

► PRESIDENT'S MESSAGE



CDR Anna Khan,
MA, REHS/RS

The Promise of Artificial Intelligence in the Field of Environmental Health

I love science fiction and as a girl growing up watching the original *Star Trek* TV show, I often wondered if we would have some of those amazing gadgets in real life. I remember in the early 1980s how thrilled my dad was to get the first mobile phone, the video game *Pong*, and of course, the microwave. Fast forward to the present, I feel I am living on the cusp of amazing technological developments, especially in the morning when I ask Alexa to turn on the lights, tell me the day's weather and news, or to add shampoo to my Amazon shopping list.

This train of thought led me to think about how technology impacts our workforce, particularly artificial intelligence (AI) and how we will perform daily tasks. According to PwC (2025), AI could potentially contribute \$15.7 trillion to the global economy and provide a 26% boost to the GDP (gross domestic product) for local economies by 2030. When I talk about the transformative impact of AI on workforce development, please note it is not a personal endorsement of AI, but rather my thoughts based on models and projections across most industries that predict the transformative impact AI will have on workforce development. This technology could be like the advent of the internet and its impact on our day-to-day lives. Chris Hyzy, chief investment officer at Merrill and Bank of America Private Bank, stated, "AI should transform the global economy as electricity and the steam engine did in their own time" (Bank of America Private Bank, 2025).

The ability to quickly generate content using AI will allow public health agencies to respond rapidly during crises.

I think that we should look at AI, especially generative AI, and how it can support our work in public health. Generative AI could significantly enhance the efficiency and accuracy of food inspection processes for environmental health practitioners by automating the creation and analysis of inspection forms and reports. AI-powered tools can generate standardized inspection templates tailored to specific regulations and compliance requirements, ensuring consistency across different inspections. During inspections, practitioners could use AI to input observations in real time, with the system automatically generating comprehensive reports that include key findings, risk assessments, and actionable recommendations. Generative AI could also analyze historical data from previous inspections to identify recurring issues or emerging trends, helping practitioners prioritize high-risk establishments. Addition-

ally, AI could simplify complex regulatory language in reports, making them clearer for business owners and partners, streamlining communication, and improving food safety standards.

Further, generative AI could revolutionize communication campaigns by streamlining the creation of tailored communication materials for diverse audiences. With its ability to analyze vast data sets and understand audience preferences, generative AI could produce engaging content such as social media posts, blog articles, videos, and email newsletters. It could enable marketers to quickly generate variations of materials optimized for specific demographics, cultural contexts, or communication channels, ensuring relevance and resonance. For instance, an AI model could create persuasive ads targeting young professionals on social media while generating informative brochures for older audiences. Additionally, it could personalize content at scale, adapting tone, language, and visuals to align with audience preferences. This capability not only enhances efficiency but also ensures consistency in brand messaging across all platforms, making campaigns more impactful and cost-effective.

Another AI-powered tool is video generation. This emerging aspect of AI could change public health communication by creating engaging and accessible videos that break down complex health information and overcome literacy barriers. Public health organizations could produce visually rich and easy-to-understand videos

tailored to diverse audiences, using animations, voiceovers, and culturally appropriate visuals to convey critical messages about topics such as disease prevention, vaccination, and hygiene practices. These AI-generated videos can include simplified language, subtitles in multiple languages, and scenarios relatable to specific communities, ensuring inclusivity and clarity. The ability to quickly generate content using AI will allow public health agencies to respond rapidly during crises—such as pandemics or natural disasters—and deliver essential information to populations regardless of literacy levels or language barriers. This approach not only enhances public understanding but also fosters trust and compliance with health guidelines.

The National Environmental Health Association (NEHA) is thinking about how AI can support environmental health practitioners. In November 2024, Ashish Sharma, NEHA IT director, provided AI webinars. He shared his experience, covered the basic under-

standing of AI and applications in day-to-day work, and provided specific case scenarios for environmental health professionals. To learn more, the recordings are available on the NEHA website at <https://www.neha.org/ai-webinars>.

I will end this column on a personal note. I mustered up the courage yesterday to try my Tesla's semi-autonomous driving feature aptly named full self-driving (FSD). It was difficult giving control over to a car even though I am still in the driver's seat and can take over at any given moment. To my pleasant surprise, the ride was smooth and reassuring. In fact, it made me think about how much safer the roads would be if cars were driving themselves. No road rage, no inexperienced drivers struggling to learn road rules, no drivers overcome by their emotional state, and no drivers worried about getting around at night due to their night vision or other eyesight issues.

We continue to grow and advance society with science and technology. So, just like

when computers and the internet brought about incredible positive change, I encourage you to be prepared and to educate and equip yourself with the knowledge to support our communities through advances that once felt straight out of science fiction. 🌸



akhan@neha.org

References

- Bank of America Private Bank. (2025). *Artificial intelligence: A real game changer*. <https://www.privatebank.bankofamerica.com/articles/economic-impact-of-ai.html>
- PwC. (2025). *Sizing the prize—PwC's Global Artificial Intelligence Study: Exploiting the AI revolution*. <https://www.pwc.com/gx/en/issues/artificial-intelligence/publications/artificial-intelligence-study.html>

www.cdpehs.com
(800) 888-6035



**CUSTOMIZE.
REDUCE COSTS.
IMPROVE ACCURACY.**

Inspections | Permits | Reporting | Scheduling | Online Bill Pay | On/Offline Mobility

Environmental health solutions since 1983

CDP Inc.