NORTHEAST
BUSINESS GROUP ON HEALTH

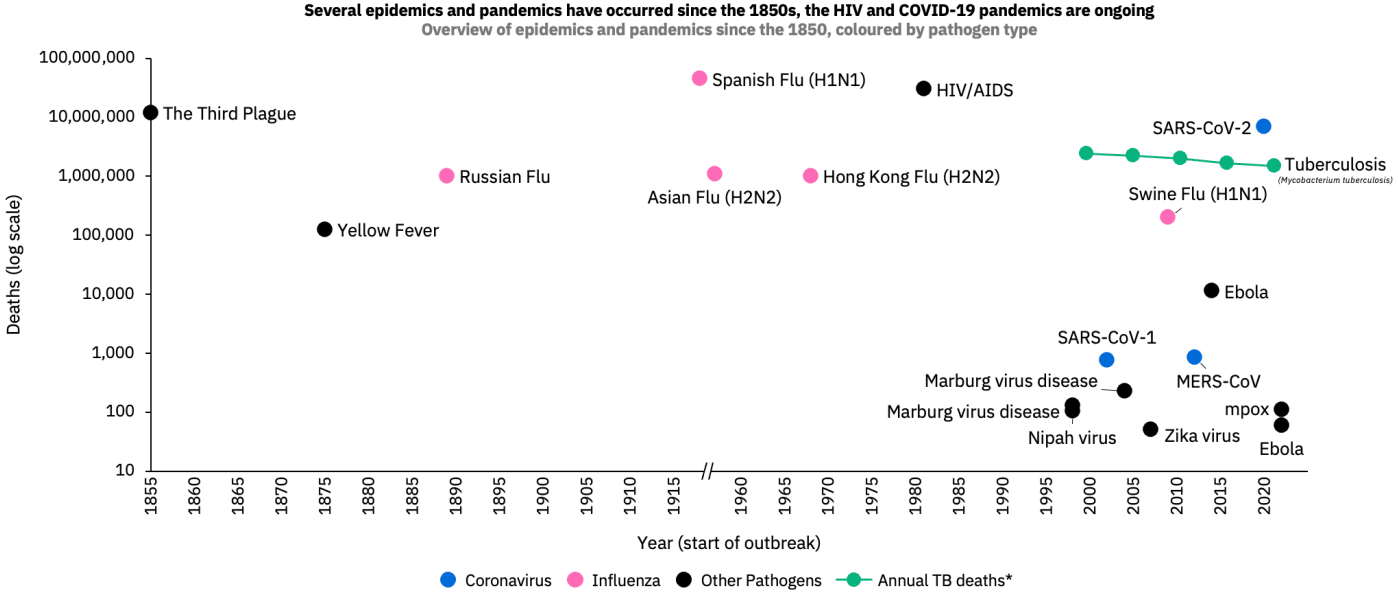
MONDAYS WITH DR MARK & DR MICHAEL

Monday, March 10, 2025 | 1:00 – 2:00PM

TOPIC #40
How is your Pandemic Preparedness?

HP2030 HEALTHY PEOPLE 2030 CHAMPION

When Will We Have Another Pandemic?



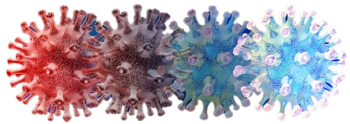
- Models predict the annual probability of a pandemic on the scale of COVID-19 in any given year to be between 2.5-3.3% which means a 47-57% chance of another global pandemic as deadly as COVID in the next 25 years[1]
- The frequency and severity of spillover infectious disease – directly from wildlife host to humans – is steadily increasing

1. https://www.cgdev.org/blog/the-next-pandemic-could-cause-as-much-loss-as-covid-but-deadlier

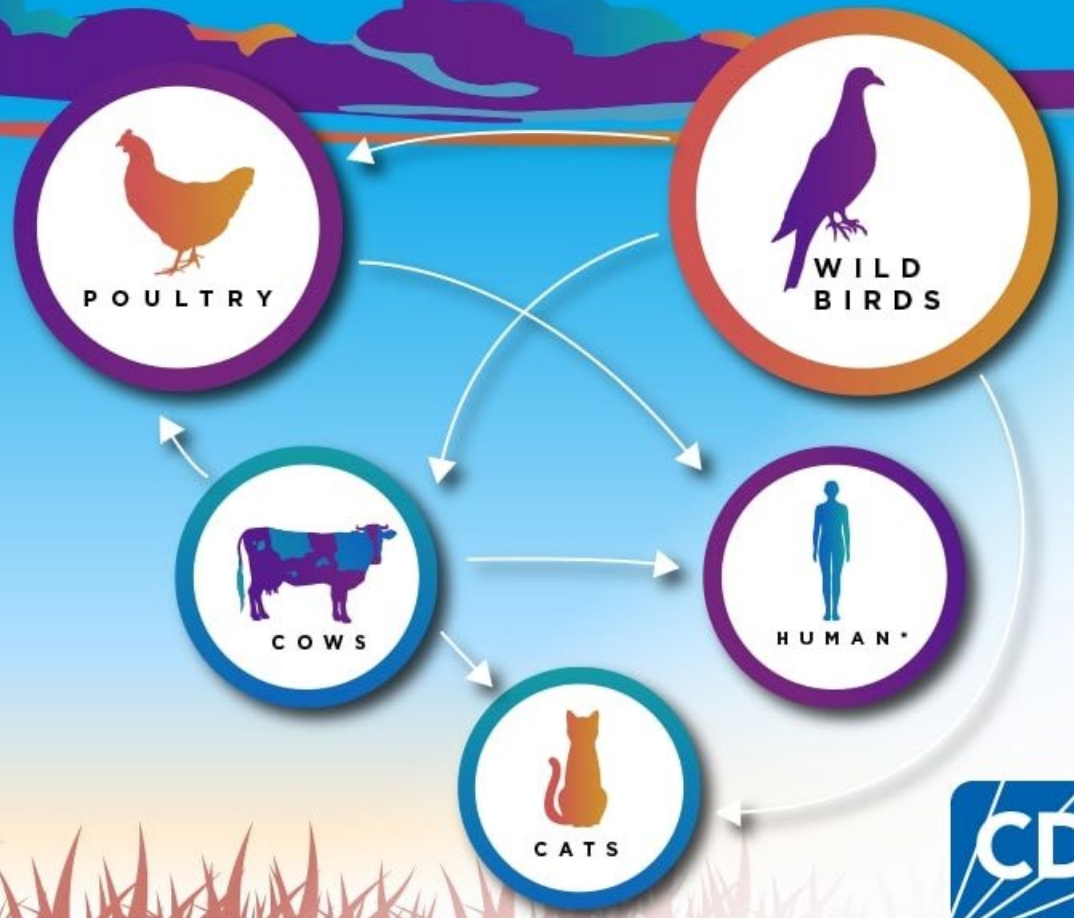
So, What Did We Learn From the COVID Pandemic?

- That our pandemic response playbooks were of limited use – each pandemic is unique
- We learned a lot as the pandemic progressed:
  - Droplet vs airborne
  - Masks – from cloth to N95
  - Importance of HVAC systems
  - Value (and divisiveness) of vaccines
  - Approaches to work, school and travel
  - Healthcare capacity and response
  - Virus spread and mutations

Pandemic Plans Need to be Dynamic/Adaptable



H5N1 Bird Flu
How is it Spreading?



*No human-to-human spread of H5N1 has been detected during the current outbreak in dairy cows.

CDC

Cases in the U.S.	Deaths in U.S.
70 cases	**1** cases

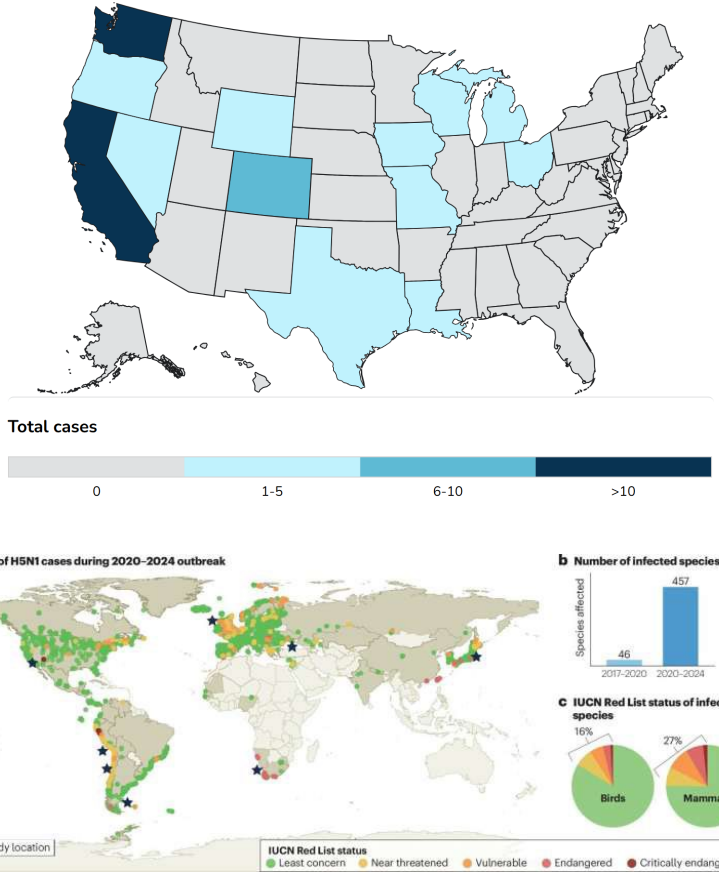
National flu surveillance (since February 25, 2024)

Specimens tested	Human cases
145,493+ specimens tested that would have detected influenza A(H5) or other novel influenza viruses	**6** case detected through national flu surveillance

Targeted H5 surveillance (since March 24, 2024)

Total people monitored	Total people tested	Human cases
15,300+ after exposure to infected animals	**840+** after exposure to infected animals	**64** cases detected through targeted H5 surveillance

Cases	Exposure Source
41	Dairy Herds (Cattle)*
24	Poultry Farms and Culling Operations*
2	Other Animal Exposure†
3	Exposure Source Unknown‡



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H5N1 D1.1

- H5N1 D1.1 is a subtype of the avian influenza virus that has been circulating in North America since late 2023. It is a reassortment virus, meaning that it has genes from different sources.

- Key Features:
  - Subtype: H5N1
  - Genotype: D1.1
  - Origin: North American wild birds
  - Mutation: PB2 E627K, which may enhance replication in mammals and in people

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Key Messages

- Current H5N1 Risk:
  - General population – **Low**
  - Those in contact with potentially infected animals or contaminated surfaces or fluids – **Moderate to High**

- Reducing your risk from H5N1
  - Keep a distance from wild birds and other animals, and don't touch, feed, or handle wild animals
  - Avoid contact with sick or infected livestock
  - Avoid contact with surfaces that appear contaminated with feces
  - Cook food thoroughly
    - Cook poultry, eggs, and beef to an internal temperature of 165°F
    - Only consume pasteurized dairy products
  - Wash your hands
    - Wash your hands thoroughly and often, especially after contact with animals or their environments
    - Use hand sanitizer containing at least 60% alcohol if soap and water aren't available
  - Get a flu shot – doesn’t protect you against H5N1 but helps stop spread of other influenza viruses!

Employer Actions - H5N1

- Monitor the situation:
  - **CDC** https://www.cdc.gov/bird-flu/situation-summary/index.html
  - **WHO** https://www.who.int/publications/m/item/cumulative-number-of-confirmed-human-cases-for-avian-influenza-a(h5n1)-reported-to-who--2003-2025--20-january-2025
  - **European Centre for Disease Prevention and Control** https://www.ecdc.europa.eu/en/publications-data/avian-influenza-overview-september-december-2024
  - **Private organizations**: ISOS, Shoreland, Airfinity, Promed and CIDRAP
- High-Risk Jobs:
  - Risk assessments; Engineering controls; Personal protective equipment; Surveillance of employees and animals; vaccinations
- Employee education
- Supporting Flu and other vaccinations

Measles

Key facts:

- Highly infectious; droplet and airborne transmission
- Measles can survive in air and on surfaces for 2 hrs.
- Complications include pneumonia, encephalitis, SSPE
- Before vaccine was introduced, ~48,000 persons were infected and 400 – 500 died each year in the US
- Measles has been increasing internationally with highest recent case counts in Pakistan, Thailand, India, Ethiopia, Russia
- Although measles was declared eliminated in US in 2000, outbreaks continue to occur due to international travelers
- Outbreaks tend to occur among unvaccinated persons
- Two doses of vaccine provide 97% protection

U.S. Cases in 2025

Total Cases: 222

Age
- Under 5 years: **76 (34%)**
- 5-19 years: **99 (45%)**
- 20+ years: **40 (18%)**
- Age unknown: **7 (3%)**

Vaccination Status
- Unvaccinated or Unknown: **94%**
- One MMR dose: **4%**
- Two MMR doses: **2%**

Hospitalizations:
- **38** cases **(17%)**
- **2** deaths

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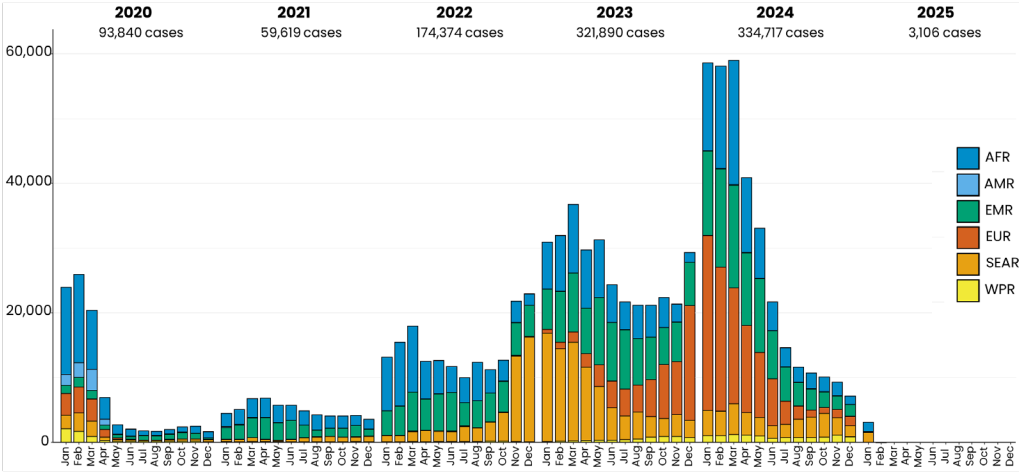
Annual US Measles Cases, 2016 to Present

Year	Number of Cases	No. States w/ Cases	No. of Outbreaks	Range of Cases/ Outbreak
2016	86	19	4	6 to 32 cases
2017	120	17	6	3 to 75 cases
2018	381	28	17	1 to 124 cases
2019	1274	32	25	3 to 641 cases
2020	13	8	1	5 to 5 cases
2021	49	5	3	9 to 22 cases
2022	121	6	5	4 to 86 cases
2023	59	20	4	5 to 10 cases
2024	285	33	16	3 to 58 cases
2025	222	12	3	3 to 201 cases

Measles Case Distribution by Month and WHO Region (2020-2025)



Africa

- Mystery Disease DRC
  - At least 1,318 people have exhibited symptoms, and 53 people have died as of Feb. 25
  - May be related to poisoning or have multiple causes
  - May by aggravated by malaria
- mPOX
  - Since January 1, 2024, the Democratic Republic of the Congo and several neighboring countries in Central and Eastern Africa have confirmed more than 21,000 mpox cases and more than 65 deaths
- Sudan Virus – Uganda
  - Type of Ebola
- Marburg virus – Tanzania
  - 10 cases have been reported including two confirmed and eight probable cases. All have resulted in death.

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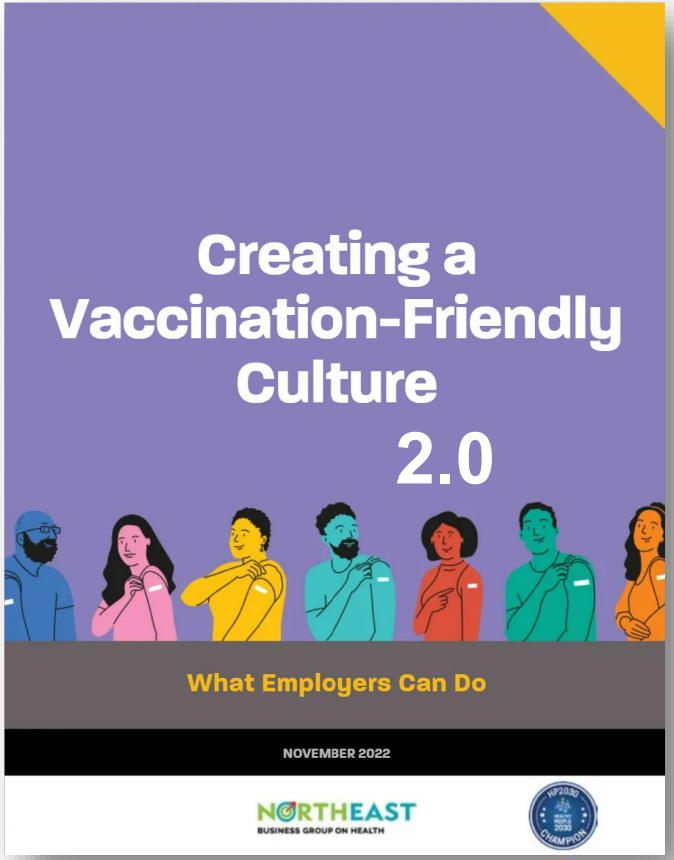
Importance & Safety of Vaccines

- Value of vaccines:
  - Prevent nearly 6MM deaths annually and have saved 154MM lives over the past 50 years
  - They significantly reduce infant mortality, cutting global rates by 40%
  - Eradicated or nearly eliminated diseases like smallpox and polio, and reducing the prevalence of others such as measles and diphtheria
  - Beyond saving lives, vaccines improve quality of life by preventing long-term disabilities and chronic health issues associated with infectious diseases
  - Every $1 spent saves $52
- Safety of vaccines:
  - Proven to be very safe – minor reactions are common but severe adverse reactions are rare and significantly less than disease related adverse events
  - Vaccines **do not** cause Autism or Sudden Infant Death Syndrome



NEBGH to update and release in June 2025!

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Questions

Upcoming NEBGH events:

- **March 19** – Colorectal Cancer Screening and Support: Addressing Challenges for Young Patients
- **March 24 –** Mondays with Dr. Mark & Dr. Michael
- **March 27**– Women's Health Conference
- **April 2** – Future Impact of GLP-1s: Employer Educational Dinner
- **May 8 -** First 100 Days of the Trump Administration: Implications for Employers.
- **June 5** – 14th Annual Health & Wellness Benefits Conference