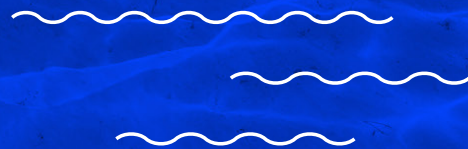


# The DOLFIN Effect

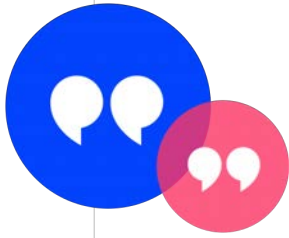
**How scientific exchange has moved  
from paternalism to participation**





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# Executive Summary



*The time is now for pharma companies to reassess why, when, how, and in partnership with whom they play a role in shaping modern scientific discourse on social media.*

- 1** Twitter and other social media platforms have radically reshaped the speed and scale at which scientific knowledge is cascaded, curated and consumed
- 2** The roles of “influencer” and “educator” have been democratized, led by a new breed of Digital Opinion Leaders (DOLs) capable of reaching large audiences of self-selected followers beyond those reached by traditional key opinion leaders (KOLs)
- 3** Amid growing regulatory scrutiny of traditional sponsored live educational events such as Speaker Bureaus, audio social media channels and other innovative formats are opening up new opportunities for synchronous and asynchronous peer-to-peer engagement among healthcare professionals (HCPs)
- 4** The potential of social media as a platform for driving credible, year-round scientific exchange in partnership with key influencers remains largely untapped by biopharma, including under-recognition of the role DOLs can play alongside traditional KOL-focussed engagement
- 5** Breaking-down traditional channel—and internal function—defined boundaries—including the need for closer collaboration between medical affairs and marketing—is critical in realizing the potential of social media

# Travelling at the new speed of science

Social media has transformed the way new scientific knowledge is diffused, debated and assimilated into clinical practice. More than 50 million HCPs worldwide are using social media, with a majority reporting they use it as a source of medical news.<sup>1</sup> In this context, the time is now for pharma companies to reassess why, when, how, and in partnership with whom they play a role in shaping modern scientific discourse on social media.



## Science goes social

The modern healthcare professional (HCP) no longer waits at the end of a long, linear chain of information sharing. Gone are the days of clinical behavior change being delayed by a reliance on presentations delivered by traditional ‘key opinion leaders’ and trial investigators at conventional scientific conferences, publication lags, and gradual diffusion of knowledge into the HCP community at large. Now, within seconds of release, new scientific findings are spread instantly and exponentially through social media networks, catalyzed by an increasingly diverse set of influencers and authorities, for self-curated consumption. The new scientific cascade is based on real-time, on-demand, democratized access to information, for patients, and HCPs alike.

## Science shared at speed

Among social media platforms, Twitter plays a key role in accelerating the spread of science. In a 2021 analysis, Fang and colleagues<sup>2</sup> describe the information “bridge” established by scientists who - with growing frequency - share new scientific findings by tweeting links to scientific publications. Through this process, their peer followers have the option to engage with new scientific information directly within the Twittersphere or click the embedded short URL to access the full-length publication

<sup>1</sup> <https://info.liveworld.com/definitive-hcp-social-media-guide>

<sup>2</sup> <https://asistdl.onlinelibrary.wiley.com/doi/full/10.1002/asi.24458>

in the conventional scientific landscape. More than a quarter (26.3%) of such Twitter clicks happen on the 1st day – and 80.5% within 10 days. Beyond Twitter's ability to enable instant information sharing, reductions in publication time lags – represented at the extreme end by an astonishing time-to-acceptance of just 3 days in the case of papers on Covid-19<sup>3</sup>, along with rising use of pre-print servers to circulate new findings ahead of peer-review<sup>4</sup> – are factors that are further empowering the potential for science to travel at speed. Some scientists are now creating Twitter bots to help them keep pace with the latest publications.<sup>5</sup>



**When science is spread on Twitter, it spreads not just at speed, but at scale – with the potential to instantly reach beyond the academic ‘ivory tower’ to reach a diverse set of global stakeholders, including the general public.**

### Science shared at scale

The rising availability of free, full-text journal articles also means that when science is spread on Twitter, it spreads not just at speed, but at scale – with the potential to instantly reach beyond the academic ‘ivory tower’ to reach a diverse set of global stakeholders, including the general public, whose engagement with science is ignored by traditional impact metrics. This offers one explanation for the observation that citation-based and Twitter-based impact metrics for scientific publications are weakly correlated.<sup>6</sup> Traditional citation-based metrics such as impact factors offer a long-term, retrospective measure of scientific impact within the relatively ‘elite’ community of academics and clinicians who publish research – specifically, based on the average number of citations per article over a 2 year period. In contrast, altmetrics that take into account the near-instant attention generated on Twitter about novel scientific findings are increasingly being adopted by journals, individual scientists and even academic institutions.<sup>7</sup>



**Some scientists are now creating Twitter bots to help them keep pace with the latest publications.**

<sup>3</sup> [https://www.researchgate.net/publication/341907295\\_Time\\_to\\_acceptance\\_of\\_3\\_days\\_for\\_papers\\_about\\_COVID-19](https://www.researchgate.net/publication/341907295_Time_to_acceptance_of_3_days_for_papers_about_COVID-19)

<sup>4</sup> <https://jamanetwork.com/journals/jama/fullarticle/2772743>

<sup>5</sup> <https://caseybergman.wordpress.com/2014/02/24/keeping-up-with-the-scientific-literature-using-twitterbots-the-flypapers-experiment/>

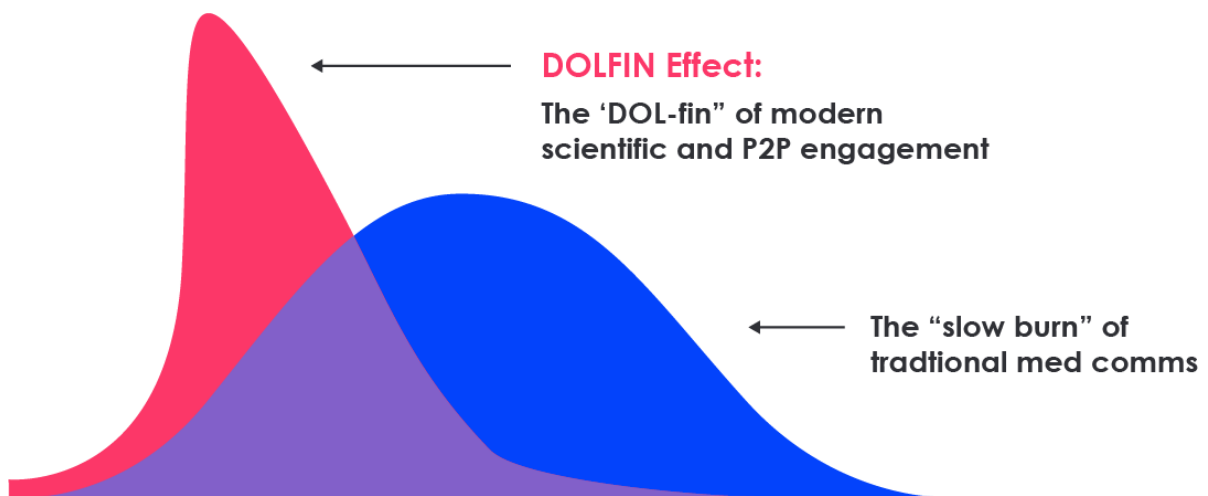
<sup>6</sup> <https://asistdl.onlinelibrary.wiley.com/doi/epdf/10.1002/asi.23101>

<sup>7</sup> <https://www.nature.com/articles/nj7463-491a>

# The DOLFIN Effect

## DOLs: The fuel that ignites the fire

Twitter has the power to democratize and accelerate the speed and scale of scientific exchange - but this power is not held, distributed or wielded equally. Through their digital savvy and large social media followings, aptly-named Digital Opinion Leaders (DOLs) play an outsized role in catalyzing the modern cascade of science. In contrast to the traditional model whereby scientific knowledge diffused gradually into the general HCP community and wider public (a traditional adoption curve), the emerging scientific cascade is “fin”-shaped and driven by DOLs, based on their ability to navigate and master the use of different platforms and channels to speed and shape the way science is spread. We call this phenomenon the DOLFIN Effect.



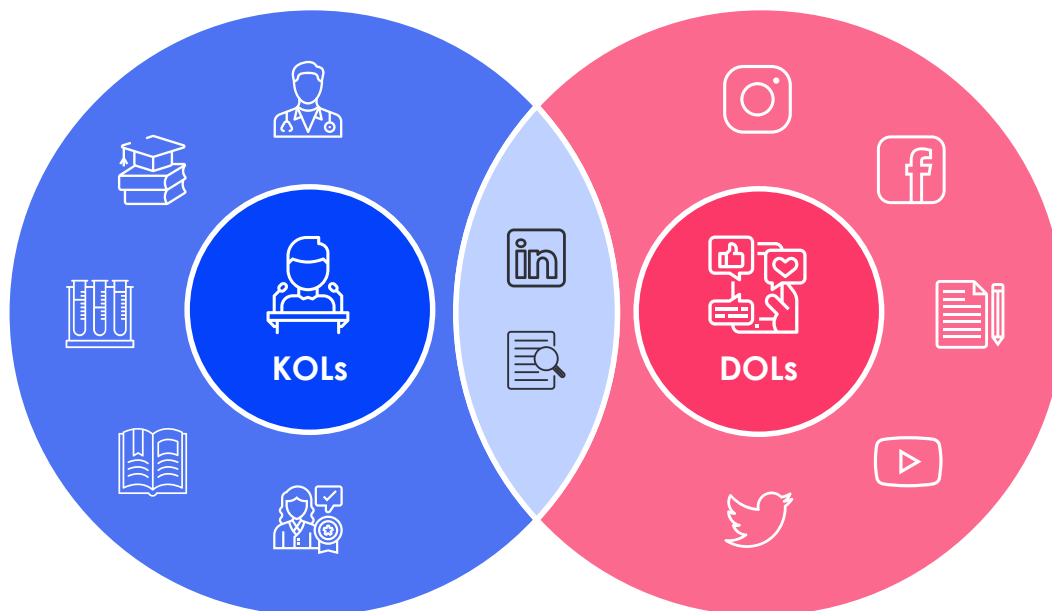
**NEW WORLD** DOLs → Everybody else

**OLD WORLD** Investigators → KOLs → Community HCPs → Patients/consumers



Digital Opinion Leaders (DOLs) have the ability to navigate and master the use of different platforms and channels to speed and shape the way science is spread.

## How to Spot the Differences



### Key Opinion Leader

- A physician or scientist
- Academic affiliation
- Track record of publications and clinical trials
- Commonly in senior positions within journals, societies and guideline committees
- Skews older
- Influence based on credibility and credentials

**Primary Use:** Credible communication of clinical trial data and high science topics via traditional scientific communication channels

### Digital Opinion Leader

- Often a physician or scientist - but can be a patient, allied HCP or other stakeholder
- Academic or clinical affiliation is not a pre-requisite
- Proficient in digital and social communication channels
- Large social media following
- Skews younger
- Influence based on cascading and curating scientific information to a large audience of connected stakeholders beyond the scope of traditional scientific communication channels

**Best Used For:** bridging the gap between HCPs & patients, raising awareness for breakthrough therapies or new categories, or reaching a broader audience of HCPs and peers and raising awareness for new therapies and findings

## Why the DOLFIN Effect matters

For pharmaceutical and biotech companies ('biopharms') seeking to retain a relevant role in shaping scientific exchange about the innovations they develop and bring to market, understanding and harnessing the DOLFIN effect is critical. In particular, biopharms' ability to design scientific engagement and communication strategies underpinned by knowledge of the DOLFIN Effect influences their success in achieving objectives such as:



Building connectivity and relationships with high-impact, high-reach influencers with the potential to influence peer perception at scale - who may not be the same individuals engaged early in the clinical and commercial development journey to support the design, execution and communication of clinical trials

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Pre-launch market developing and conditioning during the gap between when organic peer-to-peer engagement led by DOLs and other early-adopters begins to shape scientific discourse around emerging therapies and findings, and the period when regulations and approvals enable biopharms to execute sponsored medical education and promotional activities

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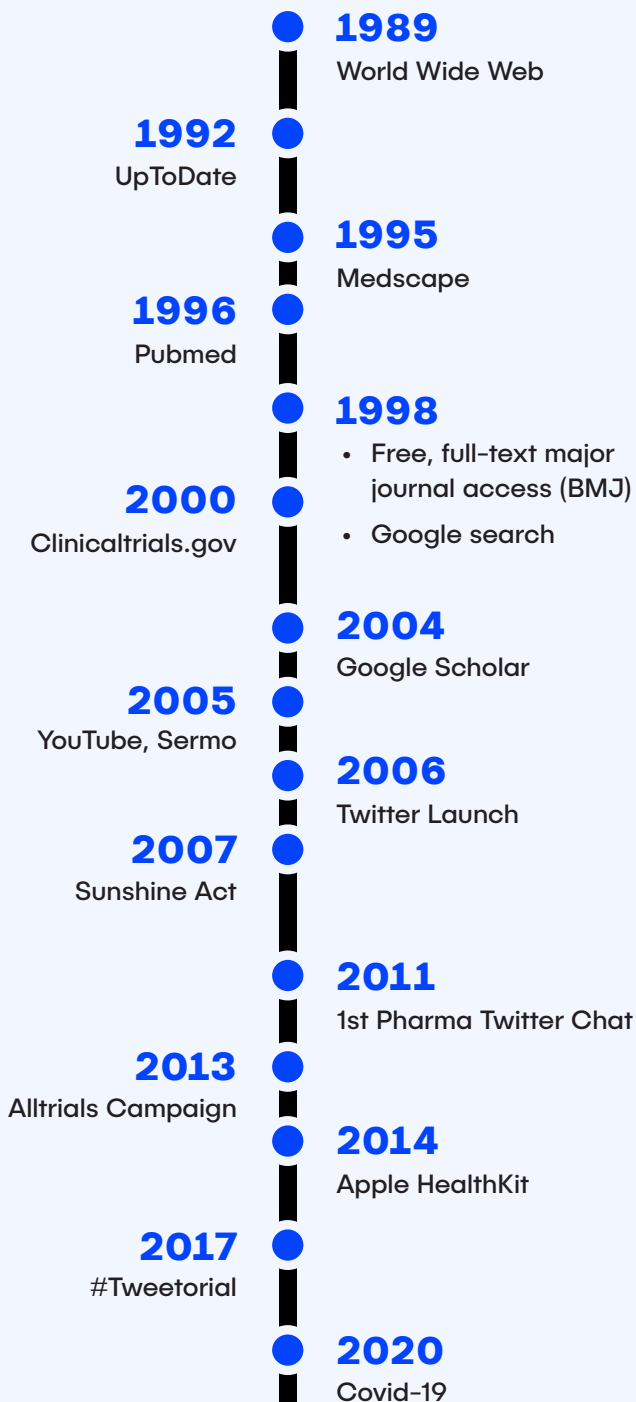


In both the pre and post-launch phase, effectively reaching the wider universe of practising and prescribing HCPs - whose content and engagement preferences, like the rest of us, have shifted remarkably in recent decades and amid the Covid pandemic



# A brief history of the DOLFIN Effect

## The Digitization and Democratization of Scientific Knowledge: 1990–2021



## The democratization of science

Whilst gaining prominence amid COVID-19's impact on virtual scientific exchange, the DOLFIN Effect has not emerged overnight. Rather, the DOLFIN Effect has been enabled by a 30+ year process wherein scientific information has been digitally democratized. In the first 15 years following the advent of the web, we witnessed the emergence of open-access and full-text online journal publications, freely-searchable databases of clinical trials and publications, and major online medical education sites. These advances have occurred against a backdrop of a broader movement towards ever-greater public transparency and individual-empowerment reflected – for example – by new requirements for disclosure of industry payments to HCPs (the Sunshine Act), prominent campaigns to demand greater clinical trial reporting transparency (eg., AllTrials), efforts to place health records and EHRs in the hands of the individual, and the rise of the 'citizen science' movement. The emergence of both public (Twitter, YouTube) and gated HCP social media platforms (Sermo, Doximity) has been a critical force in enabling HCPs and the public at large to play a more direct and participatory role in consuming, curating and cascading the latest advances in science.

## The rise of DOLs

The digital democratization of science has given rise to a new breed of influencer: the DOL. The 'DOL' acronym – and many variations thereof – has been used to describe a diverse category of online influencers. Contrasted with traditional KOLs, DOLs need not possess the conventional hallmarks of scientific influence based on publication records, citation metrics, conference presentations, clinical trial investigator responsibilities, grant funding, or involvement in professional societies, guidelines, and journal editorial boards. Whilst our focus here is primarily on HCP–scientist DOLs, it is not even a pre-requisite to be a physician or academic scientist by training. In rare diseases, in particular, so-called “patient opinion leaders” are often among the most vocal, active and influential DOLs, helping to shape which topics are elevated for discussion in specific, connected communities.

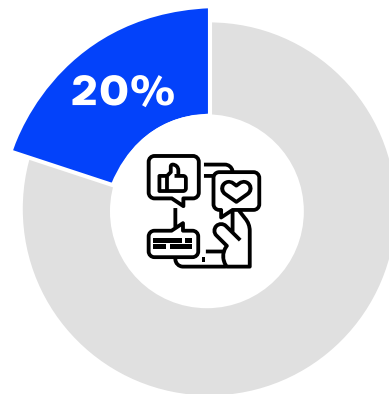
**In some cases, DOLs generate interest in specific topics brought forward by other experts:**



Dr. Mike Varshavski



Of note, only about 20% of traditional KOLs have a significant presence on social media.<sup>8</sup> Whilst uncommon, the attributes of DOLs and KOLs are however sometimes present in the same individual: the term ‘connected opinion leader’ (COL) has been used to describe individuals who possess both traditional and digital influencer attributes, and play a key role in bridging digital and traditional communication channels. Demographics provide one explanation for why COLs (KOLs who are DOLs) remain relatively rare. The

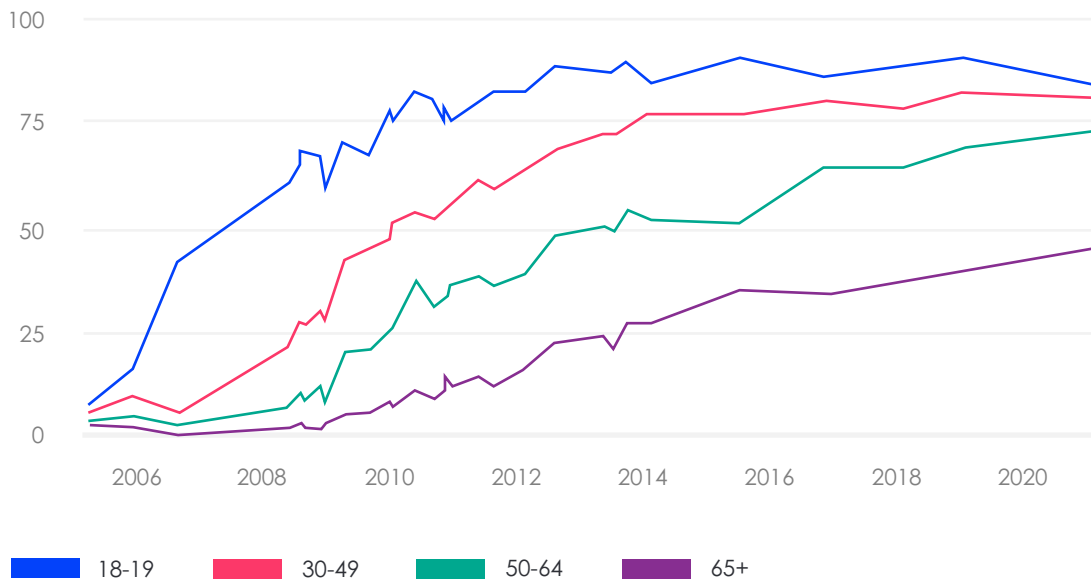


Only about **20% of traditional KOLs** have a significant presence on social media

<sup>8</sup> <https://info.liveworld.com/definitive-hcp-social-media-guide>

time required to acquire traditional status as a KOL – typically requiring a sustained track record of achievement on academic and publishing metrics – naturally places many of today’s KOLs among the 50+ age cohorts who have been slower to adopt social media in general.<sup>9</sup>

**% of U.S. adults who say they use at least one social media site, by age**



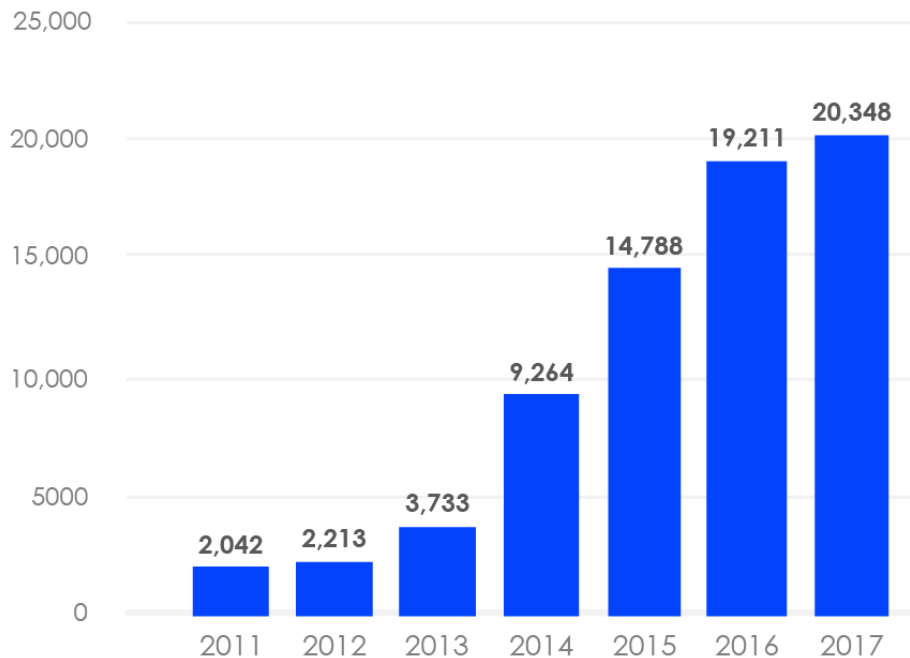
Note: Respondents who did not give an answer are not shown.  
 Source: Surveys of U.S. adults conducted 2005-2021  
 PEW RESEARCH CENTER

**Conferences redefined: doctors in dressing gowns**

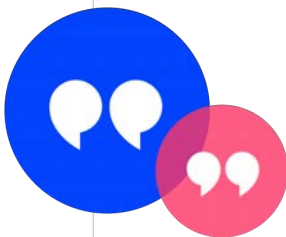
Notwithstanding the lack of a universally-adopted set of criteria for identifying and categorizing individuals as DOLs or COLs, and the rarity of the latter, there is consensus that they play an increasingly important role in shaping modern scientific exchange. Live tweeting during scientific conferences, leveraging conference and topic-based hashtags, represented one of first prominent incarnations of the DOLFIN Effect amid the rise of DOLs. As one example, an analysis of Twitter mentions of the #ASCO hashtag across 2011-2017<sup>10</sup> reveals the rapid rise in unique Twitter users over time, rivalling the number of registered attendees who physically attend this major annual oncology conference.

<sup>10</sup> <https://www.klick.com/health/news/blog/social/seven-years-of-asco-by-the-numbers/>

## Growth in Twitter users of #ASCO conference hashtag



Way back in 2012, the rheumatologist Dr Ronan Kavanagh<sup>11</sup> articulated the impact that Twitter was beginning to have on how clinicians and scientists engaged with traditional medical conferences, in a manner prophetic of the post-COVID virtual norms that increasingly define the conference experience, when he memorably wrote on his blog:



*This year I'll be attending the ACR virtually, **in my dressing gown**, from the comfort of my home office. I'll be **dipping in and out** of the meeting during the day, **after the kids have gone to bed** in the evening and before I go to work. I have set up a list of all the rheumatologists I know who will be tweeting, following the hashtag for the meeting (#ACR2012)*

— Dr Ronan Kavanagh, Rheumatologist

<sup>11</sup> <https://ronankavanagh.ie/blog/attending-a-medical-meeting-in-my-dressing-gown/>

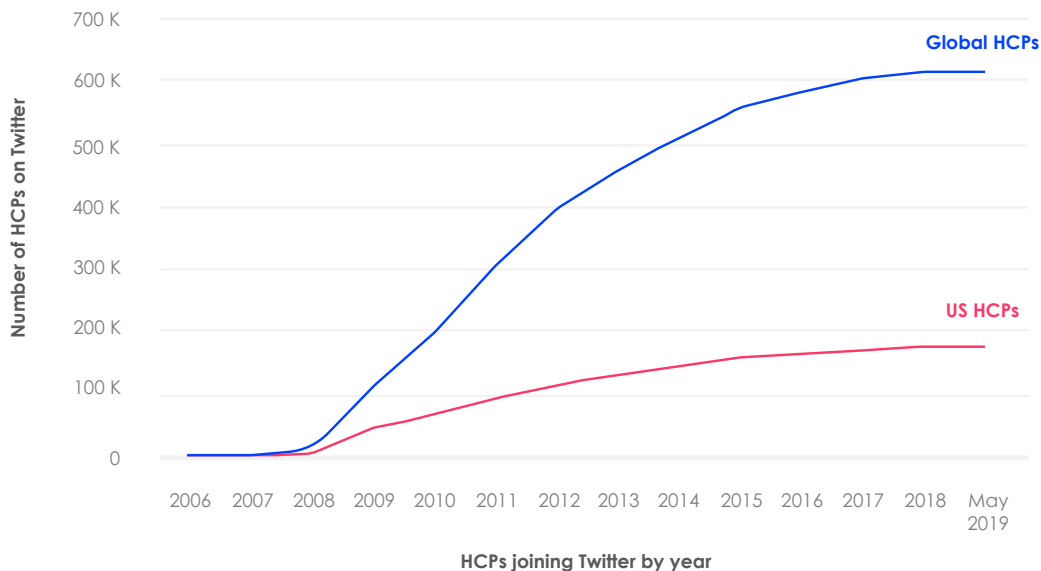
## The mass migration: doctors take to Twitter

Personal wardrobe choices aside, the ‘doctors in dressing gowns’ phenomenon has now gone mainstream. A 2019 analysis reported “a rise in the use of social media by HCPs, in particular on Twitter, with growth year over year to more than **640,000 HCPs on Twitter globally**” including professional use of Twitter as a platform where “trial and study data as well as medical approvals are shared and discussed by HCPs”.<sup>12</sup> Similarly, In a 2021 analysis by LiveWorld<sup>13</sup>, it was reported that “a survey of more than 4,000 physicians showed that virtually every physician uses social media for personal reasons, while two-thirds use it for professional reasons”. In addition to the “walled garden” HCP social communities, this included HCP’s using public platforms for professional use, including YouTube, Facebook, Twitter, LinkedIn, and Reddit. In a study of HCPs in the North East of England, it was reported that “in 2019 up to 50% of their posts were health related posts, up from 10% in 2013”.<sup>14</sup> For some HCPs, a sense of moral obligation to take action in countering COVID misinformation has been the impetus for taking to Twitter with the goal of making “facts go viral”.<sup>15</sup>

The speed of this mass migration of HCPs – to Twitter, in particular – was charted in a 2019 analysis of verified HCP Twitter accounts.<sup>16</sup>

### Growth of Healthcare Professionals on Twitter

Analysis of HCPs on Twitter by date joined, from CREATION Pinpoint database of human verified and validated HCP accounts



<sup>12</sup> <https://pharmaphorum.com/views-analysis-digital/whathcpsthink-5-digital-behaviours-when-hcps-use-social-media/>

<sup>13</sup> <https://info.liveworld.com/definitive-hcp-social-media-guide>

<sup>14</sup> <https://creation.co/knowledge/why-hcps-use-social-media-in-their-professional-lives/>

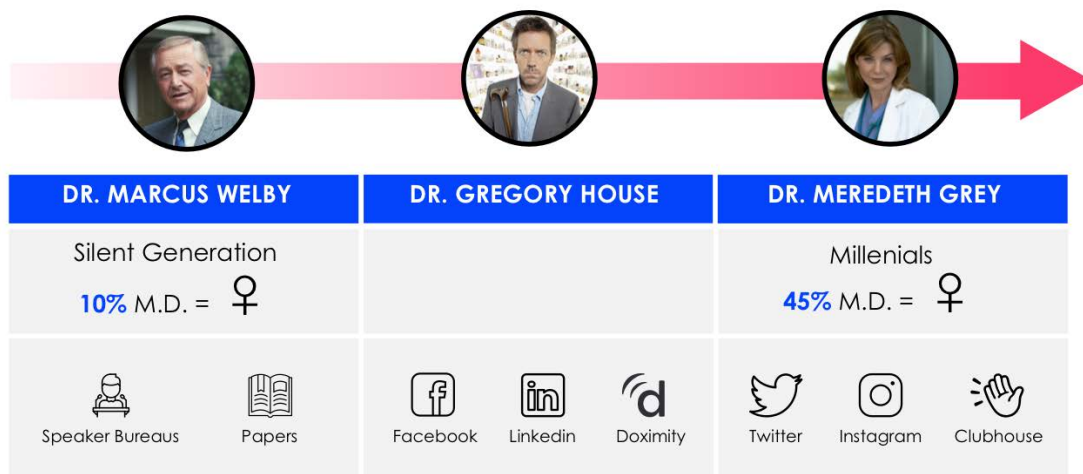
<sup>15</sup> <https://www.wsj.com/articles/doctors-are-tweeting-about-coronavirus-to-make-facts-go-viral-11589558880>

<sup>16</sup> <https://creation.co/knowledge/more-healthcare-professionals-are-on-twitter-than-ever-before/>

Moreover, these trends look set to continue. It has been predicted that “In 5 years, 75% of HCPs will be digital natives”.<sup>17</sup> Even more important than the volume of HCPs using social media, are the implications this has for where HCPs source information about new products and the influence of traditional biopharm-sponsored communication and promotional activities. Amid evidence that HCPs are increasingly using social media to consult their peers, a SERMO study of global physicians<sup>18</sup> reported that:

- » **84%** say that reading a peer’s review of a drug would influence their perception of a drug (n=109)
- » **77%** believe their peers’ opinions of drugs are more credible than the information they receive from the biopharma industry (n=108)

## The Changing Face of HCPs



Interestingly, in an analysis presented by LiveWorld, we see that millennial HCPs are more likely to be on social media, use social media to consume medical news and to read KOL posts on social media, relative to their older peers – but may be less likely to be influenced by those KOL posts. This dramatically reinforces the reality that – beyond the democratization of scientific knowledge described earlier – scientific influence is also being democratized and diversified. For biopharms, communication strategies that are over-reliant on traditional KOLs – especially those who have no digital or social media presence – may accordingly become less effective over time.

<sup>17</sup> <https://info.liveworld.com/definitive-hcp-social-media-guide>

<sup>18</sup> <https://www.sermonet.com/blog/sermo-speaks/weve-collected-1-million-physician-drug-ratings-and-thats-only-the-beginning/>

## How does younger HCPs' social media use differ from their older colleagues?

	MILLENNIAL HCPS	ALL HCPS
Use social media	87%	80%
Use social media for medical news	80%	50%
Read KOL posts in social media	60%	50%
<b>Are influenced by KOL posts</b>	<b>31%</b>	<b>40%</b>
Use Youtube in their practice	40%	10%
Rely on social networks and message boards for work	37%	25%

Source: LiveWorld, 2021

### Anyone can become an educator

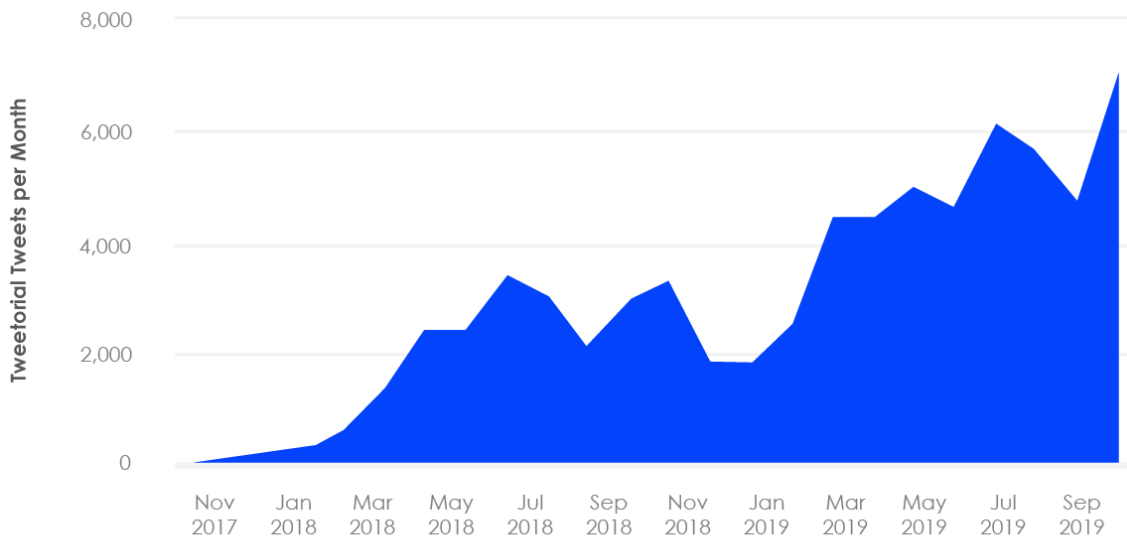
The growing popularity of Tweeterials provides one example of how scientific influence is being democratized and diversified beyond the realm of traditional KOLs. Tweeterials are a short-form, peer-curated synthesis of knowledge - typically in the form of a 10-15 tweet thread that addresses a specific topic of interest in response to a question posed by the author. In contrast to the relatively 'exclusivity' of traditional KOL-led medical education channels - noting that relatively few HCPs are among those publishing peer-reviewed journal articles or presenting at conferences - the Tweeterial format empowers anyone, who has motivation to do so, to become an educator. In a world where practising HCPs are stretched for time, Tweeterials - like medical podcasts - may fill an important gap in addressing the need for educational content, curated by peers, that can be consumed efficiently on any device. It seems plausible to anticipate that future approaches to publication planning might include partnership with DOLs or KOLs in translating long-form, peer-reviewed publications into a Tweeterial-

like, short-form format, to be cascaded on social media to a wide audience. Indeed, some mainstream journals – including the NEJM<sup>19</sup> and JACC<sup>20</sup> – have already embraced and helped to legitimize the Tweetorial format.

An analysis by Symplur charts the rapid rise of Tweetorials since 2017.<sup>21</sup>

### Growth of Tweetorials between 2017 and 2019

Monthly volume of tweets related to tweetorials. Data from the Healthcare Social Graph ® using keyword and hashtag versions of “tweetorial” and “medthread” as dataset proxies. Nov 2017 to Oct 2019.



### A virtual campfire where stakeholders gather

Much as formats like the Tweetorial democratize the role of educator, Twitter hashtags have democratized the power of congregation away from live events and conferences.

As the bell curve of physicians followed early adopters into Twitter and other social media platforms, they quickly embraced the power of hashtags as a means to connect with peers on specific topics of interest. Over time, there has been a huge growth among HCPs of specialized communities utilizing specific hashtags, such as the examples below.

<sup>19</sup> <https://twitter.com/nejm/status/1175839679435829248?lang=en>

<sup>20</sup> <https://twitter.com/jaccjournals/status/1251546879332155392?lang=en>

<sup>21</sup> <https://www.simplur.com/blog/tweetorials-from-early-beginnings-to-huge-growth-and-beyond/>



## #Hashtags Drive the Conversation

Consider following and targeting the following hashtags:

### MEDICAL HASHTAGS

- ▶ #HCSM
- ▶ #MedTwitter
- ▶ #MedEd
- ▶ #SoMeDocs
- ▶ #MedHumChat
- ▶ #ClinicalTrialsSM

### INDICATION HASHTAGS

- ▶ **Hematology:**  
#MPNSM
- ▶ **Oncology:**  
#ImmunoOnc, #ImmunoTherapy, #RadOnc, #cancerresearch
- ▶ **Pathology:**  
#NeuroPath, #BSTPath
- ▶ **Conferences:**  
#ASH19, #ASH2019, #ASHsm, #ASCO19, #ASCO2019



In essence, hashtags have come to represent a virtual campfire where HCP and patient stakeholders can gather – across the boundaries of discipline, geography and time zone – any day of the year and in ways that were previously less possible. One representation of this has been the Twitter chat – leveraging a hashtag as a basis for a live, moderated, twitter-based discussion on a topic of interest. In one example, a Twitter chat hosted by SBM in May 2018 (#BehavioralMedChat) focused on cardio-oncology brought multiple stakeholders together for a moderated 6-member panel discussion featuring cardiologists, oncologists, nurses, social workers and patient advocates, generating 603 Tweets from 105 unique participants, with > 1 million impressions within 24 hours.<sup>22</sup> Early industry adopters of the Twitter chat format included AstraZeneca with the first biopharma-hosted Twitter chat in 2011 (#rxsave) and Boehringer Ingelheim, whose #COPDChat was showcased as a business success story by Twitter in 2014.<sup>23</sup>

After impacting every medical speciality simultaneously, the COVID pandemic has powerfully illustrated Twitter's unique power in enabling communication and collaboration across specialities, borders and time zones. Post-pandemic, such collaboration may shape research and clinical practice in many areas.<sup>24</sup>

<sup>22</sup> <https://cardiooncologyjournal.biomedcentral.com/articles/10.1186/s40959-020-00072-w>

<sup>23</sup> [http://www.pmlive.com/blogs/digital\\_intelligence/archive/2014/february/twitter\\_praises\\_boehringers\\_use\\_of\\_its\\_platform\\_542775](http://www.pmlive.com/blogs/digital_intelligence/archive/2014/february/twitter_praises_boehringers_use_of_its_platform_542775)

<sup>24</sup> <https://rapm.bmj.com/content/early/2020/04/21/rapm-2020-101530>

## Social media as an alternative to live biopharma-sponsored events

For biopharma marketing and medical affairs teams, social media – via hashtags, Twitter chats and other formats – provides a relatively untapped opportunity to bring together key stakeholders outside of the confines of live meetings – with the bonus of reducing the financial, logistical and potentially even regulatory barriers associated with those traditional formats. In November 2020, the Office of Inspector General<sup>25</sup> fired a warning shot across the bow of biopharma companies who may be considering an in-force post-Covid resumption of in-person speaker programs, with a special fraud alert that implicitly signalled a preference for virtual formats, which carry fewer questions about the appropriateness of biopharma-sponsored education:



*The risks associated with speaker programs will become more pronounced if companies resume in-person speaker programs or increase speaker program-related remuneration to HCPs. Companies should assess the need for in-person programs given the risks associated with offering or paying related remuneration and consider alternative less-risky means for conveying information to HCPs.*

The existential crisis that may be facing biopharma speaker programs – and a sign of what may be to come – was further reinforced by the Corporate Integrity Agreement and settlement reached with Novartis in June 2020<sup>26</sup>, which included an agreement to limit speaker events to (1) virtual formats only, with a (2) \$10,000 individual and \$100,000 total cap on speaker remuneration, and a (3) limit on the timeframe of such events to within 18 months post-launch.

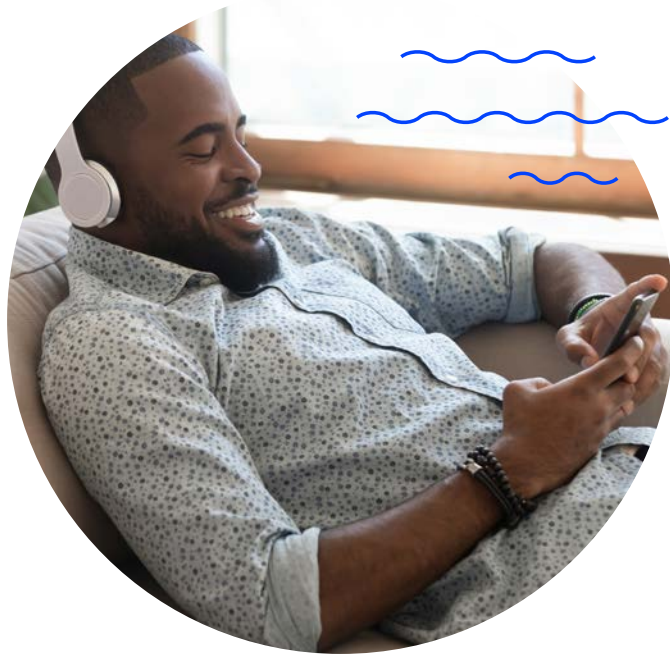
## A new era of sonic peer-to-peer engagement

As biopharma explores the opportunity to leverage social media as an alternative means of enabling peer-to-peer education and congregation, new opportunities are emerging that make this more possible than ever. One particularly exciting opportunity arises from the emergence of audio-

<sup>25</sup> <https://oig.hhs.gov/fraud/docs/alertsandbulletins/2020/SpecialFraudAlertSpeakerPrograms.pdf>

<sup>26</sup> [https://oig.hhs.gov/fraud/cia/agreements/Novartis\\_Corporation\\_06302020.pdf](https://oig.hhs.gov/fraud/cia/agreements/Novartis_Corporation_06302020.pdf)

only social media platforms such as Clubhouse. Clubhouse, which launched in March 2020 and has >10 million users, enables members to host or join audio-only drop-in conversations (“rooms”) as well as to create or join “clubs” based on specific topics. Attendees are muted but can raise their hand to be brought on “stage”. Among the more established Clubhouse clubs with a medical focus is “Virtual Grand Rounds”<sup>27</sup>, with ~25,000+ followers and rising. Clubhouse offers the opportunity for these interactions to be private, invite-only – and as standard, discussions are also live-only, not recorded, and not accessible after the event. With HCPs, like the rest of us, increasingly screen- and Zoom-fatigued, an audio-only platform like Clubhouse – with its privacy-enabling options – represents an interesting opportunity for how biopharms could explore new alternatives to live or virtual peer-to-peer events, with the potential to reach target audiences at scale from the comfort of their office or home.



Amid the surging popularity of Clubhouse, others have joined the rush to be part of this new era of sonic social engagement. In May 2021, Twitter rolled out “Twitter Spaces” which similarly offers the potential to host or join audio drop-in conversations (“spaces”) that are live-only and not accessible afterwards – though notably, these spaces are “public” and thus present a challenge for pharma-sponsored events that would seek to restrict participation to HCP-only audiences. In April 2021, Facebook also announced it was creating a new “audio room” feature, almost identical to Clubhouse and Twitter spaces, with the initial roll out from May 2021 limited to prominent public figures.

The potential role of social media platforms – such as Twitterchats or Clubhouse conversations – in enabling the digital-transformation of traditional peer-to-peer events extends beyond the ability to host such events online – to include management and coordination of KOL advisory

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<sup>27</sup> <https://www.joinclubhouse.com/club/virtual-grand-rounds>

boards, speaker bureaus and working groups. As one example of this, Allergan have developed an invitation-only facebook group to manager its speaker bureau for ULBRELVY with 190 members.<sup>28</sup>

## 24/7 peer-to-peer support: the walled gardens

Whilst public platforms like Twitter have been and remain critical to modern scientific exchange, some HCPs have been reluctant to engage based on privacy and other concerns.<sup>29</sup> To quote Ron Benshoshan from SERMO<sup>30</sup>, “they are not comfortable talking shop on consumer social media. There is simply too much liability and privacy concerns.” Since Sermo launched in 2006, busy physicians have found 24/7 peer-to-peer support on a growing variety of HCP social community platforms—see insert below—which are closed to anyone without professional credentials. Posting on ‘private’ networks, physicians are free to ask questions and seek clinical decision support without concern for liability; a ‘safe space’ to learn and deepen their clinical expertise. Sermo, Doximity and Figure 1 have all succeeded in building significant networks of connected HCPs who congregated within these “walled gardens” in search of direct peer-to-peer and professional support.



- **2011**
- Largest US network: with over 70% of U.S. doctors and 45% of all NPs/Pas
- Practical tools for the busy physician: video calls, find experts, CME



- **2006**
- 1,3MM HCPs across 150 countries
- Anonymity focus: enabling honest peer-to-peer conversations and crowdsourcing



- **2013**
- Report >1 million members, available in 190 countries
- “Instagram for doctors”

<sup>28</sup> <https://www.facebook.com/groups/632747310837140/discussion/preview>

<sup>29</sup> <https://pubmed.ncbi.nlm.nih.gov/33179209/>

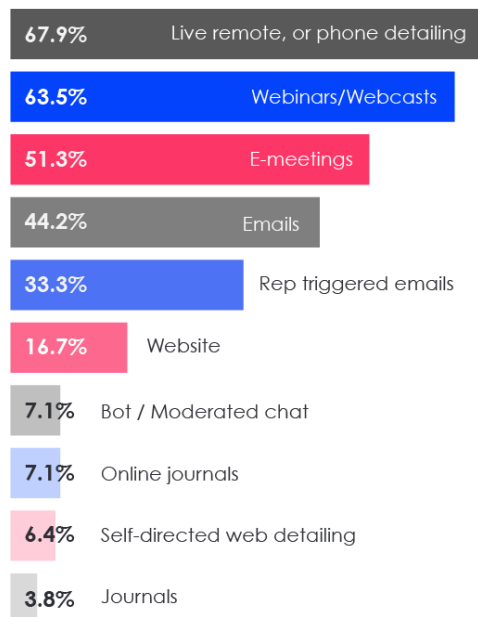
<sup>30</sup> <https://www.klick.com/health/news/blog/social/sermo-investigates-physician-social-preferences/>

# Covid-19 as a catalyst of the DOLFIN Effect

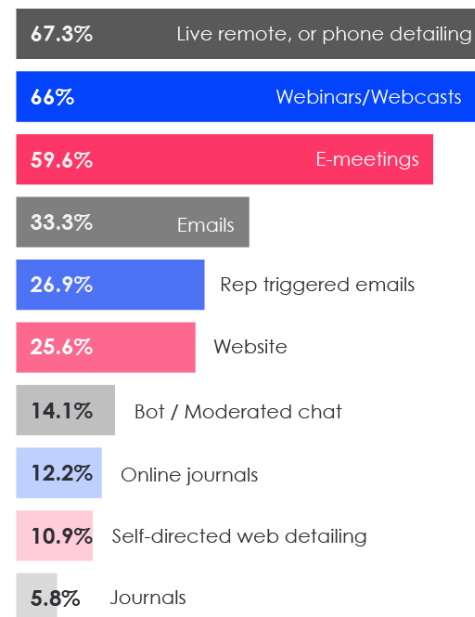
## The “shift to virtual”

COVID has forever changed the way HCPs connect with each other, their patients and with biopharms, in ways that will further accelerate the democratization of scientific knowledge and influence. One consequence of this accelerated “shift to virtual” is the reality that medical congresses of the future will be different. The Nature publishing group,<sup>31</sup> for example, reported survey findings suggesting that, post-pandemic, 74% of respondents want a virtual option when attending medical conferences – which are traditionally the main stage for traditional KOLs to exert their influence. Beyond the likelihood of hybrid formats, it is likely that the expansion of the remote-attendee audience will only further enhance the importance of social media as a means of live, peer-to-peer engagement and curation of knowledge. Amplifying pre-Covid trends<sup>32</sup>, Twitter in particular may play an even greater

Which three channels have been the most impactful for remote HCP engagement during the COVID-19 pandemic?



Looking ahead, which three channels do you believe will be leveraged the most for HCP engagement?



(Respondents were able to choose more than one answer)

<sup>31</sup> <https://envnewsbits.info/2021/03/19/scientists-want-virtual-meetings-to-stay-after-the-covid-pandemic/>

<sup>32</sup> <https://link.springer.com/article/10.1007/s11899-021-00620-w>

role in shaping discourse at future conferences. Additionally, there is data to suggest that webinars and webcasts will be a key channel for biopharma companies seeking to engage HCPs remotely.

### **Elevated expectations for high-value content experiences**

Beyond just the COVID-catalyzed shift to virtual engagement, we are witnessing an increasing trend towards HCPs seeking answers from medical affairs teams, who have been responding to a much higher volume of requests for information from doctors, rather than promotional sales reps.<sup>33</sup> This parallels a more general demand for insight-rich content: “The clear request from customers has been that they want more value-added content. In biopharma, value added equals more science,” says Harmony Garges, Chief Medical Officer with ViiV Healthcare.

In addition to HCPs seeking more insight-rich and scientifically credible content, broader societal-level trends may increasingly reshape the “experience” of how such content is consumed. HCPs, after all, are simply people – people who are accustomed to consuming content through platforms like Spotify, Netflix, YouTube and Amazon, wherein they receive AI-driven, peer-based recommendations for relevant content, that can be easily organized and consumed (e.g., playlists) across a myriad of technologies and devices that, increasingly, includes screen-free, audio options. Social media will play a key role in both serving and spreading such content, for patients and HCPs alike. From Vox’s “Explained” series on Netflix, to Stanford uploading entire courses to Youtube, and the rise of medical podcasts – we are on a trajectory to a world where scientific information is increasingly digitized, democratized and ultimately devoured in new and forever-evolving ways.

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<sup>33</sup> From Beyond COVID-19: Life science reimagined, Ernst & Young / Reuters Event [\[event link\]](#) [\[whitepaper link\]](#)

# Decoding the DOLFIN Effect: Implications for Biopharma

## From paternalism to participation

The trends we have explored reveal distinct facets of how social media – and in particular, the DOLFIN effect – is reshaping modern scientific discourse in a myriad of ways. For biopharma seeking to determine the implications of these changes, the key insight is this: we are witnessing a shift from paternalistic to participatory scientific exchange.

The top-down, KOL-led, linear, largely-didactic information flow model upon which traditional scientific exchange and medical communication strategies were built has been upturned. It is being replaced by a new participatory form of participatory scientific exchange, wherein scientific information is instantly and publicly accessible, socially-spread and community-curated in an audience-agnostic way. HCPs (and other stakeholders) have never wielded more power in the choices they make about the content, channels and sources of influence that define their own experience of seeking and consuming scientific knowledge.

## In this new world, it has never been more true that:

- The ability to educate and influence is no longer exclusively 'owned' by traditional KOLs, or even HCPs
- Even if an individual is not a top-tier KOL or DOL, they can play a key critical role in driving and amplifying the local cascade of scientific knowledge and medical education within their own personal, local, and professional network
- Patients – and other non-scientist, non-clinician stakeholder groups – can both engage in a more direct and meaningful way, and do so in near real-time based on equality of access to information
- By the time information appears at a conference or in a peer-review journal, the conversation may have already advanced and the window of opportunity to shape the narrative may already have shrunk

The shift from paternalism to participation—which is already well-advanced—is being catalyzed by HCPs' use of social media. DOLs, in particular, are the fulcrum of this change, increasingly serving as a key source of connection between individuals, information sources and content experiences.

## Biopharma has been slow to adapt

While the phenomenon we call the DOLFIN effect has been gathering pace for 15 years, and gradually overturning the old model of scientific exchange, in many ways, biopharma has been slow to adapt. In particular, we see six key ways in which the pace of adoption has been inadequate:

- **KOL centrality:** Failure to appreciate the rising importance of DOLs and appropriately integrate them within the stakeholder engagement and medical communications strategies typically led by medical affairs
- **Location centrality:** Under-serving and failing to recognize the importance of remote audiences engaging on social media during live events held in a specific location
- **Conference centrality:** Even among companies who understand the power of reaching the larger, remote audience tuning in via social media, many companies have been slow to seize the opportunity to do so outside of major conferences and events
- **Self centrality:** In some cases, biopharma has treated social media merely as a promotional advertising channel - engaging as if the audience were 'targets' to whom messages about specific products could be served, rather than understanding social media as a virtual community who seek high-value, clinically-relevant content and who may actually push back against efforts infiltrate their 'sacred' space with promotional content<sup>34</sup>
- **Function centrality:** The failure to recognize social media as a platform for peer-to-peer and direct scientific exchange in some cases derives from a historical, channel-based delineation of responsibilities across functions - with "social" typically owned by marketing, and medical affairs owning KOL relationships and scientific communications
- **Compliance centrality:** Whilst recognizing the critical importance of ensuring all communications and engagements are compliant, it is nonetheless also true that scientific exchange on social media travels at a pace beyond that with which traditional MLR review processes are designed to accommodate.

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<sup>34</sup> <https://www.linkedin.com/pulse/should-pharmas-use-medical-conference-hashtags-curbed-len-starnes/>



## Now is the time

In spite of the above challenges, the opportunity social media-based engagement offers to drive scientific exchange at speed and scale is unquestionable. In a post-pandemic world, we believe now is the time for pharma and biotech to seize this opportunity with both hands, and update their scientific exchange model.

## Beyond boundaries: a functionally-agnostic approach

For biopharms seeking to evolve their social media strategy for the DOLFIN era, a starting point is to recognize the potential value of a more audience-centric, functionally-agnostic and holistic approach. Distinct from many other communication platforms, social media is a scientific watering hole at which all stakeholders may drink simultaneously - including patients, caregivers, patient advocacy organizations, professional societies, practising physicians and both DOLs and KOLs. These audiences may fail to discern - or care - whether content emanating from biopharm innovators and their partners is ultimately funded by a medical affairs, corporate communications, or marketing budget. While branded advertisements are tolerated if not actively sought out by these audiences, it is critical to understand what each stakeholder group values and may be seeking within the broader concept of scientific exchange. Closer cross-functional collaboration - especially between medical affairs teams responsible for traditional peer-to-peer medical communications and publication activities and marketing teams responsible for omnichannel content strategy - is almost certain to be a core element of the required evolution in approach. To this end, useful questions that biopharm personnel with different functional responsibilities - in particular, those working in relatively siloed organizational models - may find value in reflecting on include the following.



**Social media is a scientific watering hole at which all stakeholders may drink simultaneously**





## MEDICAL AFFAIRS:

- Does our current KOL identification methodology allow us to identify DOLs?
- Are we actively supporting our traditional KOLs in acquiring the skills of DOLs?
- How should we effectively integrate DOLs into our existing KOL engagement strategy – from clinical trials, to medical communications, and beyond?
- Are we exploiting the full range of opportunities afforded by social media to drive peer-to-peer scientific exchange, 365 days a year?
- What are the social-media equivalents of traditional communication deliverables including publications, conference presentations, and live peer-to-peer meetings?



## MARKETING:

- Are we looking at social media solely as a promotional channel for uni-directional, branded communications?
- Are we missing opportunities to harness DOLs and social media to more effectively drive disease state education and awareness campaigns?
- Do we have the appropriate level of collaboration and coordination across functional lines including with medical affairs and corporate communications?
- What would it mean to shift our content strategy from a 'communication' (selling) to 'community' (serving) orientation?
- Do we have appropriate tools, platforms and processes in place to meaningfully monitor and participate in scientific discourse with the communities of stakeholders we are trying to reach?

# Klick's DOLFIN Framework

To help our clients navigate the shift from paternalistic to participatory scientific exchange, Klick has developed the DOLFIN Framework. This framework is designed to help our client partners understand and explore the untapped opportunities for HCP social media engagement, identify and develop connections with DOLs, and ultimately to develop strategically powerful engagement strategies based on these insights and relationships. The DOLFIN Framework is built around four key solution areas, architected based on our experience and best-practices in partnering with our clients to solve key recurring challenges, as follows:



## DISCOVER

A workshop-driven process to help organizations discover the untapped potential of DOL engagement and dissemination of science via digital channels



## DEVELOP

An activation-ready training platform to support existing KOLs in acquiring the skills and online influence of DOLs



## DETECT

A data science-driven methodology for identifying overlooked KOLs & DOLs



## DESIGN

A strategic and tactical framework to design personalized DOL engagement plans



## Get In touch



**To find out more about Klick's DOLFIN Framework, contact:**

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