes**.



It exposes the bacteria to tiny quantities of antibiotics to see which are **effective at killing the infection**.

Within 30-45 minutes it tells the health worker or medic **the right antibiotic to prescribe**.



Image source: <https://amr.longitudeprize.org/about-the-prize/>

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CDC Report Signals Achievement Of Scientific Consensus On Causal Link Between Zika And Birth Defects

Author: Roger Bernier, PhD, MPH

With reports of West Nile virus surging in mosquitoes around Las Vegas (see our What We're Reading feature this month) we look back to the Zika outbreak from 2016.



Despite an unprecedented surge in cases of microcephaly during the Brazilian outbreak of Zika virus, scientists have been hesitant to draw a direct causal link between the virus and neurological birth defects. Uncertainties about classification and verification of microcephaly cases, a lack of neurological effects from related flaviviruses and the fact that at least some previous Zika outbreaks in the Pacific Islands did not result in any reported cases of microcephaly were all major factors contributing to the cautious approach of the global health community.

However, mounting evidence has recently spurred global public health officials to conclude that Zika infection during pregnancy can in fact cause microcephaly and other neurological defects in the developing fetus. Following a statement by the World Health Organization in late March that there is now "strong scientific consensus that Zika virus is a cause of Guillain-Barre syndrome, microcephaly and other neurological disorders", the Centers for Disease Control published results of a formal review in the *New England Journal of Medicine* (1) concluding definitively that "a causal relationship exists between prenatal Zika infection and microcephaly and other serious brain abnormalities." As CDC director Thomas Frieden told the *New York Times*, "There is no

longer any doubt that Zika causes microcephaly."

The CDC's review, conducted by a panel of experts led by Sonja Rasmussen, examined the latest data from recent outbreaks in Brazil and French Polynesia, including case studies, epidemiologic data, and studies of fetuses from pregnant women infected with Zika virus as well as infants suffering from microcephaly. The panel assessed whether the data satisfied an established set of criteria, known as Shepard's criteria, that were specifically created for determining whether maternal exposure to infectious agents or poisons can be considered a direct cause of birth defects. The authors argued that Zika satisfied the following four of Shepard's criteria, enough to conclusively establish causality:

1. Maternal Zika infection must take place at a critical time in prenatal development.

Substantial evidence from case studies and reports, as well as analysis of the timing of confirmed Zika transmission in different regions of Brazil has shown that severe microcephaly and other brain abnormalities are associated with maternal infection during the first or early second trimester of pregnancy, a critical period for neurological development. Since the current outbreak of Zika virus, Brazil has experienced a dramatic increase in cases of infants born with microcephaly and other brain abnormalities. After reporting an average of 163 cases of per year prior to the outbreak, officials have now confirmed over 1100 cases of microcephaly in Brazil since October alone.

- Zika cont'd on page 12

2. Careful delineation of clinical findings with a specific defect or syndrome rather than a broad range of defects.

Neurological defects in fetuses and infants with presumed prenatal Zika infection have a typical pattern that has come to be referred to as “congenital Zika syndrome”. This syndrome is characterized by severe microcephaly, brain calcifications and other abnormalities, including some that are not commonly seen in cases of microcephaly such as redundant scalp skin.

3. There must be an association between a rare exposure and a rare event.

Microcephaly is historically considered a rare event (6 infants per 10,000 in the US). While infection with Zika virus in Brazil during the outbreak would not be considered rare, CDC’s experts argue that infection of pregnant women traveling to Brazil for a short time during the epidemic should be considered a rare exposure. They cite a number of documented cases of pregnant women briefly traveling to areas experiencing the Zika outbreak, testing positive for Zika antibodies and the subsequent development of fetal brain abnormalities or as evidence of an association between a rare exposure and a rare event. The logic behind this criterion being that the combination of a rare event such as microcephaly with a rare exposure implies causality as there should be an extremely low probability of the two happening together.

4. The association should make biologic sense

There is now a wealth of evidence that the Zika virus is neurotropic. Zika virus can cross the placenta and has been detected in amniotic fluid. Live Zika virus has also been isolated from the brain of a fetus with severe

abnormalities following a confirmed maternal infection at 11 weeks of gestation, while Zika RNA has been found in brains and placenta of infants and fetuses with microcephaly. In addition, a recent study has found that Zika readily infects neural progenitor cells in culture, leading to cell death and decreased growth of the cell population, suggesting a putative mechanism underlying microcephaly.

Further Questions

One important criterion that CDC’s panel of experts did not feel has yet been satisfied is the requirement for two epidemiologic studies of high quality to support the association. While the authors do cite two epidemiologic studies that offer support, one from Brazil and another retrospective analysis on a smaller outbreak in French Polynesia, they felt that limitations, including small sample sizes, in these studies prevented them from satisfying this criterion. Interestingly, the Brazilian study found that fetal abnormalities were detected by ultrasound in 29% (12 out of 42) of pregnant women who tested positive for Zika virus, while authors of the French Polynesia study estimated that only 1% of mothers infected during the first trimester gave birth to infants with microcephaly.

The wide discrepancy in these findings combined with the fact that multiple previous outbreaks in the Pacific Islands resulted in no reported cases of microcephaly demonstrates the critical need for a better understanding of both the true risk to infants born to mothers infected with Zika virus, as well as the additional risk factors that may be involved in adverse birth outcomes. With the outbreak continuing to

- Zika cont'd on page 13

spread across South and Central America, ongoing larger epidemiological studies will hopefully be able to shed light on these pressing questions. For now, the achievement of a global consensus that Zika is linked to neurological birth defects will allow the public health community to shift focus and resources

to important topics related to control and prevention, including mosquito control efforts, improvement of diagnostic methods and the ongoing effort to develop an effective Zika vaccine.

(1) <https://tinyurl.com/zo88kqr> ■

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Epi Crossword Puzzle – June 2024

R You Into Data Management?

Our crossword puzzle was created by by Dr. Richard Dicker—A former CDC employee and not-quite-retired epidemiologist in concert with Lauren Wilner who is in the PhD program at University of Washington School of Public Health and is an instructor for a course on data management. For an online version go to: <https://tinyurl.com/5c4zc34c>

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64					65						66			
67					68						69			

- Crossword Questions cont'd on page 15

Across

1. Lots
6. Type of summer top
10. Captain's place
14. Tennis player Agassi
15. Decorated, as a cake
16. Fortnite company
17. Humanitarian State Dept. agency created by JFK
18. Handles
20. *Common content of a manuscript's Table 1*
22. Related on one's mother's side
23. "Put ___ Happy Face"
24. Chicago trains
27. Archaeological find
30. *It's full of geoms and hex codes*
32. June 6, 1944
35. "___ want for Christmas ..."
37. Novelist Jong
38. Where a Zamboni operates
39. Brewer's or baker's need
41. Coup d' ___
42. Popular 4-vowel starting word in Wordle
44. Jedi foe
45. Oscar ___ Renta
46. Harmonious
48. Egypt's President elected in 2012, ousted in 2013
50. Abbreviation for maximum
51. ___ kwon do
53. ___'s razor (simplest explanation is usually correct)
56. *Poisson or Binomial, for example*
60. *Data analysis processes, or what broke in Atlanta this month*
63. Shrek's princess
64. Name on U.S. Open stadium
65. Vindaloo accompaniment
66. Sound effect artist or type of bladder catheter
67. *Strategy to avoid copying and pasting the same line of code repeatedly*
68. Nobel Peace Prize city
69. Foul moods

Down

1. Home, in Hamburg
2. Occur afterwards
3. "Frankly, Scarlett, I don't give ___"
4. *ID variable*
5. Calm
6. *R's ___ verse*
7. Ones or elevens in Blackjack
8. "Groovy!"
9. Canadian pop-country singer-songwriter
10. Chops
11. Most popular MPH track for readers of this periodical
12. Type of review, for short
13. MPH track that includes reproductive health
19. "All the world's a ___" (Shakespeare)
21. Track event
24. A-list
25. ___ *area estimation*
26. *Statistical analysis software first released in 1985*
28. Martinique et Guadeloupe
29. Something a prospector stakes
31. *Work of either a modeler or a prophet*
32. Roto-Rooter's target
33. Denier's contraction
34. Biscotti flavoring
36. Analogy words
40. Pulsate
43. Up to
47. Betting setting
49. Shoe marks
52. Cone-shaped heaters named after a Sicilian volcano
54. Garlicky mayonnaise
55. French Impressionist
56. ___ *learning model*
57. Type of number
58. "Do or do not. There ___ try" (Yoda)
59. Negative votes
60. *One in Rcolorbrewer*
61. Equal: Prefix
62. National dish of Vietnam

What We're Reading This Month

Editor's Note: All of us are confronted with more material than we can possibly hope to digest each month. However, that doesn't mean that we should miss some of the articles that appear in the public media on topics of interest to the epi community. The EpiMonitor curates a monthly list of some of the best articles we've encountered in the past month. See something you think others would like to read? Please **send** us a link at info@epimonitor.net and we'll include it in the next month.

Public Health Topics

- ◆ Once called Nantucket fever, this nasty tick-borne illness is on the rise (NPR)
<https://tinyurl.com/2635vvef>
- ◆ Real-time data show the air in Louisiana's 'Cancer Alley' is even worse than expected (Grist)
<https://tinyurl.com/8hwt6xsn>
- ◆ An epidemic of scientific fakery threatens to overwhelm publishers (WAPO)
<https://tinyurl.com/ynyu8xpr>
- ◆ Study Uses Powerful New 'Digital Cohort' Method to Understand Vaping Epidemic (UCSD)
<https://tinyurl.com/mr2fu9p6>
- ◆ Precise control balances epidemic mitigation and economic growth (Nature)
<https://tinyurl.com/3449x5rh>
- ◆ A record-breaking number of mosquitoes are carrying West Nile virus around Las Vegas (NBC News)
<https://tinyurl.com/bdhpph92>

Bird Flu

- ◆ Why the New Human Case of Bird Flu Is So Alarming (NYT)
<https://tinyurl.com/mtp924sv>
- ◆ The Dairy Industry Must Act Faster to Keep H5N1 from Starting a Human Epidemic (Scientific American)
<https://tinyurl.com/yc5s2z7x>
- ◆ Bird flu outbreak spreads to mammals in 31 states. At least 21 cats infected. (USA Today)
<https://tinyurl.com/4kscw6s3>

Bird Flu continued

- ◆ Bird flu could survive pasteurization, study finds (WYFI / PBS)
<https://tinyurl.com/4nshr384>
- ◆ "We're flying blind": CDC has 1 million bird flu tests ready, but experts see repeat of COVID missteps (CBS News)
<https://tinyurl.com/2hna7p3s>
- ◆ A Bird-Flu Pandemic in People? Here's What It Might Look Like. (NYT)
<https://tinyurl.com/a99uzccx>

COVID-19

- ◆ 2 Covid Theories (NYT)
<https://tinyurl.com/24cf7ttb>
- ◆ Cannabis use linked to worse COVID-19 outcomes (Univ of Minnesota)
<https://tinyurl.com/yeyuw5fj>
- ◆ 'Unusual' cancers emerged after the pandemic. Doctors ask if COVID is to blame. (WAPO)
<https://tinyurl.com/3yp7r28t>
- ◆ New COVID-19 variant could cause summer surge (USA Today)
<https://tinyurl.com/muatve95>
- ◆ World-First Experiment Reveals Why Some People Never Get COVID-19 (Science Alert)
<https://tinyurl.com/3pptrddb>
- ◆ COVID summer wave grows, especially in West, with new variant LB.1 on the rise (CBS News)
<https://tinyurl.com/tvb34f6k>
- ◆ Coronavirus FAQ: Is the 6-foot rule debunked? Or does distance still protect you? (NPR)
<https://tinyurl.com/bd5wc4cz>

Notes on People

Do you have news about yourself, a colleague, or a student?

Please help The Epidemiology Monitor keep the community informed by sending relevant news to us at this address for inclusion in our next issue. people@epimonitor.net



Awarded: The American Medical Association (AMA) presented **Michael Osterholm**, Ph.D., MPH, with the AMA Award for Outstanding Government Service. The director of the Center for Infectious Disease Research and Policy (CIDRAP) at the University of Minnesota, Osterholm is a renowned epidemiologist who warned for years that the United States was ill-prepared for a pandemic. He was appointed to President-elect Joe Biden's COVID-19 transition advisory board, and previously served as science envoy for health security on behalf of the U.S. Department of State.



Awarded: Principal scientist **Gertjan Medema** has been awarded the Lee Kuan Yew Water Prize 2024 for his groundbreaking research and significant contributions in the field of sewage epidemiology for virus detection in wastewater during the COVID-19 pandemic. With the emergence of COVID-19 in early 2020, Gertjan Medema and his colleagues recognized the need for early detection and monitoring, and began collecting sewage samples at nine locations in the Netherlands to test for the SARS-CoV-2 virus. The results were promising as traces of the virus were detected in the sewage of several cities before they were officially reported.



Named: **Benika Dixon**, an assistant professor at Texas A&M University School of Public Health, has been named a Kavli Fellow. This prestigious fellowship, awarded annually by the National Academy of Sciences (NAS), recognizes the brightest young scientists who are 45 years old or younger. Her research focuses on the mental and physical health implications of environmental exposures, hazards and disasters on vulnerable populations. Her current work centers specifically on inmates in the Texas prison system



Named: Utrecht University and UMC Utrecht have announced the appointment of **Patricia Bruijning-Verhagen** as professor of vaccination and infection control epidemiology, effective June 1, 2024. This position will enable Patricia to continue her work in designing and evaluating optimal infection prevention policies through vaccination and other innovative strategies. Her appointment comes at a crucial time, as the world faces the dual challenge of emerging infectious diseases and an expanding portfolio of vaccines.

Notes on People

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Named: Nolan Wages, Ph.D., a professor in Virginia Commonwealth University's Department of Biostatistics in the School of Population Health, has been named a fellow of the Society for Clinical Trials. For more than a decade, Wages has been deeply involved in a national research effort aimed at revolutionizing how early phase oncology trials are conducted. His team has not only developed novel methods but also ensured their successful implementation into actual trials, where they can improve patient outcomes.



Passed: Richard M. Simon former NIH biostatistician passed away on May 9, 2024. Richard was born in St. Louis and graduated from U-City High school, where he found and mastered a love of mathematics, cultivated by a 7th grade math teacher. Richard later went to Washington University where he received a Doctoral degree in Applied Mathematics and Computer Science. After a 2-year stint in the Public Health Service in Washington DC, Rich began working at the National Institute of Health, where he spent his entire career. As a biostatistician, Rich became associate director of the Division of Cancer Treatment and Diagnosis, director of the Biometric Research Program, and chief of the Computational and Systems Biology Branch. Rich pioneered many of the statistical methods in cancer clinical trials used today.

<https://tinyurl.com/nhae3sdv>



Passed: Biostatistician Dr. **James "Jim" Mason Harper**, died at the age of 71 on May 23rd, 2024, after sixteen years of living bravely with PLS. Jim earned his Ph.D in Biostatistics from the University of Pittsburgh, where he met his wife, Jackie. He spent his career with contract research organizations, supporting the development and approval of many new drugs to treat different diseases; he was proud to have been critical to the approval of the first drug to treat ALS, which he eventually benefited from himself. <https://tinyurl.com/yu5hpydr>

Near Term Epidemiology Event Calendar

Every December The Epidemiology Monitor dedicates that issue to a calendar of events for the upcoming year. However that often means we don't have full information for events later in the upcoming year. Thus an online copy exists on our website that is updated regularly.

To view the full year please go to: <http://www.epimonitor.net/Events> The events that we are aware of for the next month follow below.

July 2024

- July 1-4 <https://tinyurl.com/ykdakije>
Short Course: Causal Inference in Epidemiology: Concepts and Methods / University of Bristol / Virtual
- July 1-12 <https://bit.ly/2Kxw9QD>
Short Course: Epidemiological Evaluation of Vaccines: Efficacy, Safety and Policy / London School of Health & Tropical Medicine / London, England
- July 8 – Aug 2 <http://bit.ly/2LSdUmP>
Summer Program: 8th Annual Summer Institute in Statistics for Clinical & Epidemiological Research (SISCER) / University of Washington / Virtual
- July 8-26 <https://bit.ly/2QnqkHv>
Summer Program: 59th Summer Session in Epidemiology / University of Michigan / Ann Arbor, MI
- July 11-12 <http://tinyurl.com/26sm9fs8>
Short Course: Further Survival Analysis / University of Bristol / Virtual
- July 15-31 <https://tinyurl.com/4j5mr5ru>
Summer Program: 13th Annual Summer Institute in Statistics and Modeling in Infectious Diseases (SISMID) / SISMID & Emory University / Atlanta, GA
- July 21-26 <https://tinyurl.com/3jr6kss9>
Conference: Integrative Molecular Epidemiology Workshop / American Association for Cancer Research (AACR) / Philadelphia, PA
- July 22-26 <https://tinyurl.com/2s2e4vhx>
Conference: 25th Annual International AIDS Conference / International AIDS Society / Munich, Germany
- July 22-26 <http://bit.ly/38Agng0>
Summer Program: 31st International Summer School of Epidemiology at Ulm University / Ulm University & University of North Carolina / Ulm, Germany
- July 23-36 <https://bit.ly/3GC1mtG>
Conference: NACCHO 360 Conference / NACCHO / Detroit, MI
- July TBD <http://bit.ly/3mOIFtn>
Summer Program: 8th Annual Summer Institute in Statistics for Big Data (SISBID) / University of Washington / Virtual

- Near Term Epi Calendar cont'd on page 22

August 2024

August 3-8 <https://tinyurl.com/ewaekf3w>

Conference: JSM 2024 (Joint Statistics Meeting) / American Statistical Association / Portland, OR

August 15-16 <https://tinyurl.com/2yz5dchm>

Conference: 7th International Conference on Public Health (ICOPH 2024) / Multiple / Bangkok, Thailand & Virtual

August 24-28 <https://bit.ly/3mXQ4ge>

Conference: ISPE Annual Conference / ISPE / Berlin, Germany

August 25-28 <https://tinyurl.com/4b75uxb9>

Conference: International Society of Environmental Epidemiology 36th Annual Conference / ISEE / Santiago, Chile

August TBD <http://tinyurl.com/y7932kpb>

Short Course: Joint Models for Longitudinal and Survival Data / Erasmus MC / Rotterdam, The Netherlands

August TBD <http://tinyurl.com/4vsbdekd>

Short Course: Advances in Clinical Epidemiology / Erasmus MC / Rotterdam, The Netherlands

August TBD <http://tinyurl.com/3ptm7rxk>

Short Course: Data Science in Epidemiology / Erasmus MC / Rotterdam, The Netherlands

August TBD <http://tinyurl.com/2x6h3kt9>

Short Course: Methods to Investigate Public Health Interventions / Erasmus MC / Rotterdam, The Netherlands

August TBD <http://tinyurl.com/murur9wb>

Short Course: Practice of Epidemiologic Analysis / Erasmus MC / Rotterdam, The Netherlands

August TBD <http://tinyurl.com/4sre3yrt>

Short Course: Introduction to Global Public Health / Erasmus MC / Rotterdam, The Netherlands

August TBD <https://bit.ly/38pSFIY>

Summer Program: Erasmus MC Summer Program / Erasmus MC / Rotterdam, The Netherlands

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or on Twitter at: @theEpimonitor

or on Instagram at: @epimonitor

Post-Doctoral Research Fellow, Cardiovascular Epidemiology

The Department of Research and Evaluation (R&E) of Kaiser Permanente Southern California (KPSC) is seeking a Post-Doctoral Research Fellow interested in cardiovascular epidemiology.

KPSC is a multidisciplinary research environment consisting of epidemiologists, clinician researchers, behavior and implementation scientists, and data scientists. Scientists in the Department of R&E conduct research involving large, diverse populations, providing timely evidence to decision-makers and the public. The cardiovascular disease research team has expertise and experience in performing a vast array of population-based cardiovascular disease research and pharmacoepidemiology studies, applying advanced analytic methods. Projects include large National Institutes of Health funded multisite cardiovascular epidemiologic studies on prevention, incidence, treatment, medication adherence, comparative effectiveness/safety, and outcomes research using real-world electronic health record data. The overarching goal of these studies is to use our large membership and extensive data to generate results that will improve care and contribute to scientific knowledge about cardiovascular outcomes.

The research team collaborates with partners from government, industry, academia, and other health care systems. This position will provide mentored experience in conducting research, proposal development and scientific publication, designed to prepare the incumbent for a productive career as an independent researcher. The fellow will be encouraged to lead their own research projects, write grants, communicate results at national and international conferences, and publish scientific findings.

Essential Responsibilities:

- ▶ Designs, develops and directs well-defined research with supervision from a R&E Research Scientist.
- ▶ Prepares grant proposals and publications independently and collaboratively.
- ▶ Provides consultation and direction to programmers/analysts with regard to data management and analysis.
- ▶ May perform chart reviews or provide direction to research support staff performing these tasks.
- ▶ Presents study findings at scientific meetings.
- ▶ Participates in R&E department meetings and projects as appropriate.

Preferred Qualifications:

- ▶ Doctoral degree (Ph.D., Dr.P.H., Sc.D.) in epidemiology, preferably in pharmacoepidemiology or cardiovascular disease epidemiology, health economics and outcomes research, health services research, or a clinical doctoral degree (M.D., Pharm.D.) + master's degree with formal research training in epidemiology and/or biostatistics.
- ▶ Track record of publication in the peer-reviewed literature.
- ▶ Competent in advanced research methods, including statistical techniques and study design commonly used in epidemiologic research or related fields.
- ▶ Experience with large electronic health records or claims databases.
- ▶ Strong communication and analytic skills.

A description of the Department of Research & Evaluation is available on the web at <http://kp.org/research>.

It is home to over 40 research scientists, post-doctoral fellows and clinician investigators and over 400 support staff. The Department is located in Pasadena, California, a community of 140,000 residents and the home of the California Institute of Technology, the Rose Bowl, the Jet Propulsion Lab, and other historical and cultural sites. Information about the community can be found at <https://www.visitpasadena.com>.

KPSC is an Equal Opportunity/Affirmative Action Employer and offers a comprehensive compensation package, including employer-paid medical, dental and coverage for eligible dependents. Competitive wages, generous paid time-off and a comprehensive retirement plan are just part of the exceptional benefits offered to Kaiser Permanente employees. For immediate consideration, interested candidates should submit their letter of interest and CV online at www.kp.org/careers (job number 1278080). Inquiries may be directed to Dr. Kristi Reynolds, Director of Epidemiologic Research (email: <mailto:Angela.X.Tedford@kp.org>). Principals only

The Division of Public Health Sciences Postdoctoral Research Fellowship in Public Health

Seeking postdoctoral fellowship applicants with an interest in cancer prevention and control to join diverse team of multidisciplinary researchers in the Division of Public Health Sciences and Siteman Cancer Center at Washington University in St. Louis. We welcome applicants from a range of disciplines. Our multidisciplinary faculty conducts world-leading research on a wide range of health issues and leads community education and outreach to prevent cancer and other diseases, promote population health, and improve quality and access to health care in Missouri and beyond. Engaging populations underrepresented in research and addressing cancer disparities are priorities in the work we do.

The Division has a diverse range of NIH funded projects and faculty mentors—to see the full range, consult our website.

While we welcome applicants in any relevant research area, these are the highest priorities for the Training Program:

- Cancer Disparities and Health Equity
- Community-based and Community-engaged Research
- Cancer Epidemiology
- Implementation Science
- Shared Decision Making
- Social Determinants of Health

Postdoc positions are partially funded by a T32 grant (T32CA190194) from the NCI, with annual stipend starting at \$53,760, depending on experience, for up to 3 years.

Support for tuition, books, software, conference travel, and research is available.

Washington University offers excellent benefits.

Our vibrant cohorts of postdoctoral fellows will find dedicated mentoring and career development. Our trainees have a strong record of funding and finding faculty positions following their postdoc. You'll find ample opportunities to collaborate with investigators from a range of disciplines.



 **SITEMAN**
CANCER CENTER

 Washington
University in St. Louis
SCHOOL OF MEDICINE

 BJC HealthCare

Eligibility and Application Instructions

Eligibility: PhD, DrPH, MD, or other doctoral degree in a public health related discipline, or a doctoral degree in another discipline with an interest in public health research. T32 Applicants are limited to United States citizens, non-citizen nationals, or must be lawfully admitted for permanent residence and possess registration requirements.

We particularly welcome applications from first generation college graduates and other backgrounds underrepresented in biomedical sciences. Washington University School of Medicine is an equal opportunity employer.

Send inquiries to: Dr. Aimee James and Dr. Graham Colditz, Training Directors, at aimeejames@wustl.edu

To apply: send an application, cover letter, curriculum vitae, and professional reference list by email to PIIspostdoc@wustl.edu. Applications are considered on a rolling basis.

To learn more about the Division and our faculty, please visit: <https://publichealthsciences.wustl.edu/>

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