

Accessible Uses of AI for Public Health Professionals

A quickly made Presentation by Matthew Budd, JCHD
Presented 01/15/2025



Common Terms

Artificial Intelligence (AI)

Machine Learning: “Teaching” an AI to perform tasks

Generative AI: Generates data based on input of data.

Large Language Models (LLM): Generative AI focused on language-based tasks

Hallucinations: Generated content that is irrelevant, made-up, or inconsistent with the input data



CDC Uses of Public Health

X-ray analysis for Tuberculosis

Enhance COVID-19 Vaccine Safety Monitoring

Data analysis

- Review death certificates to identify opioid-related deaths
- Input missing data from surveys or fix sparsity in geological sampling

Turn non-traditional data sources into data: images, audio, social media, etc.



Considerations for AI in Public Health:

Privacy & Confidentiality

Trust & Transparency

- Algorithmic bias may exist

Veracity and Accuracy

Equity and Inclusivity

Resource Implications

Energy Impacts



AI Tools

Google Gemini

ChatGPT (Chat Generated Pre-trained Transformer)

Microsoft Copilot

Canva - Image AI

Several other free and paid AI tools exist



Tips for AI prompts

Be Specific when using AI - state what your goal for the content is or ask for a specific tone

Use “do” and “don’t”

- Include: goals, objectives, talking points, critical pieces of information
- Don’t include: certain words or phrases, common knowledge (be specific), etc.

Tell the AI who your audience is

Use examples

Build on previous prompts - change the wording, tone, or add more context

Tell AI if it has something wrong

Ask AI what prompts may be helpful to get the information you want



Uses of AI

1. Alphabetize a list
2. Write an APA Citation
3. Translation of Information
4. Searches for Public Health Code Sections
5. Search Guidance and Recommendations
6. Combining Documents
7. Writing Survey Questions or job Descriptions
8. Writing Difficult Emails, Letters, or Narratives
9. Updating Policies
10. Generating Marketing and Press Release Drafts



Quick and Easy uses of AI

1. Alphabetize a list
2. Writing APA citations
3. Translation of Information
4. Searches within the Michigan Public Health Code
5. Search guidance and recommendations



Generating First Drafts with AI

6. Combining documents
7. Writing survey questions or job descriptions
8. Writing difficult emails, letters, or narratives
9. Updating Policies
10. Generating marketing and press release drafts



Remember: Always
double check the work
of AI

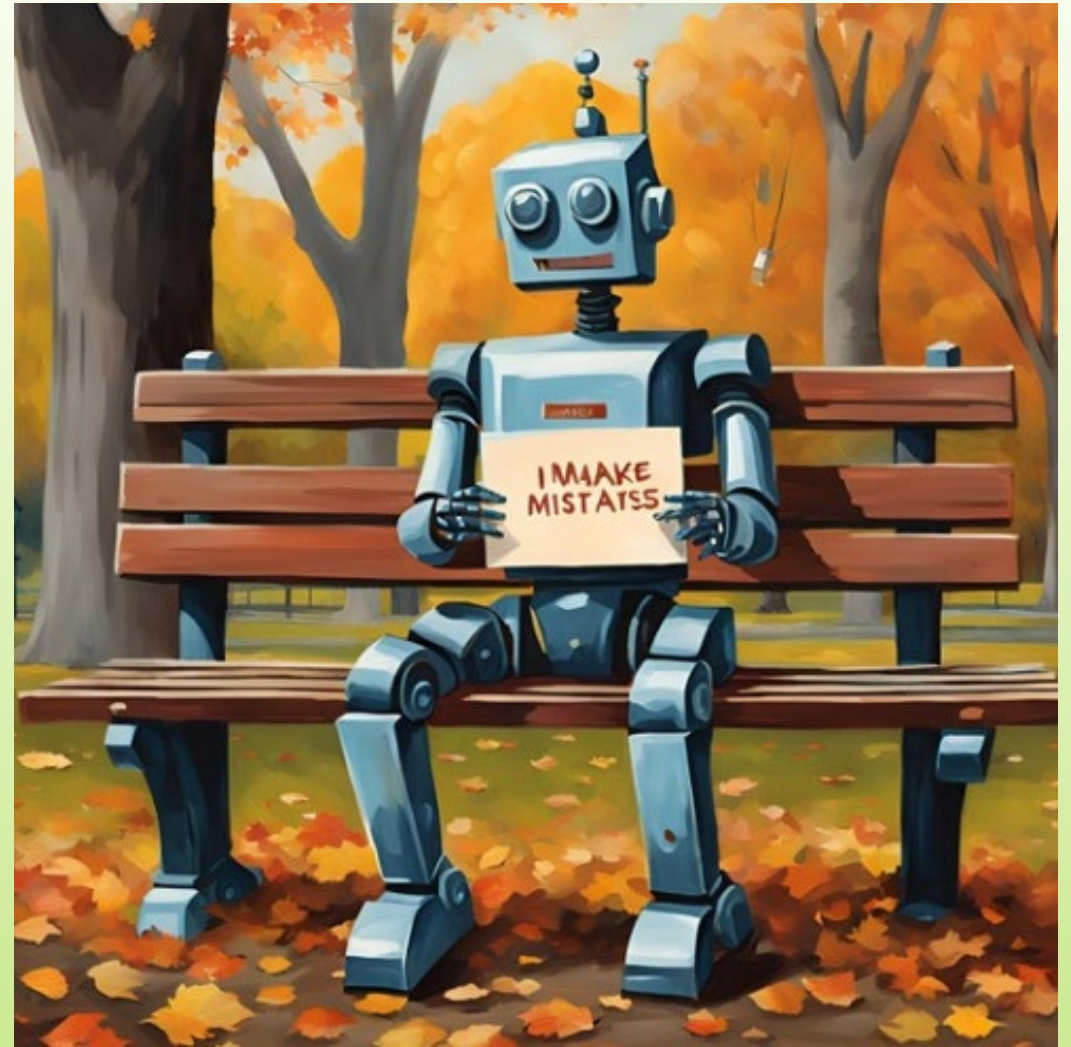


Image Generated in Canva Free
Online AI Image Generator



Opportunities for AI in Public Health

- Monitor Social Media
 - Ex: CDC utilizing AI to monitor social media to identify school closings (as there is no national database)
- Predictive Analytics & Forecasting
 - Monitoring metrics or online discourse and anticipating communication needs
 - Ex: Used for COVID-19 and other Respiratory Illnesses for annual forecasting
- Translation Tools
- Interactive Public Health Chat Bots
 - Ex: US Department of Homeland Security has an AI chatbot to answer questions about immigration and citizenship
- EHR Standardization & Interpretation of EHR data

Network for PH Law Opportunity in January 2025

AI & Public Health: Opportunities and Challenges

- Webinar Thursday January 23 2pm - 3pm
- <https://www.networkforphl.org/resources/ai-and-public-health-opportunities-and-challenges/>

Further Reading

- CDC AI & Machine Learning: applying Advanced Tools for Public Health: <https://www.cdc.gov/surveillance/data-modernization/technologies/ai-ml.html>
- Harvard AI for Global Health and Public Health: <https://teamcore.seas.harvard.edu/ai-social-work>
- Harvard University Guidance on Prompting AI: <https://huit.harvard.edu/news/ai-prompts>
- Leveraging AI for Public Health Communication: Opportunities and Risks <https://debeaumont.org/news/2024/leveraging-ai-for-public-health-communication-opportunities-and-risks/>
- Transforming Public Health Practice with Generative AI: <https://www.healthaffairs.org/doi/10.1377/hlthaff.2024.00050>
- University of Michigan Guidance on Prompting AI: <https://genai.umich.edu/resources/prompt-literacy>
- Using AI to improve public health: a narrative review: <https://pmc.ncbi.nlm.nih.gov/articles/PMC10637620/#sec12>