Using Hyper-Targeted Advertising for Public Health Messaging

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#AIforGood

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Public Health Messaging Today

- limited targeting using age/gender
- “one-size-fits-all” visual and text
- social media for “fans”
- duration less than 1 year
- goal: one viral message

https://facebook.com/SmokefreeSW

- different visuals
- different texts
- specific to customer segment
- dynamic creatives
- goal: personalization

https://www.doubleclickbygoogle.com/articles/weight-watchers-boosts-acquisitions-56-using-dynamic-creative/
Existing Ad Targeting Capabilities

Demographics: age, gender, marital status, recent parents, nationality, education, income (US/UK), ethnicity (US), ...
Interests: fast food, weight loss, lung cancer, running, ...
Geo-fencing: recent hospital/bar/park visitors, ...
“Personality”: Using marker interests as proxy* ...
Custom audiences: known email, phone number, names, ...

*“Psychological targeting as an effective approach to digital mass persuasion”; S. C. Matz, M. Kosinski, G. Nave and D. J. Stillwell; PNAS Nov. 2017
The Pitch

“Show the right public health message to the right person at the right time”

Advertising 101

1. Have domain experts generate visuals and texts as well as user segments
2. Where appropriate, measure offline conversion (“in-store visits”)
3. Use AI to learn best visuals-text-segment combinations

Examples

- Activity in nearby park (parents, football lovers, couples, …)
- Diabetes screening tests (interest in plus-size clothing, in fast food, …)
- Benefits of breast-feeding (recent moms, different education levels, …)
- Child vaccination (age of child, political orientation, education level, …)

Side effect: Advance science of behavior change
Challenges and Opportunities

- Privacy: re Cambridge Analytica
- Ad fatigue: personalization can help
- Digital divide: users not on the respective platform left behind
  + Reach: more than 2B Facebook users
  + Cost effective: easy to start small, scale up
  + Science: large-scale health behavior change
Proof-of-Concept Studies

Advertising healthy recipes in the US on Facebook
- emphasizing taste vs. health benefits
- interest-based targeting (healthy vs. unhealthy)
- geographic targeting (high/low obesity rates)
- joint work with Christoph Trattner and Pamina Strobl

Advertising smoking cessation to US Hispanics on Facebook
- social vs. individual consequences
- white vs. non-white model in ad image
- demographic targeting (parents or not, married or not)
- joint work with Kokil Jaidka and Lyle Ungar
Thanks!

Ask me about real-time analysis of social media text and images during disasters for situational awareness

http://aidr.qcri.org/