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Editorial

Moving From KOLs to DOLs - the changing influence of healthcare providers

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After obtaining his undergraduate degree at Boston University, Dr. Sharan received his medical degree from the University of Medicine and Dentistry of New Jersey. He completed his orthopedic residency at Albany Medical Center and a spine surgery fellowship at NYU Langone Orthopedic Hospital (formerly the Hospital for Joint Disease). He was named an AO Spine Fellow and an AAOS Washington Health Policy Fellow. In 2015, he completed a healthcare management degree titled "Masters in Health Care Delivery Science" at Dartmouth College.

Dr. Sharan began his career as Chief of the Orthopaedic Spine Service at Montefiore Medical Center. He then continued on as a co-director at Westmed Spine Center before joining the team at NJ Spine and Wellness. He is licensed to practice in the state of New Jersey.

Committed to providing the community with high-quality spine surgical care, Dr. Sharan has been recognized as a Best Doctor by Castle Connolly, New York Magazine Best Doctor, along with Westchester Magazine Best Doctor. Dr. Sharan has received numerous academic distinctions for his research with over 100 publications, abstracts, and book chapters. He has co-edited a textbook entitled "Basic Science of Spinal Diseases," and has been featured in publications such as Becker's Spine Review, Los Angeles Times, Reader's Digest, and The Star-Ledger.

Visit the Awake Spinal Fusion Website

Connect with Dr. Sharan on LinkedIn

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Conflicts of Interest Statement for Dr. Sharan

b After completing his fellowship Dr. Dasa and his wife, decided to begin their careers as faculty at LSUHSC to help rebuild post Katrina. In his tenure at LSU he has developed surgical techniques to allow outpatient opioid free total knee replacement and pioneered the use of cutting edge technologies such as iovera. He has presented and published his research internationally in some of the world's leading publications and meetings. He serves in leadership roles both regionally and nationally and was most recently involved in national expert panels to help CMS redesign the delivery of total joint replacements and establish national guidelines on the management of knee arthritis. He currently serves as vice chair for academic affairs for the department of orthopedics, Irvin Cahen endowed chair for research, chair of the LSU clinical practice leadership group. He is the co-founder and chief medical officer for an innovative start up, SIGHT Medical and helped co found a novel medical education platform called DOC SOCIAL. His research interests cover all areas of adult orthopaedics focusing on joint replacement, knee arthritis, health disparities and outcomes research. He is one of the few surgeons in the world performing outpatient opioid free total knee replacements allowing patients to recover in the shortest time possible.

Visit Dr. Dasa's Profile on the LSUHSC's Website

Visit Dr. Dasa's Profile on Doc Social

Connect with Dr. Dasa on LinkedIn

Visit the Open Payments Data Page for Dr. Dasa

Conflicts of Interest Statement for Dr. Dasa

c Mr. Flickinger is a co-founder of Doc Social.

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Visit the Doc Social Website

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The increasing use of digital social media networks has changed the influence of health care providers. Key Opinion Leaders are individuals who came from academic institutions who would often maintain influence through publications or podium presentations. The Covid-19 crisis has highlighted the role of Digital Opinion Leaders as individuals who are having a tremendous amount of influence in healthcare through the posting of content or writing blogs online. This article discusses the changing role of KOLs to DOLs and defines what roles each group has in influencing behavior among healthcare providers.

INTRODUCTION

Traditionally information in healthcare is disseminated through publications in peer-reviewed journals. The increasing number of publications has unfortunately led to an explosion of knowledge and many clinicians report the inability to keep up with this.[1] Instead healthcare providers (HCPs) will often rely on Key Opinion Leaders (KOLs) as a surrogate for information and knowledge.[2] These individuals are considered peers and many HCPs trust their judgment as they are often seen as an authority in their particular subject. Attend any conference or read any journal and you will often see the same KOLs on the podium or as an author in publications. Respected for their opinion as well as their experience, KOLs have tremendous influence in healthcare. Some would argue that KOLs have the ability to impact medicine as much as a randomized prospective trial.

Increasingly though, as we have seen during the Covid crisis, healthcare providers are attending fewer live conferences and have transitioned to online conferences. There has been an explosion of resources online as well as social media to disseminate medical information. As a result, the currency that a traditional KOL uses to gain and maintain influence is diminishing. We are already seeing many healthcare providers transition to using digital resources as an additional method to acquire knowledge, sometimes in lieu of in person synchronous learning at conferences.[3] As a result we are seeing a new class of influencers in healthcare called Digital Opinion Leaders (DOLSs), individuals who are posting online and are shaping the opinion of other providers.[4]

WHAT MAKES A KOL

How do you determine who is a key opinion leader? Ultimately it comes down to a health care provider who is able to influence the behavior of their peer colleagues in regards to decision making. At a very granular level behavior can be defined as the actions one takes based off a particular trigger. How does a surgeon decide which implant to use (behavior) – is it based off a paper that he/she read (trigger) or what a peer colleague told him/her (trigger)? How does a surgeon decide which technique to use for a particular surgery (behavior) – based off what they heard at a conference from a KOL (trigger) or watched on an online video (trigger)?

Traditionally a healthcare provider would gain notoriety and thus become an influencer through publications in peer-reviewed journals as well as podium presentations at national conferences. Some healthcare providers would also publish books or hold elected positions for national societies. Surgeon influencers would teach courses for either industry or academic societies. The more influence one would gain the more often they would be called to teach or speak at national and international meetings. This becomes a self-perpetuating cycle whereby that surgeon gains more influence and is asked to participate in more educational activities. Until recently there was no method to measure the influence and impact of all these activities. The advent

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e Mr. Martin is a co-founder of Doc Social.
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1 https://www.nap.edu/read/10866/chapter/28#445

2 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2432185/#:\~:\text\=In the world of medicine,help drug companies sell drugs.&text=These influential doctors are engaged,boost sales of new medicines.

3 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4103576/

4 https://medicalaffairs.org/digital-opinion-leaders-a-challenging-role-in-a-changing-environment/#:\~:\text\=Digital Opinion Leader (DOL) is,KOL) on a digital platform.

of online social networks have brought new digital capabilities and measurement tools that do not exist in the current analog framework.

WHAT MAKES A DOL

The rapid proliferation of social networks has created an opening for non-traditional healthcare providers to post information online and thus create a new breed of influencers termed Digital Opinion Leader (DOL).[5] While traditionally KOLs came from academic or well-known institutions, now we are seeing DOL's coming from non-traditional institutions. In addition, individuals from other specialties such as nurses, physical therapists, physician assistants, pharmacists, or dietitians are having a tremendous impact beyond their own field. Historically new research could take 3-4 months or sometimes 1-2 years to reach publication. When a DOL sees an idea that could be helpful to the medical community they can immediately post that information online, reaching a broad international constituency that couldn't be reached using the traditional analog framework. Ultimately this collapses the timeframe and broadens the scope for the dissemination of a new idea. In addition, it opens the door for many non-traditional healthcare providers to post information and gain influence.

There are a myriad of platforms where a DOL can post information about a topic of interest. The more individuals that read the content the more likely it is to be viewed/reshared/liked. Beyond the creation of content, the quality of the content is also important. Generally content that is of high quality is reshared by others or receives comments. For a DOL it is important to 1) create content and 2) create high quality content. As more individuals read the content, the more influence that DOL gains. By creating and disseminating content to a broad digital network, knowledge is becoming increasingly more democratized in healthcare away from the elite few. These are the typical metrics that are used to measure the influence of a DOL.

> **Metrics to Identify a DOL:**
>
> 1. Number of followers
> 2. Number of followers who are a healthcare provider
> 3. Number of views of posts/blogs/videos
> 4. Number of likes of content
> 5. Number of times the content is reshared (this is a measure of quality)
> 6. Number of comments (represents engagement)
> 7. Frequency that a DOL is tagged or mentioned in a post

HOW DOES A DOL GAIN INFLUENCE?

In the new era of digital marketing, it is clear that content is king. When an influencer wants to gain influence, they may post a photo of themselves with a particular product or at a specific location. In healthcare the same rules apply.

A DOL gains influence by (1) creating their own content. This can take the form of a post where they give their opinion on a new concept or publication. Some DOLs will make a video blog or a written blog on a particular subject and post it on different channels. In addition, a DOL can (2) reshare content from others, giving their opinion on the matter. Although they are not generating their own content, in this scenario, a DOL gives their opinion on the subject which ultimately leads to increased influence. Readers of content from a DOL appreciate the practical and real-world advice and thus are more likely to respect the viewpoint of a DOL. Often KOLs are perceived as being out of touch as they come from "academic" institutions or they are consultants for a company and their opinion is not seen as being authentic. The final method for a DOL to gain influence is by (3) being mentioned by others. This is the most challenging method of gaining influence. In this scenario an individual will tag or mention a DOL regarding specific content or be asked to comment on a subject. The DOL will be seen as an authority on the subject further increasing their influence.

THE TRANSITION FROM KOL TO DOL

The Covid-19 crisis forced many in-person meetings to be canceled. It is becoming a greater challenge for societies and companies to host the traditional on-site meeting. In the past the main source of influence for a KOL was from either the podium at a large society meeting or smaller in-person meetings. It is clear that the Covid-19 crisis will result in a fundamental transformation in the method that healthcare providers will use to gain influence among their peers.

Progressive organizations have already transitioned many of their meetings to a digital format. They have created asynchronous videos for training as well as educational purposes. Some KOLs have begun to create a bigger presence online by posting to various social networks, slowly making the transition to become a DOL. The mark of a DOL is posting original content and an increasing number of followers. The broader the followers, the greater the global influence. The narrower the followers, the more targeted the influence. Ultimately DOLs understand that healthcare providers are not looking to attend live conferences to get their updated information; instead, many providers (not just millennials) obtain the majority of their information through digital platforms.

5 https://www.pharmalive.com/the-rise-of-the-digital-opinion-leader/

WHERE SHOULD THE CONTENT BE POSTED?

Twitter appears to be the most highly sought-after site to post new information in healthcare. Next are the creation and posting of personal blogs. Then posts on Facebook seem to be popular places as well.

Most common locations to post content for DOLs:[6]

1. Twitter
2. YouTube Video Blogs
3. Facebook
4. LinkedIn

Age groups of various health care providers:

1. Baby Boomers (born between 1944-1964)
2. Gen X (born between 1965-1979)
3. Millenials (born between 1980-1994)
4. Gen Z (born between 1995-2015)

Gen Z individuals are known to have a higher frequency of checking their phones than Baby Boomers.[7] As such they are more likely to be influenced by social networks than Baby Boomers.

HOW DO YOU MEASURE THE IMPACT OF A DOL?

Measuring the impact of a DOL depends upon how you define impact. Healthcare providers are used to the concept of an impact score from journals. This was a measure of how many times a publication was cited by another publication. The theory behind the score is that a mention of the publication is a surrogate for its importance.

> **Digital activities are easy to measure and thus gives rich data around measuring influence. The most common metrics to measure a DOL are:**
>
> 1. Influence: how many followers does a DOL have
> 2. Resonance: how often is their content re-shared
> 3. Trust: how often is a DOL mentioned or tagged by others
> 4. Engagement: does the content drive the reader to participate or comment

CHANGING METHOD OF INFLUENCE

In the non-medical product world, the role of influencers in selling goods and services has been heavily researched. Many individuals now have a career based off their ability to be an influencer. Healthcare providers have consistently been held in high regard by the public as the information that is disseminated is assumed to be evidence based and scientifically proven. Traditionally physicians and other healthcare providers are not easily influenced by information that has not been properly studied. In healthcare there has always been a need for key opinion leaders to explain the value of a new procedure/service/device. While peer reviewed publications remain the gold standard, there is no question that the opinions of KOLs, and now DOLs, have a tremendous impact in the healthcare community.

In the past measuring the amount of influence of a healthcare provider was difficult. With the transition to digital platforms, the "influence" of a DOL in healthcare can now be measured. Much of the practice of medicine is based on peer-to-peer engagement which can now be measured.

Now more than ever healthcare needs a new set of leaders who will be able to responsibly disseminate information and appropriately influence their peers online, while still maintaining public trust. The debate around vaccines for Covid illustrates some of the challenges that the medical community faces. As technology becomes more sophisticated and the data around DOLs improve, there will be a greater need for the development of social networks that spread knowledge in the same manner as peer-reviewed publications - the dissemination of trusted and evidence-based information. By doing so, the healthcare community can continue to maintain the trust of the public that is critical in the care of patients.

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6 https://www.reutersevents.com/pharma/medical/age-digital-opinion-leader

7 https://www.herosmyth.com/article/75-eye-opening-statistics-how-each-generation-uses-technology