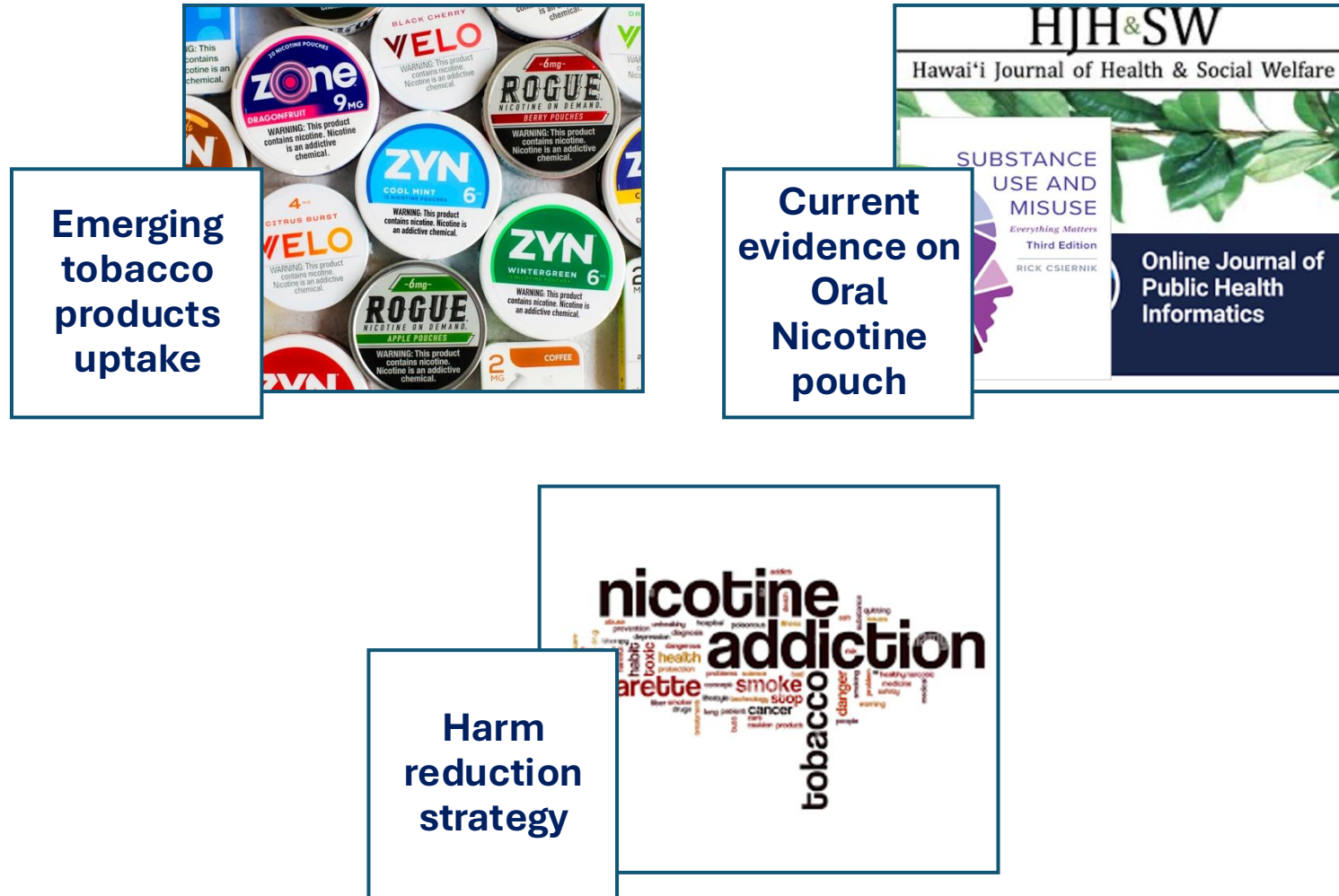




# **Emerging Tobacco Products & Addiction Preventing and Reducing Tobacco Use and Addiction**

**Samia Amin, PhD, MBBS/MD, MPH  
Assistant Professor (Public Health Informatics)  
Southern Arkansas University**

# Overview of the presentation





# Emerging Tobacco Product & Addiction

# Emerging tobacco and/or nicotine delivery products

- Emerging tobacco and/or nicotine products are those that meet one or more of the following criteria:
  - Introduced to the U.S. market within the past 15 years
  - Rapidly increased in popularity within the past 15 years
  - Modified or used in novel ways beyond their original design



# Oral Nicotine Pouches (ONPs): Emerging & novel products

- Tobacco-free products that retain nicotine delivery represent a modified and novel-use nicotine category
- Absorbed through oral mucosa
- 2014: ZYN (by Swedish Match) launched in a U.S. test market (Colorado)
- 2016: Expanded to 4,000+ retail stores
- 2019: Nationwide distribution with rapid online sales growth
  - 2016: 163,000 units sold
  - 2020: 46 million units sold
  - 2022–2023: 6.3 → 9.5 billion units, ~62% of global sales



# ONPs and addiction risk: Wide range of nicotine concentrations



ZYN Red Berry Fizz  
Slim Strong (9  
mg/pouch)



ZYN Red Berry Fizz  
Slim Normal (6  
mg/pouch)



ZYN Red Berry Fizz  
Slim Extra Strong (11  
mg/pouch)



ZYN Menthol Ice Slim  
Ultra Strong (16.5  
mg/pouch)



ZYN Menthol Ice Slim  
Super Strong (13.5  
mg/pouch)



ONPs can contain from 3 mg to 50+ mg per pouch



# ONP and other tobacco products use

- Cigarette and e-cigarette users are more likely to use ONPs.
- Many adolescent ONP users also smoke or vape.
- Non-tobacco users show low preference for ONPs over other products.
- In adults, ONPs deliver nicotine and relieve cravings.
- ONPs can reduce daily cigarette consumption.



# Negative consequences of ONP use

- Users may develop significant nicotine dependence.
- Common adverse effects: mouth lesions, sore mouth/throat, upset stomach, nausea, and unusual jaw sensations.
- Most users experience at least one adverse effect.
- Mild effects reported: headaches, hiccups.
- Certain usage behaviors (e.g., moistening pouches, using multiple pouches) may increase risk.





# Current evidence on Oral Nicotine pouch

# Research evidence on ONP

Amin, S., Phillips, K. T., Phillips, M. M., Park, L., & Pokhrel, P. (2025). **What do we know about the use of Oral Nicotine Pouches? A Scoping Review of Quantitative Studies.** *Hawai'i Journal of Health & Social Welfare.* Advance online publication

Amin, S., Wu, Y., Baptista, S., Okamoto, S. K., Herzog, T. A., Kawamoto, C. T., & Pokhrel, P. (2026). **Instagram memes of oral nicotine pouches: A content analysis.** *Online Journal of Public Health Informatics.* Advance online publication.

Amin, S., Buente, W., Duque, J.-D., Mettias, A., Samiul, S. M., Amin, S., Okamoto, S. K., & Pokhrel, P. (2026). **Exploring #Zyn-related video content posted by Zynfluencers on TikTok.** *Substance Use & Misuse.* Advance online publication.

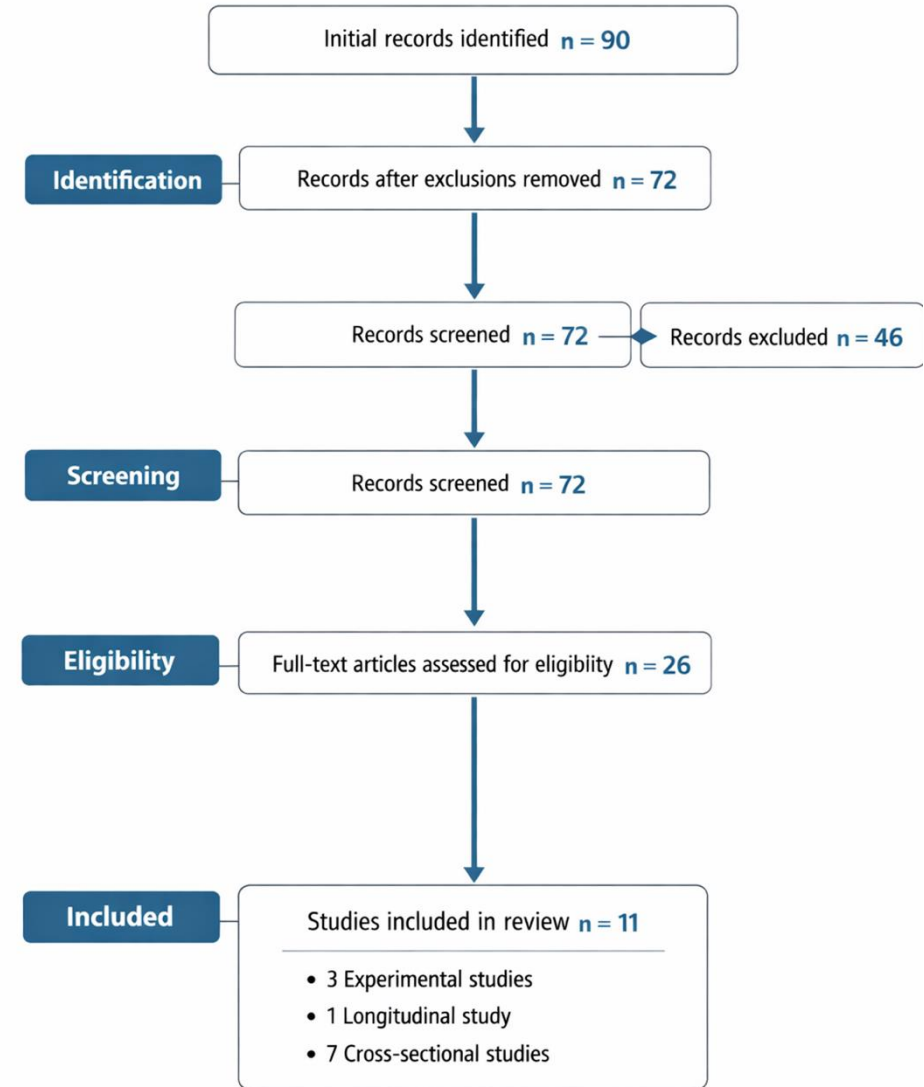




# Search strategy

- Search conducted: March 2024
- Databases:
  - PubMed
  - Scopus
  - Web of Science
- Grey literature: Google Scholar
- Keywords:
  - Oral nicotine pouch
  - Nicotine pouches
  - Nicotine-containing pouches
  - Non-tobacco nicotine
  - Tobacco-free nicotine
- Boolean operators (AND/OR) applied

## PRISMA 2020 Flowchart



# Sample characteristics

- **Total sample across studies:** N = 20,895
- **Gender distribution:**
  - Male: 47.4% (n = 10,014)      Female: 52.6% (n = 10,881)
- **Adolescents** included in 4 studies: 9,490 participants (45.4%)
- **Common ONP brands:** Zyn (7 studies), On! and Velo (4 studies)
- **Patterns of use**
  - Peer influence increases willingness to experiment.
  - Adolescents report ever using or being willing to try ONPs.
  - Young adults show both use and susceptibility to future ONP use.
  - Among adult smokers, overall use declines, but daily use rises among continuing users.



# Reasons for uptake of ONPs

## Perceived benefits

- Convenient and discreet use
- Smoke-free alternative to cigarettes and smokeless tobacco
- No odor or spitting, appealing for indoor use

## Appealing product characteristics

- Variety of flavors and nicotine strengths
- Modern packaging and branding

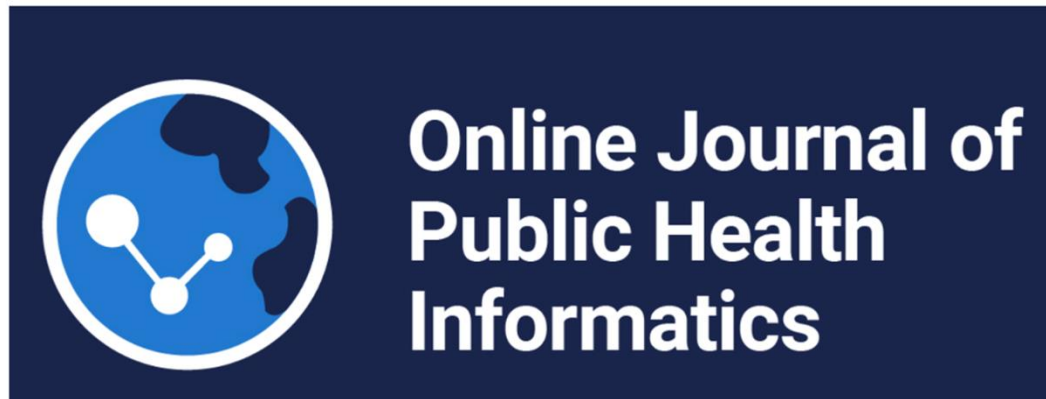
## Peer and societal factors

- Peer adoption and normalization
- Association with lifestyle, trendiness, and “safer” alternatives

## Marketing and social influence

- Social media (Instagram, TikTok, YouTube)
- Influencer promotions and viral content
- Targeted advertising toward young adults and new users





Online J Public Health Inform. 2025 Dec 19. doi: 10.2196/84025. [Epub ahead of print]

### **Instagram memes of oral nicotine pouches: A content analysis.**

Amin S<sup>1,2</sup>, Wu Y<sup>3</sup>, Baptista S<sup>3</sup>, Okamoto SK<sup>3</sup>, Herzog TA<sup>3</sup>, Kawamoto CT<sup>3</sup>, Pokhrel P<sup>3</sup>.

#### **Author information** ▾

- 1 701 Ilalo Street, University of Hawaii Cancer Center, 701 Ilalo Street, Honolulu, US.
- 2 Southern Arkansas University, Magnolia, US.
- 3 701 Ilalo Street, University of Hawaii Cancer Center, Honolulu, US.



Amin, S., Wu, Y., Baptista, S., Okamoto, S. K., Herzog, T. A., Kawamoto, C. T., & Pokhrel, P. (2026). Instagram memes of oral nicotine pouches: A content analysis. *Online Journal of Public Health Informatics*. Advance online publication.

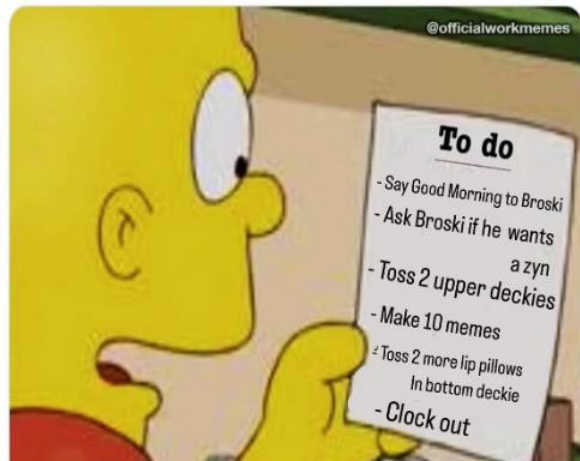
**Southern Arkansas University**



How I be looking at the Zyn rack while I wait in line at the 7/11



Looking like a busy day at work...






POV: on my way to work...  
Forgot my zyns at home 🤔



- Total memes analyzed: **244**
- Majority of analyzed memes focused on **Zyn**, reflecting its strong presence on **Instagram**
- **Top three themes**
  - **Zyn community: 35.6%** (87/244)
  - **Marketing & branding: 27.8%** (68/244)
  - **Perceived consequences of use: 13.9%** (34/244)



# Engagement metrics

	Zyn Community	Marketing & Branding	Perceived Consequences of Use
	650K likes	585K likes	215K likes
	1.6K comments	738 comments	224K comments
	696K shares	497K shares	422 shares
Focus	<ul style="list-style-type: none"> <li>✓ Group identity</li> <li>✓ Solidarity</li> <li>✓ Shared humor</li> <li>✓ Collective pride</li> </ul>	<ul style="list-style-type: none"> <li>✓ Branding product</li> <li>✓ Accessibility</li> <li>✓ Glamorization of use</li> </ul>	<ul style="list-style-type: none"> <li>✓ Mental health references</li> <li>✓ Dependence</li> <li>✓ Stress relief narratives</li> </ul>

*Key insight: Community-building and branding-related humor generated the highest engagement.*



## Theme 1: Zyn Community

Emphasized belonging and shared identity

Used humor to reinforce in-group culture

Highlighted collective defiance and solidarity

## Theme 2: Marketing & branding

Parodied luxury branding and generational transition

Normalized and glamorized nicotine use

Framed dependence humorously and casually

## Theme 3: Perceived consequences of use

Stress relief

Mental health coping

Dependence and withdrawal humor

## Additional Themes

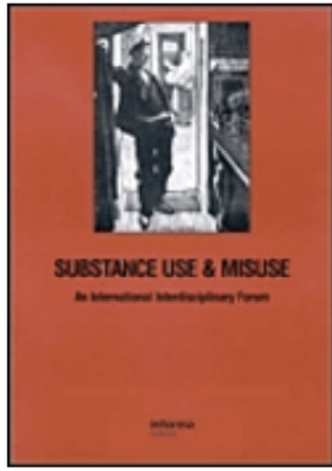
Nicotine strength

Flavor varieties

First-time user experiences

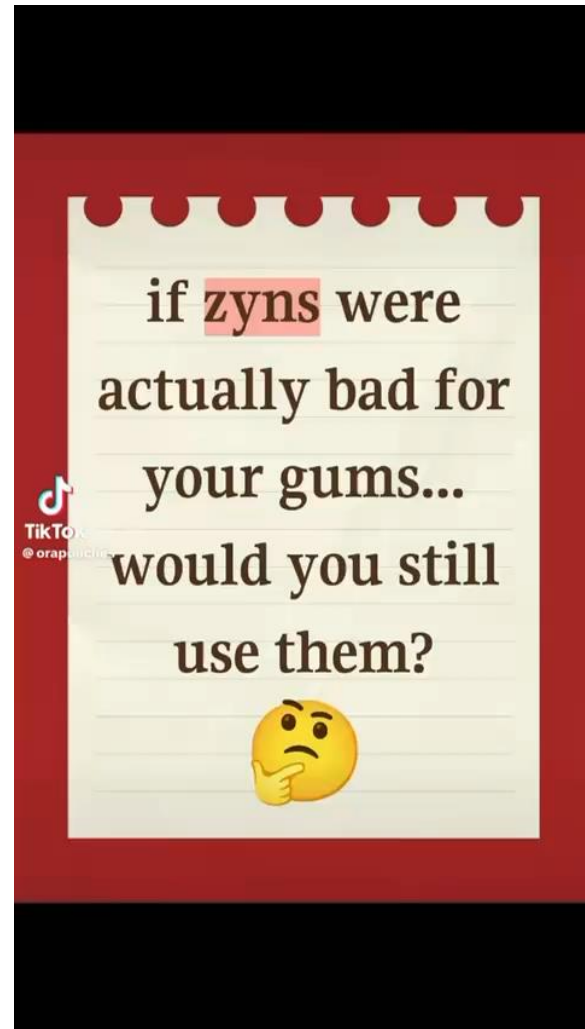
Comparisons with other tobacco products





## Exploring #Zyn-related video content posted by Zynfluencers on TikTok

Journal:	<i>Substance Use and Misuse</i>
Manuscript ID	LSUM-2025-0324.R1
Manuscript Type:	Research Article
Keywords:	Zynfluencers, Zyn, Oral nicotine pouch, Tik Tok



When that fresh Zyn hits 🕶️

TikTok  
© hrall75



TikTok  
@alcatrazbby

Me: Can I get a Zyn?  
Bro: No sorry, I've only one left

Me:



Reply to hayati's comment  
basically don't use

TikTok  
@ bracesbysable

Why Zyn is  
bad for your gums



Search

For You

Shop

Explore

Following

LIVE

Upload

Profile

More

Log in



#fyp #zyn...



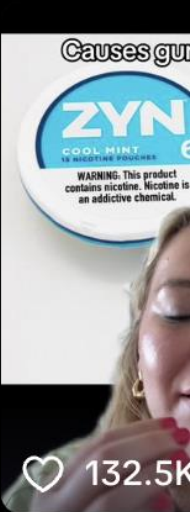
#onthisday The...



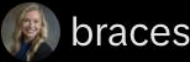
I guess they got...



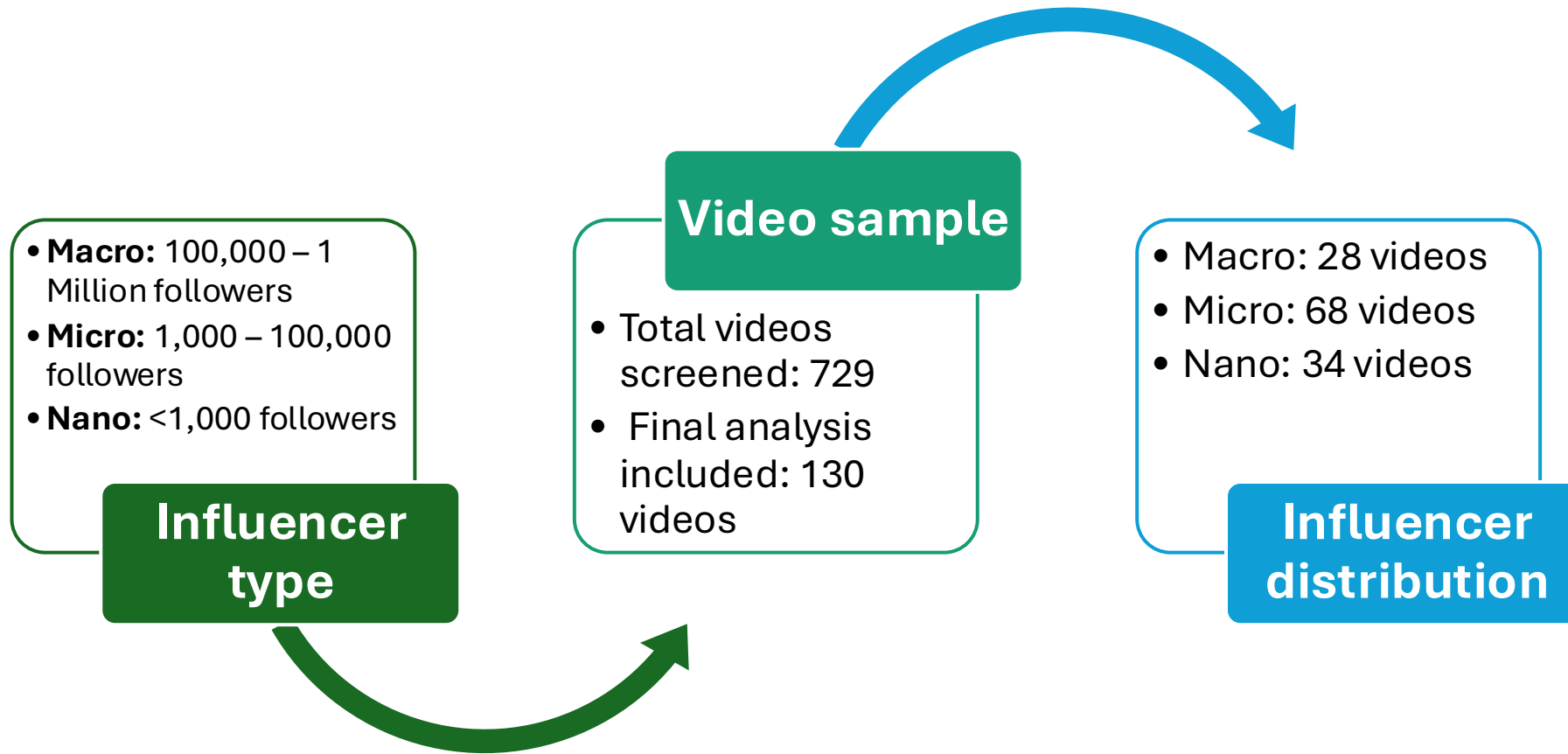
My superhero 🥰...



Replying t



# Video characteristics across influencer types



# Key take away



01

Macro: personal stories and product reviews dominate.

02

Micro: balances health messages with promotions.

03

Nano: meme-heavy, humorous content.

04

Health warnings more common in micro and nano posts.

05

Nano posts more from outside the U.S.; macro/micro mainly U.S.





# Harm reduction strategy

# Oral nicotine pouches: A dual public health challenge

Two parallel realities

Potential harm reduction tool  
for **adult smokers**

Growing digital normalization  
among **adolescents and youth**



# Adult smokers: Using oral nicotine pouches for smoking cessation

*Switch to quit.....not switch to stay*

---

Frame as medical harm reduction tool but not a social identity product

---

Use ONPs as a step-down nicotine tool

---

Encourage complete switching from cigarettes to ONPs (no dual use)

---

ONPs are lower risk than combustible cigarettes but not risk-free

---

**Core message:** ONPs should be a **transition tool for smokers**, not a long-term lifestyle substitute.



# Social media platforms: A critical prevention lever

Social media is central to ONP normalization.  
Therefore, platforms must become part of the solution.

## Strong age-gating

- Verified age systems for nicotine-related content.
- Restrict under-18 exposure to ONP posts.

## Algorithmic responsibility

- Deprioritize nicotine-related hashtags.
- Reduce amplification of meme-based nicotine content.

## Sponsored content transparency

- Mandatory labeling of paid nicotine promotions.
- Public database of nicotine brand partnerships.

## Remove youth-targeted branding

- Ban community-style nicotine campaigns.
- Monitor and restrict influencer-driven normalization.

**Strategic shift: From amplifying “nicotine culture” → to promoting prevention literacy.**

# The role of social media influencers

- Influencers helped normalize ONPs. So, they can also help de-normalize youth use and responsibly support smokers transitioning away from cigarettes.
- Influencers are not just marketing tools, and they are digital norm architects.
- **Nano influencers:**
  - Publicly model a nicotine-free lifestyle.
  - Share authentic personal decisions to avoid oral nicotine pouches (e.g., Zyn).
  - Consistently reinforce that choosing not to use nicotine is normal and socially accepted.
- **Micro influencers:**
  - Clearly frame oral nicotine pouches as a temporary transition tool for adult smokers only.
  - Emphasize complete switching rather than dual use.
  - Avoid portraying nicotine products as trendy or lifestyle-enhancing.
- **Macro influencers:**
  - Publicly decline nicotine sponsorships.
  - Avoid glamorizing or normalizing nicotine use.
  - Actively promote prevention campaigns and smoking cessation resources instead of nicotine products.

