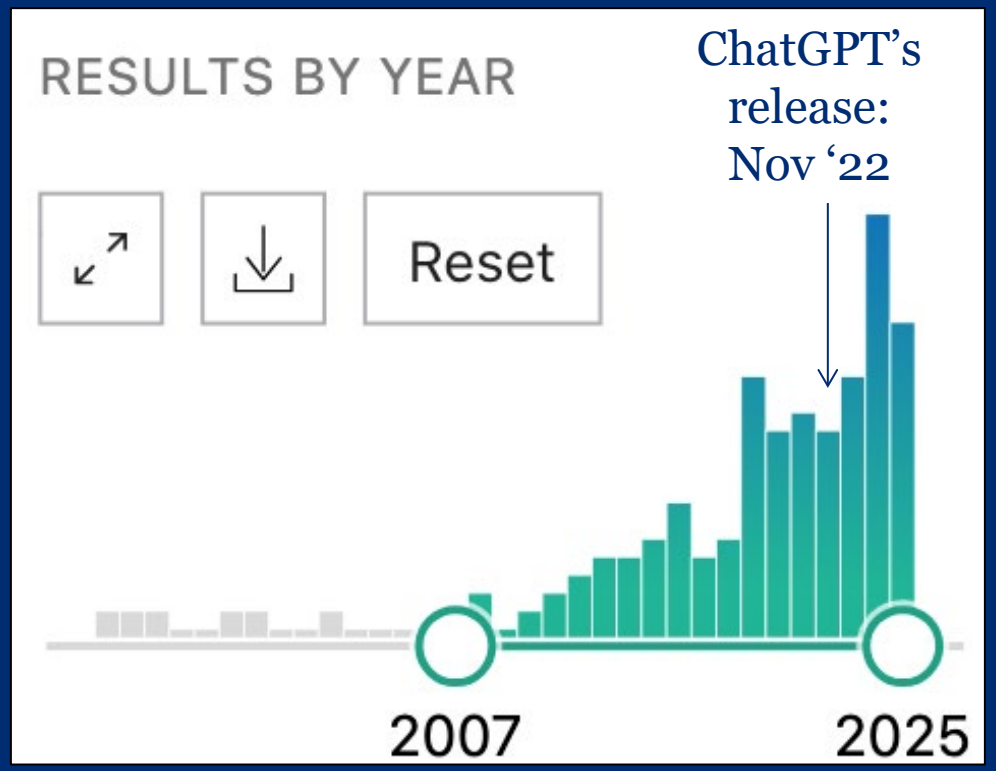
Emerging Roles of Artificial Intelligence in Tobacco Control: Current Focus Areas and Opportunities

Jeffrey J. Hardesty, Kevin Welding, Joanna Cohen

Emerging Roles of AI in Tobacco Control



Artificial intelligence (AI) usage is growing in tobacco control research

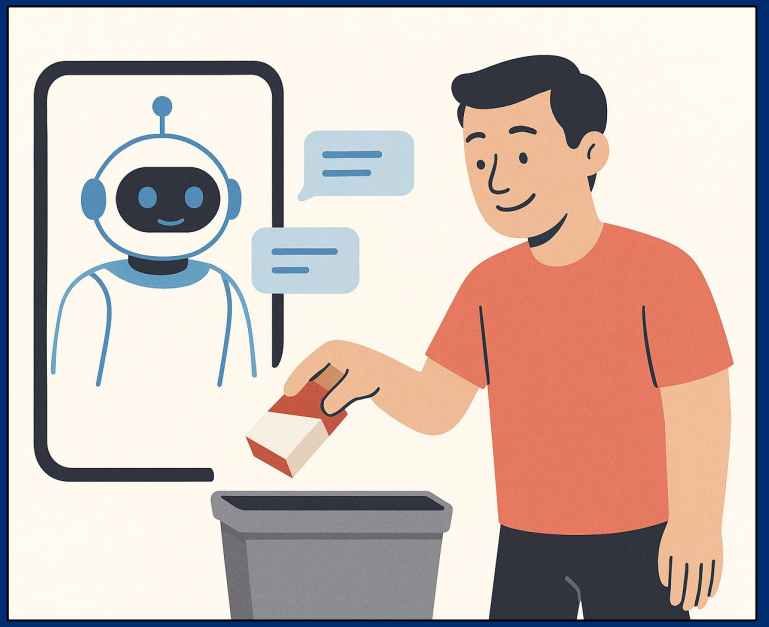
This presentation briefly summarizes current focus areas from the past five years and future opportunities

How We Reviewed the Literature

1. Searched PubMed: "artificial intelligence” AND “tobacco”
2. Included original research, past five years
3. Excluded lab-based science papers
4. Summarized topic areas from 47 papers

Most Common Focus Areas

- Smoking cessation (30%, n=14)
- Social media surveillance (26%, n=12)
- Other behaviors and patterns of use (15%, n=7)
- Detecting tobacco use (13%, n=6)



Less Explored Areas

- Real-time puff detection (4%, n=2)
- Message effectiveness simulation (2%, n=1)
- Point-of-sale advertising identification from photos (2%, n=1)

Future opportunities?

- Cameras to detect smoking in public or private spaces (e.g., restaurants) that notify security or business managers
- Digital twins of retailer spaces to simulate the effect of different store layouts and product placements
- Expanded drone and satellite mapping of illicit tobacco crops in protected areas and cross-border smuggling routes

Thank you!

Have more questions?
Save my email or
contact me on LinkedIn!

jhardesty@jhu.edu

JOHNS HOPKINS
BLOOMBERG SCHOOL
of PUBLIC HEALTH

Institute for Global Tobacco Control

Protecting Health Saving Lives—
Millions at a Time

publichealth.jhu.edu/igtc