

The Emerging Role of Digital Opinion Leaders in the Migraine Social Media Landscape

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Disclosures

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Introduction

- Social media offers tools and platforms for both patients and HCPs to learn, share, and engage with health-related content^{1–3}
- For HCPs, social media is a valuable resource for professional networking, medical education, and health promotion^{1,2}
- Some HCPs have emerged as DOLs—those with a large social media presence who can shape opinions and attitudes⁴



To understand social media's impact on the migraine digital landscape and the dynamics of HCP digital engagement, this analysis examined migraine-related social posts of 30 DOLs

DOL, digital opinion leader; HCP, healthcare professional.

1. Chen J, et al. *J Med Internet Res*. 2021;23(5):e17917. 2. Farsi D, et al. *J Med Internet Res*. 2021;23(4):e23205. 3. Moorhead SA, et al. *J Med Internet Res*. 2013;15(4):e85. 4. Furini M. *Sensors (Basel, Switzerland)*. 2024;24(2):610.

Methods

Data Source

Posts mentioning migraine or related terms in English across X (Twitter), Facebook, Instagram, LinkedIn, TikTok, and YouTube from July 2022-June 2024

~23M total posts



~636K posts
by 1,002 HCPs

DOL Identification



The top 30 most active and credible DOLs in the migraine social media space were identified using MDigitalLife

- The database maps HCP social profiles to NPI numbers



Influence was evaluated using a multi-dimensional scoring system that used natural language processing to assess reach, relevance, and resonance, which were aggregated to derive an overall influence score

- **Reach:** network analysis and followership evaluation across social media channels, emphasizing relevant audiences (eg, other HCPs and patients)
- **Relevance:** quantification of the volume of migraine-related content shared by each HCP
- **Resonance:** evaluation of engagement with migraine-related content to gauge potential impact

Methods (cont.)



DOL Channel Activity

- Social media posts by the 30 DOLs who mentioned a migraine keyword were collected through partnership with netbase.com and tubular.com
- Data were collected using NetBase for X, Tubular for TikTok and Instagram, and manually collected from LinkedIn
- Individual relevant posts were combined and aggregated by channel



Conversation Volume, Hashtag Usage, and Shared Resources

- Data were collected through partnership with netbase.com
- Public posts by the 30 DOLs on X mentioning a migraine keyword were assessed quantitatively
- The most used hashtags were manually categorized (community, conference, etc), and the most shared links were manually analyzed to validate relevancy

Results: DOL Social Presence

Of the 30 DOLs identified, 15 were headache specialists, with 13/15 neurologists, 1/15 a headache researcher, and 1/15 a nurse practitioner; the remaining DOLs were neurologists (n=14) and a neurosurgeon (n=1)

DOL Social Media Channel Presence

Platform	Number of Posts (%)*
X	22,397 (97.7)
LinkedIn	395 (1.7)
Instagram	102 (0.4)
TikTok	23 (0.1)
YouTube	0
Facebook	0

DOLs were most engaged on X, where they primarily shared treatment developments/updates and recent publications

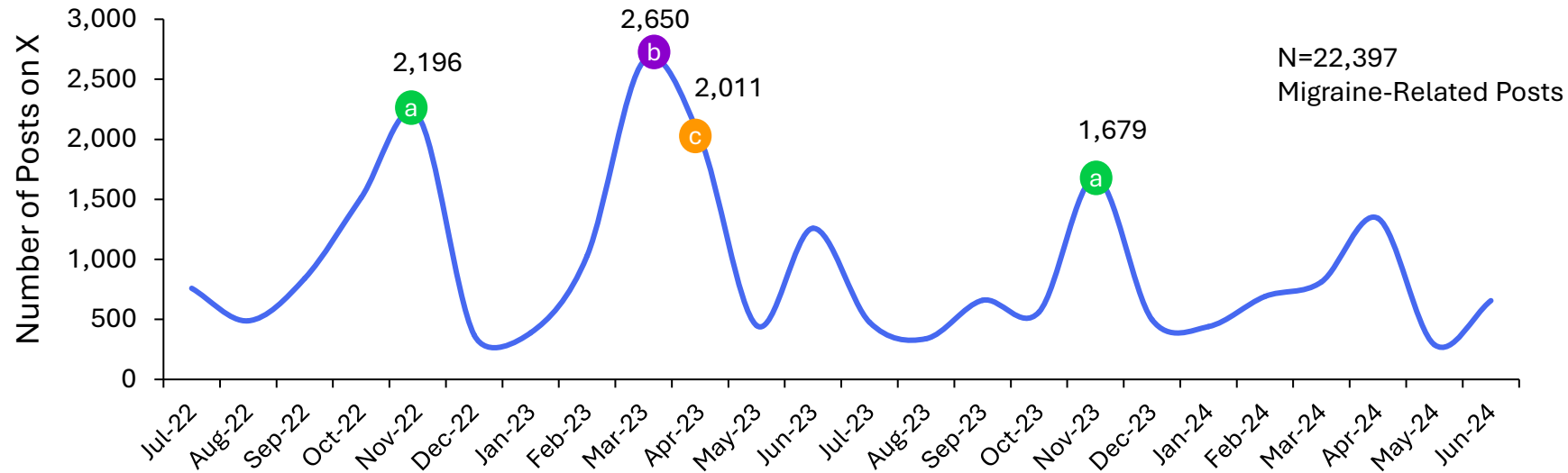
LinkedIn was mainly used as a space to share professional achievements and latest research articles

Some DOLs posted migraine-related content on patient-focused Instagram accounts, while others shared professional-related migraine content

Only one of the identified DOLs was active on TikTok

*Percentages do not add up to 100% due to rounding.
DOL, digital opinion leader.

Results: Overall Conversation Volume



Conversation volume and engagement peaked during annual gatherings and events

a

November 2022 and 2023:

Both spikes driven by increased DOL engagement during American Headache Society Scottsdale Headache Symposium (#AHS AZ)

b

February-March 2023:

National Headache Foundation's annual Headache on the Hill advocacy event (#HOH2023) and American Academy of Neurology's advocacy event Neurology on the Hill (#NOH23)

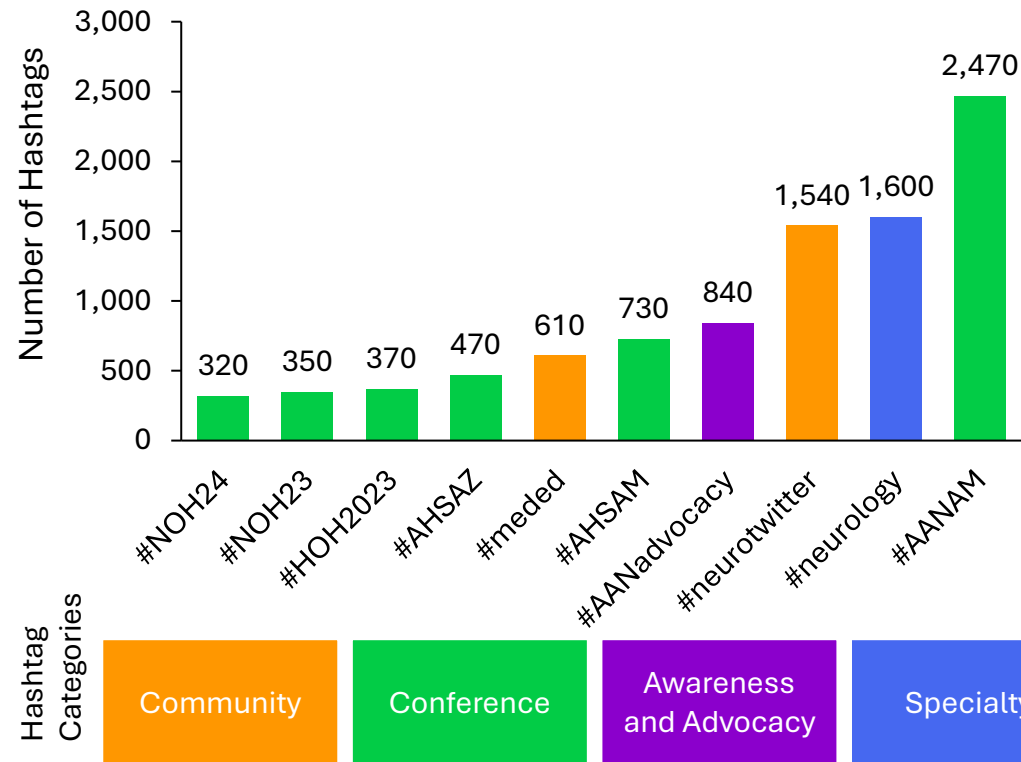
c

April 2023:

American Academy of Neurology's annual meeting (#AANAM)

Results: Top Hashtags and Shared Resources

Top Hashtags by DOLs (N=9,300 Hashtags)



DOLs used hashtags to **support their posts** and **drive engagement**

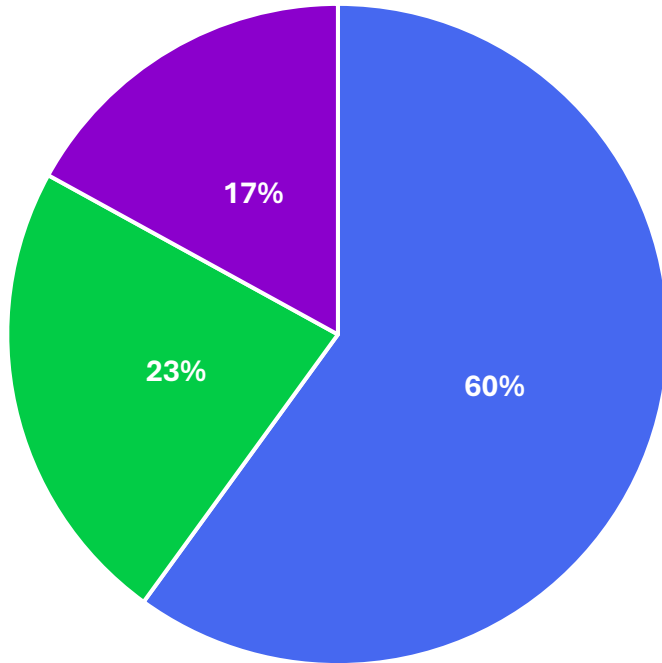
Top 5 Shared Resources by DOLs

Resource	Number of Shares
The Counterfactual Brain: #MigraineChat Blog	140
Miles for Migraine Website	50
American Academy of Neurology Website	40
American Headache Society Website	40
Scottsdale Headache Symposium Website	30

DOLs shared URL links directing their audiences to **outside resources**

Results: DOL Behavioral Patterns

DOL Behavioral Patterns



■ Clinical Champion (n=18)*

■ Advocacy Ally (n=7)[‡]

■ Community Captain (n=5)[†]

Based on 22,397 posts on X.

DOL, digital opinion leader; HCP, healthcare professional.

*n=7 headache specialists (all neurologists); n=10 neurologists; n=1 neurosurgeon. [†]n=2 headache specialists (1 neurologist; 1 researcher); n=3 neurologists.

[‡]n=6 headache specialists (5 neurologists; 1 researcher); n=1 neurologist.

Clinical Champions

- Primarily utilized social media during conferences to **discuss clinical advancements and ongoing research**
 - Frequently **summarized clinical research findings** and **shared content** from colleagues, conference presentations, and recent publications

Advocacy Allies

- Served as **advocates for patients** by sharing **educational and patient-focused content** to promote advocacy and awareness
 - Advocated for **health equity, gender equality, and diversity** in healthcare

Community Captains

- Acted as a **bridge** between patient, advocacy, and HCP communities
 - Facilitated **conversations**, hosted **collaborative events**, and provided **thought leadership**



Conclusions



For the first time, this analysis provides valuable insights on **DOL engagement activity** within the migraine social media landscape



DOLs were **most active on X**, with conversation volume increased around annual meetings and events



Hashtags were used to **elevate engagement** most frequently around conferences, and the most common shared resource was the #MigraineChat blog



The three distinct patterns of DOL engagement activity may suggest **different motivations for posting**, such as showcasing clinical advancements, advocating for patients, and providing thought leadership



The findings of this analysis underscore the **important role of DOLs** in driving exchange of migraine research, awareness, education, and advocacy