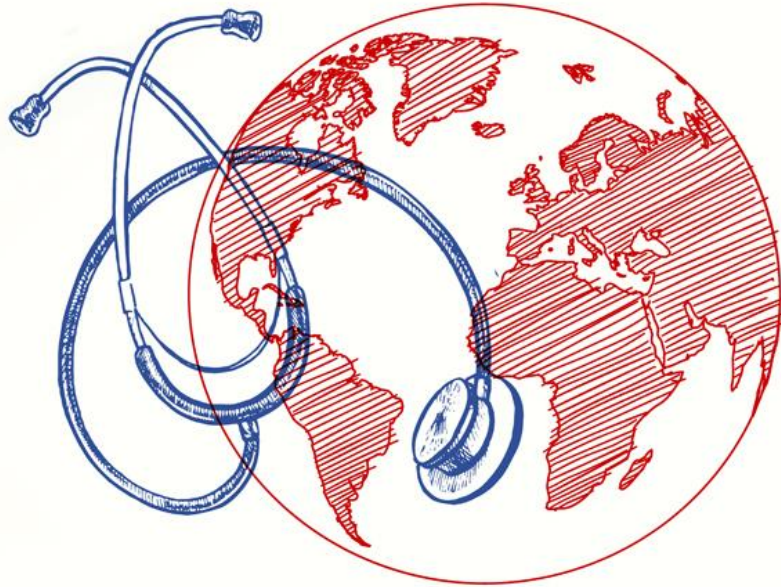


Global Health Cast 76

August 27, 2024



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What we talk about today

- **Significant link found between heme iron, found in red meat and other animal products, and type 2 diabetes risk**
- **Pre-clinical study shows the potential of Manuka honey as a nutraceutical for breast cancer**
- **The first epinephrine nasal spray approved by the US FDA for emergency treatment of anaphylaxis**
- **Mpox update**
- **H5 update**
- **Effectiveness of Ebola vaccine in DRC**

Significant link found between heme iron, found in red meat and other animal products, and type 2 diabetes risk



Higher intake of heme iron, the type found in red meat and other animal products—as opposed to non-heme iron, found mostly in plant-based foods—was associated with a higher risk of developing type 2 diabetes in a new study led by researchers at Harvard T.H. Chan School of Public Health.

“Compared to prior studies that relied solely on epidemiological data, we integrated multiple layers of information, including epidemiological data, conventional metabolic biomarkers, and cutting-edge metabolomics,” said lead author Fenglei Wang, research associate in the Department of Nutrition.

Pre clinical study shows the potential of Manuka honey as a nutraceutical for breast cancer

UCLA investigators found Manuka honey contains compounds that can help reduce tumor growth in preclinical models and is less toxic than more traditional cancer treatments



- Manuka honey significantly reduced tumor growth in mice with ER-positive breast cancer cells by 84% without affecting normal breast cells or causing major side effects.
- Higher concentrations of Manuka honey led to a greater reduction in cancer cell growth.
- Manuka honey reduced levels of signaling pathways that are upregulated in cancer such as AMPK/AKT/mTOR and STAT3, which are involved in tumor cell growth and survival.
- Manuka honey reduced the proliferation of cancer cells but did not affect the growth of normal human mammary epithelial cells,

The first epinephrine nasal spray approved by the US FDA for emergency treatment of anaphylaxis

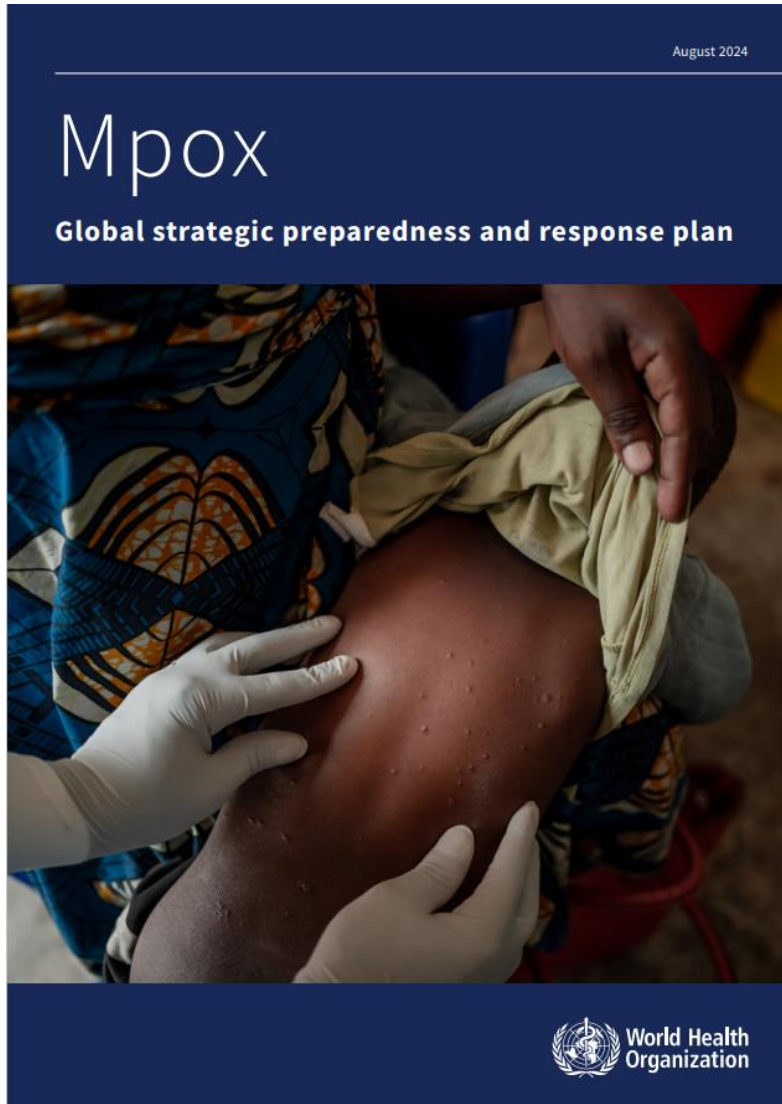


Neffy's approval is based on four studies in 175 healthy adults, without anaphylaxis, that measured the epinephrine concentrations in the blood following administration of neffy or approved epinephrine injection products.

Neffy is a single dose nasal spray administered into one nostril. As with epinephrine injection products, a second dose (using a new nasal spray to administer neffy in the same nostril) may be given if there is no improvement in symptoms or symptoms worsen.

Patients may need to seek emergency medical assistance for close monitoring of the anaphylactic episode and in the event further treatment is required.

Mpox – News



[draft_sprp_mpox_2024.pdf \(who.int\)](#)

Orthopoxviruses

- Variola
- Cowpox
- Vaccinia
- MPox

Non-orthopoxviruses *causing human disease:*

- Parapoxviruses (including Orf virus: sheep, goat, cattle)
- Molluscum contagiosum
- Yatapoxvirus

Non-orthopox Parapoxviruses causing animal diseases

- Bovine-Papular-Stomatitis-Virus.
- Paravoxvirus of red deer in Neuseeland.
- Pseudocowpox-Virus.
- Auzduk-Disease-Virus.
- Camel-Contagious-Ecthyma-Virus.
- Chamois-Contagious-Ecthyma-Virus.
- Sealpox-Virus.

H5 update: Humans

National flu surveillance (since February 25, 2024)

Specimens tested

43,000+

specimens tested that would have detected influenza A(H5) or other novel influenza viruses

Targeted H5 surveillance (since March 24, 2024)

Total people monitored	Total people tested	Human cases
4,500+ after exposure to infected animals	230+ after exposure to infected animals	13 total reported human cases in the United States

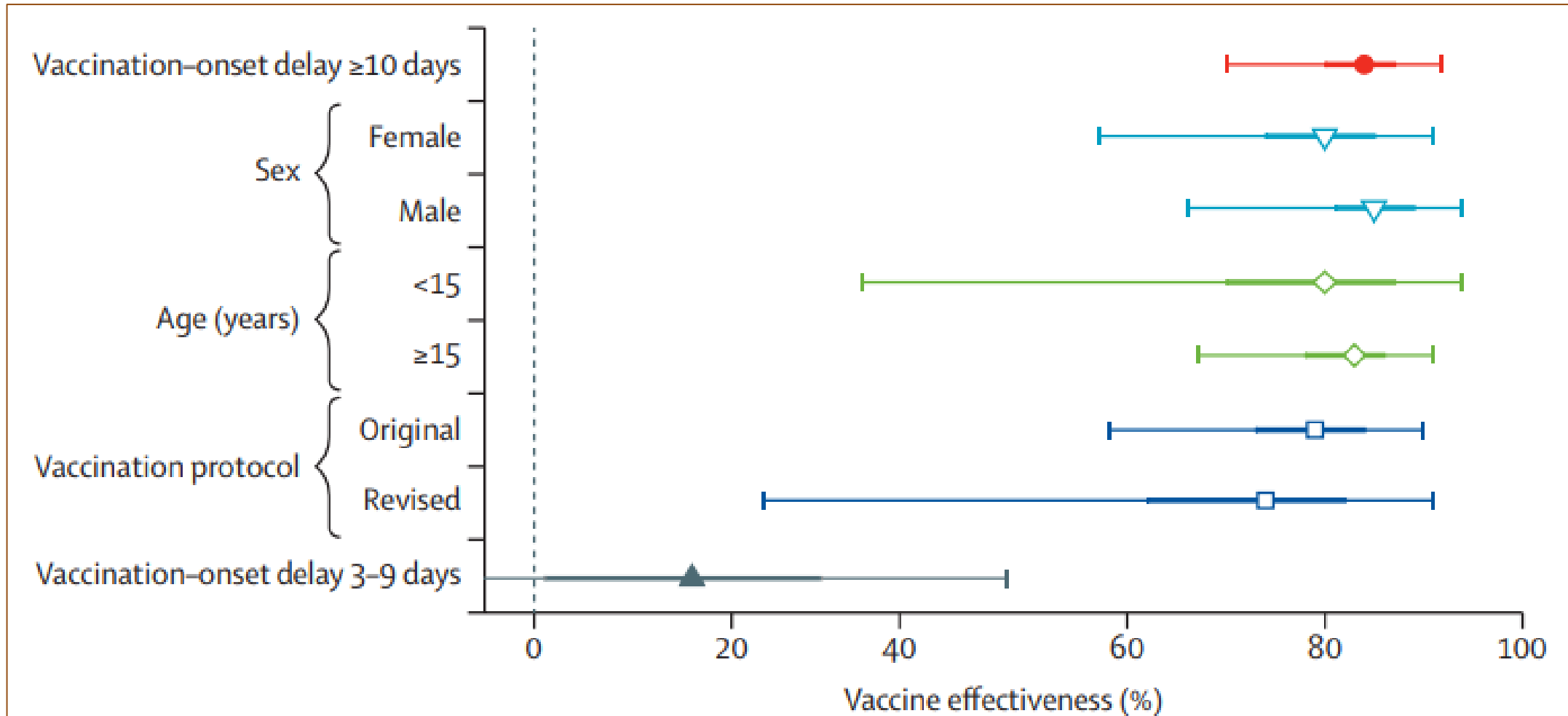
H5 update: Birds

Wild Birds Detected	Poultry Affected	Dairy Herds Affected
9,773 as of 8/20/2024 Full Report >	100,713,651 as of 8/22/2024 Full Report >	191 as of 8/15/2024 Full Report >
Jurisdictions with Bird Flu in Wild Birds	States with Outbreaks in Poultry	States with Outbreaks in Dairy Cows
51	48	13

VEs of rVSV-ZEBOV vaccine against Ebola

- ▶ **Background:** Previous phase 3 trial (n=11841) efficacy RSVV-ZEBOV; **cluster-randomised design**
 - ▶ identification of exposed confirmed cases of Ebola virus disease
 - ▶ Single dose of rVSV-ZEBOV: **VEy: 100%** [95% CI 69–100]).
 - ▶ Analyses (2018–20 Ebola outbreak in DRC): **VEs 98%** (95% CI 96–99)
- ▶ **Methods: Retrospective test-negative** analysis on VEs of rVSV-ZEBOV
 - ▶ Vaccination during 2018–20 epidemic in DRC
 - ▶ Data on suspected Ebola virus disease cases collected from Ebola treatment centres.
 - ▶ Inclusion: Subjects with Ebola virus RT-PCR result, available key data, eligible for vaccination during the outbreak, and had symptom onset aligning with the period in which a ring-vaccination protocol was in use.
 - ▶ Individuals confirmed by RT-PCR to be Ebola virus disease-positive (defined as a case) matched to one individual negative for Ebola virus disease (control) by sex, age, health zone, and month of symptom onset.
 - ▶ VEs estimated from OR of being vaccinated (≥ 10 days before symptom onset) versus being unvaccinated among cases and controls, after adjusting for the matching factors.

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At the Supermarket



At the Movies



At the Airport



Same bottle different value.

Next time you doubt your worth, maybe
you are in the wrong place