

# Do Traditional Key Opinion Leaders and Digital Opinion Leaders Exist in the Same or Different Communities?

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## BACKGROUND

- Traditional key opinion leaders (KOLs) are highly respected within their field and are often identified based on their publication history
- Digital opinion leaders (DOLs) may be recognized as experts within specific online channels

## OBJECTIVE

- We compared the publication and social media activity of traditional KOLs and DOLs in atrial fibrillation to determine whether they represented a single continuous group and to assess the extent of any overlap between the two

## METHODS

- For this analysis we restricted our search to KOLs and DOLs within a single therapeutic area, atrial fibrillation, and to a single social media channel, Twitter

### KOLs

- Traditional KOLs in atrial fibrillation were identified from PubMed based on their publications in PubMed-indexed peer-reviewed journals over the past 10 years
- These individuals’ relevant atrial fibrillation–related Twitter activity over the previous 2 years was collected with the Symplur Signals analytics platform (Symplur LLC, Pasadena, CA)<sup>1</sup>

Table 1. Traditional Influential KOLs

Lip GHJ	Lanev DA	Kirchof P	Lopes RD
Connolly SJ	Granger CB	Eikelboom J	Wiviott SD
Singer DE	Hohnloser S	Wallentin L	Mahaffey KW
Kowey PR	De Caterina R	Goto S	Yusuf S
Oldgren J	McMurray JJ	Gibson CM	Huisman MV

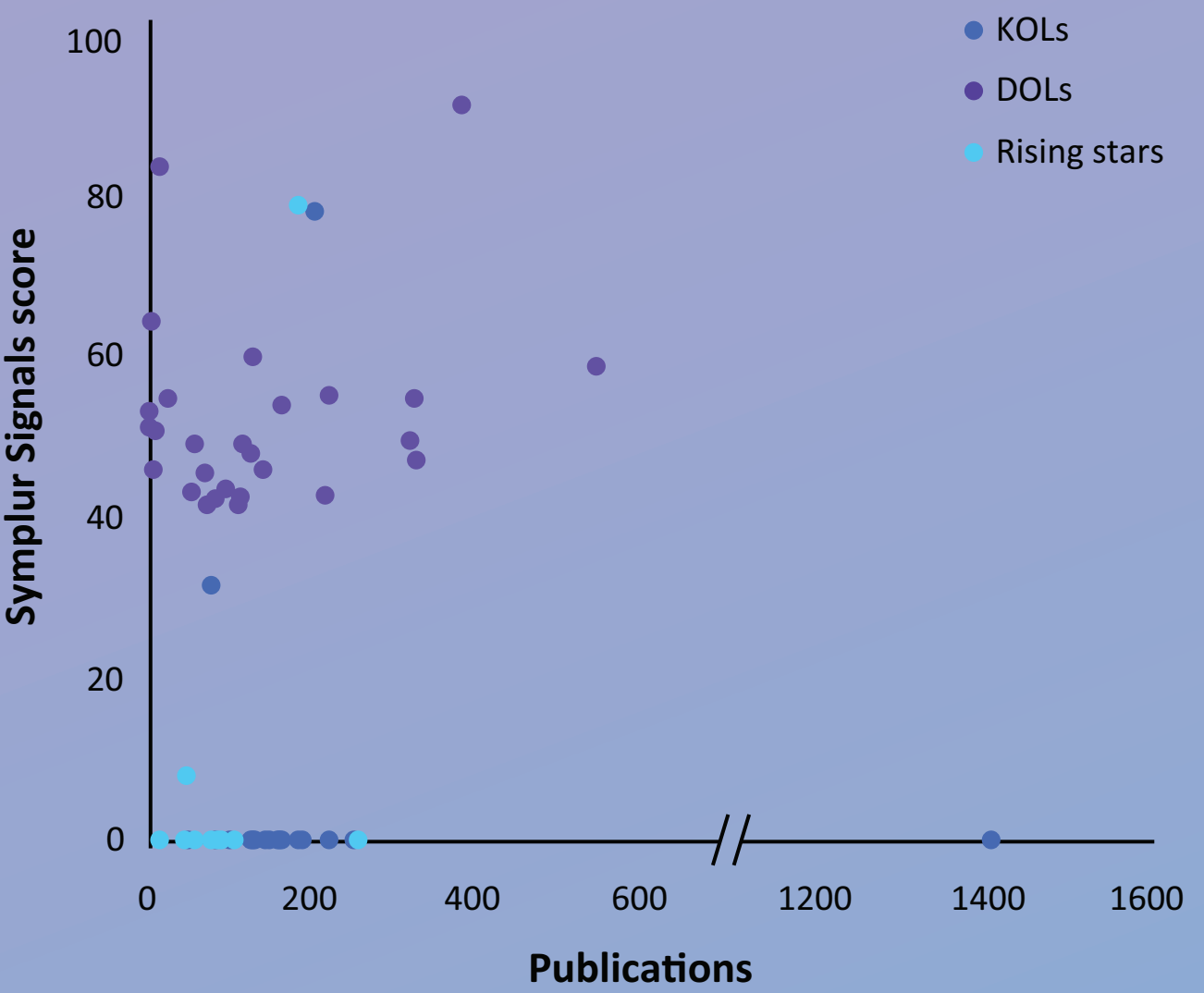
Publication activity was weighted by first or last author position, the number of manuscripts in high-impact journals, and authorship of international or national guidelines



## LIMITATIONS

- This was an exploratory analysis of KOLs and DOLs from a single therapy area and within a single social media channel. Additional work would be needed to extrapolate to other therapy areas and platforms
- The Symplur Signals score will have screened for DOLs who are active researchers and therefore more likely to have published. Other metrics should be used to include other stakeholders, such as HCPs or patient advocates
- Social media is a dynamic ecosystem that is constantly in flux. DOLs may score as significantly more or less influential based on the time frame assessed, and even around individual congresses or events

Figure 1. Publication Records and Digital Influence



Publications relating to atrial fibrillation in PubMed-indexed journals from the previous 10 years. Symplur Signals score based on 2-year social media activity relating to atrial fibrillation.

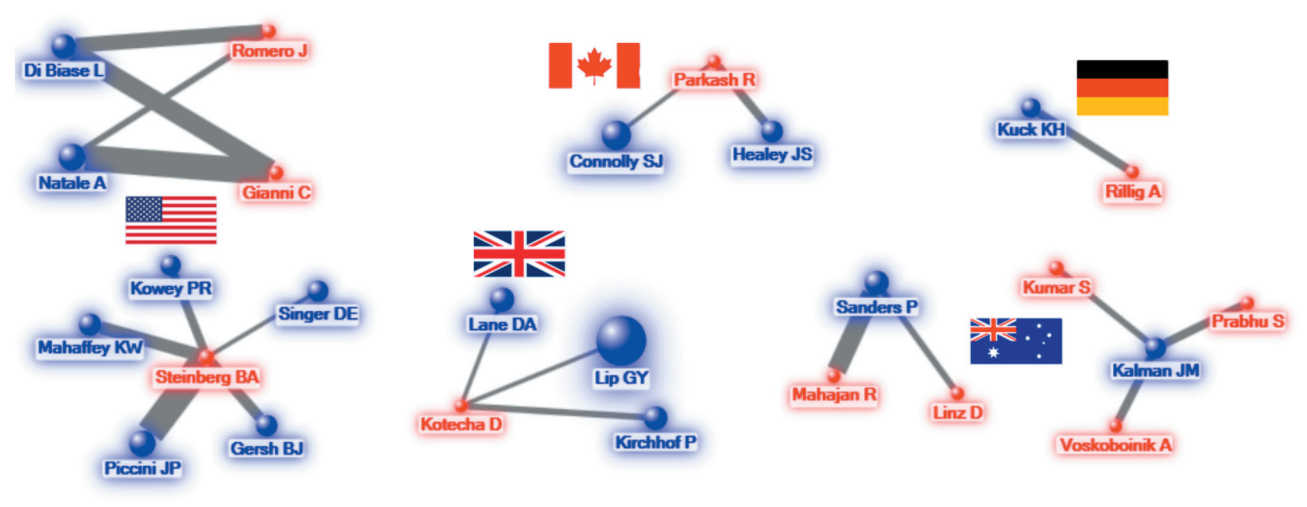
## CONCLUSIONS

- KOLs and DOLs represent two overlapping but distinct groups
- Statistically, social media influence and publication history did not correlate. In atrial fibrillation, being an expert in one domain does not imply that the expert will also have expertise in the other domain
- This understanding could help to improve identification of appropriate experts to engage as KOLs or DOLs

## Rising Stars

- It may not always be possible to engage with established KOLs who have existing relationships with other companies or authorship groups
- We therefore identified a group of less well-established KOLs or DOLs, whom we called “rising stars,” based on their coauthorship of manuscripts with the previously identified KOLs
- Once identified, these individuals’ 10-year publication records and 2-year social media activity were assessed in the same way as for the KOLs

Figure 2. Rising Stars Around the World



Rising stars were defined as early career practicing clinicians who had coauthored with a KOL ≥5 times and were first author on ≥3 manuscripts.

## DOLs

- DOLs in the same therapy area were identified based on the past 2 years of social media activity using Symplur Signals<sup>1</sup> and ranked by their SymplurRank
- These individuals’ relevant 10-year atrial fibrillation–related publication activity was identified from PubMed

Figure 3. DOLs Identified by SymplurRank

89.36 SymplurRank Prash Sanders @PrashSanders D... Researcher/...	53.92 SymplurRank Manas Manas @manas1973 D... Researcher/...	48.31 SymplurRank Andrea Russo @AndreaRussoEP D... Researcher/...	42.69 SymplurRank Hein Heldtschel @HH4EHRA D... Researcher/...
82.23 SymplurRank John Mandrola, MD @drjohnm D... Researcher/...	53.75 SymplurRank Jonathan Piccini, ... @JonPicciniSr D... Researcher/...	48.12 SymplurRank Mintu Turakhia @leftbundle D... Researcher/...	42.49 SymplurRank Toiga Akso, MD @MDToigaAkso D... Researcher/...
76.41 SymplurRank Dominik Linz @dominik_linz D... Researcher/...	53.09 SymplurRank Nassir Marrouche @NassirMarrouche D... Researcher/...	47.03 SymplurRank Thomas Jared Ban... @TJBanBunch D... Researcher/...	42.18 SymplurRank DJ Lakkireddy @DJ_Lakkireddy D... Researcher/...
63.04 SymplurRank JK Han MD @metta_doc D... Researcher/...	52.23 SymplurRank Dr. Martha Gulati @DrMarthaGulati D... Researcher/...	46.32 SymplurRank Gerhard Hindricks @GerhardHindricks D... Researcher/...	41.94 SymplurRank Dr. Deepak L. Bhatt @DLBHATTMD D... Researcher/...
59.08 SymplurRank Jason Andrade @OrlasonAndrade D... Researcher/...	50.16 SymplurRank Ritu Thamman M... @iamritu D... Researcher/...	45.12 SymplurRank Dennis H Lau @DH_Lau D... Researcher/...	41.52 SymplurRank Dr. Dhruv Gupta @DhruvGuptaBHS D... Researcher/...
57.83 SymplurRank Andrea Natale, MD @andrianatalemd D... Researcher/...	50.05 SymplurRank David R Tomlinson @DRTomlinsonEP D... Researcher/...	45.07 SymplurRank Edward J Schloss ... @EJSMD D... Researcher/...	40.93 SymplurRank John Camm @johncamm D... Researcher/...
54.01 SymplurRank Andreas Bollmann @ABollmannMD D... Researcher/...	48.68 SymplurRank Luigi Di Biase @LuigiDiBiaseMD D... Researcher/...	44.97 SymplurRank Amin Al-Ahmad, ... @aalahmadmd D... Researcher/...	40.81 SymplurRank Suneet Mittal @suneet D... Researcher/...

SymplurRank is an algorithm designed specifically for healthcare and intended to measure the influence of Twitter users relevant to a specific topic. It recursively analyzes the healthcare influence of each individual conversation partner, the influence of their conversation partners, and their healthcare stakeholder status as a doctor, journalist, patient, and so on. The algorithm will consider mentions or conversations with nonhealthcare-related accounts to be of little worth. Conversely, the algorithm would positively weigh conversations or mentions by a clinician or caregiver identified as influential on the topic at hand.

## RESULTS

- Most KOLs had no identifiable activity within the social media space
- There was a distinct difference between KOLs and DOLs with respect to social media influence, but the two groups had an overlapping range of activity within the publication space
- The rising stars, like traditional KOLs, generally showed a similar lack of relevant social media activity; however, one of these individuals was also identified as a DOL
- There was no statistical correlation between the Symplur Signals score and publication activity (rs: 0.145; two-tailed  $P=0.461$ ), despite the healthcare research focus of the metric

### REFERENCES

1. Symplur LLC. Symplur signals. <https://www.symplur.com/products/signals>. Accessed March 25, 2021.

### DISCLOSURES

ML, CJP, and AS are members of the ISMPP Social Media and Web-based Metrics Working Group. ML and XL are employees of Medistrava. CJP was an employee of TrendMD at the time of this study; he is now employed by Cactus Communications. AS is an employee and shareholder of Envision Pharma Group.

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