

Using Artificial Intelligence and Machine Learning to Uncover True HCP Influencers

RE-IMAGINING NPI ADVERTISING

There is no doubt of the value for pharmaceutical and life sciences companies to effectively target and engage with health care providers (HCPs). Building relationships with key opinion leaders (KOLs) and collaborating with influential physicians and specialists is critical to long-term product growth and optimal patient outcomes. Engaging with influential HCPs is also a better investment, returning approximately \$6.50 in lift for every \$1 spent on influencer marketing.¹ It's no wonder 68% of life sciences companies planned to increase their influencer marketing budgets in 2020.²

However, the traditional mode of engaging Healthcare Providers is outdated.

DEFINING AN ANTIQUATED SYSTEM

The marketplace's current method of engaging with HCPs via 1:1 NPI targeting is not designed to reach the influencers most likely to be the best brand advocates. Typical NPI target lists are built from prescribing and self-reported specialty data. Prescription data is a legacy measure of volume, not of actual influence and doesn't account for the full treatment journey – for example, the NPI who is influenced to prescribe by someone invisible via analysis of this data stream. Likewise, specialty lists are self-reported and become obsolete over time, meaning influential HCPs that treat and prescribe like specialists may be completely overlooked and omitted from a campaign despite their real world behavior.

This traditional approach has become inefficient. It is a methodology that relies on spending more money to activate homogenous messaging to a lower quality audience via inferior channels. It is also derived from data available to anyone in the market – from brands within the same organization to competitors, who all end up targeting in the exact same way, resulting in lower HCP response rates, lower ROI and increased HCP fatigue. In other words,

it is an unvirtuous cycle. Most shockingly, this system doesn't effectively target what brands and agencies are trying to measure against, namely:

- The most influential HCPs in a therapeutic area,
- The HCPs most likely to convert to a therapy based on their affiliation with top prescribers,
- Hospital and Integrated Delivery Network (IDN) affiliations of interest that need to be reached en masse.

Aside from being an impractical technique for targeting HCPs, this prevailing strategy results in suboptimal engagement with current and potential brand advocates. Medical marketers have historically defaulted to a "numbers game" mindset, hoping that with enough spend disseminated to a wide audience, the message will find its way. Covid-19, however, exposed the flaws of this approach and revealed its myriad of inefficiencies. Blanketed targeting of HCPs is not correlated with meaningful engagement, which means value is wasted because brands can't maximize their returns.

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While the current approach may generate leads, it's dated, expensive and doesn't meet the demands of the market. There is an alternative, however. A way to capture value, engage the correct HCPs and drive ROI without sharing data with competitors, or entering a race to the bottom to sway a small pool of HCPs, does exist – though it has not spread across the industry as of yet. The solution consists of multiple steps, but pharma marketers must first think outside the box regarding who an influential HCP *actually* is.

¹ Kantar Health

² Kantar Health

By re-imagining HCP advertising sans the traditional prescriber-based or specialty list, medical marketers can uncover and activate the HCPs with the highest propensity to be brand ambassadors and ignore those less likely to create value. By applying artificial intelligence (AI), machine learning (ML) and evolutionary computation (EC) to real world data (RWD) it becomes possible to surface highly valuable influencers including:

- Senior partners who may not be directly writing prescriptions but carry weight in a practice,
- Physicians who influence upstream from a prescribing NPI,
- Practitioners associated with Sunshine Act activities,
- Twitter influencers who have an outsized effect via their digital footprint,
- HCPs heavily involved in clinical trials,
- Frequently published physicians whose work highly impacts a therapeutic area.

These are all well accepted and understood real world examples of HCP influencers, yet when using traditional 1:1 NPI-based approaches they would very likely never be engaged or even accounted for.

By building quality HCP audiences, brands and agencies can activate a more refined set of influencers and generate greater returns for less money.

Medical marketers can focus their time, money and human capital creating differentiated messages for specific influencers and driving better channel optimization based on the actual behavior of an HCP – an accurate audience allows marketers to deliver a meaningful message via the best channels for a specific current or potential brand advocate.

ADVANCED AI/ML UNCOVERS HCP INFLUENCERS

Identifying these HCPs, however, requires a core set of technology that utilizes privacy-safe AI/ML/EC with a RWD universe of over 300 million de-identified patients and 65 billion anonymized social determinants of health signals:



VeraSpec Modeling

Defines HCPs by what they actually do, rather than what they declare to do. This identifies physicians who appear to act like high-value specialists and who are unlikely to be found on specialty lists.



uReferral Graph

Completes the missing pieces and tracks a patient to the HCP that initiated their treatment journey. While they may be three or four steps removed from the prescribing HCP, their influence is clear, yet they wouldn't be on an NPI list built using prescription data.



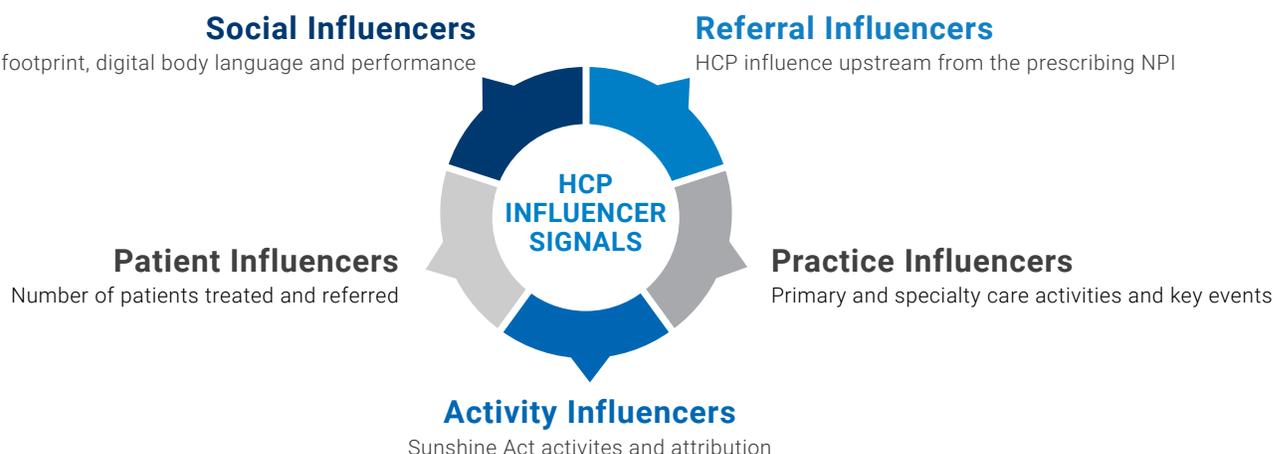
SOARDetect

Finds the "hidden" HCPs who are often the most influential, yet with a greatly reduced patient interaction, leading them to be undetected. Again, these HCPs would likely not show up on either NPI or specialty lists.

Additional technologies allow for practice affiliation analysis (e.g., senior partners with decreased patient loads, a partner of a high prescriber, physician assistants who write certain scrips and influence choice, nurses who may not write scripts but influence choice and interns, who serve as the next generation of prescribers) and hospital and IDN affiliation analysis (e.g., all NPIs associated with a hospital, IDNs, parent IDNs, regional associations, group purchasing organizations).

A PROVEN SYSTEM OF INSIGHT

At Swoop, we have developed a process by which we can utilize a client's NPI or specialty list as a baseline, analyze the social footprint and influencer body language of HCPs within our proprietary data universe comprised of trillions of data points and detect five primary clusters of HCP influencer signals.



HCPs are then each rated using our proprietary SOAR (social, online, activity, referral) Score to derive an initial cohort of influencers. We eliminate the non-influential HCPs and replace them with highly similar influencers identified via VeraSpec, uReferral, and SOARdetect.

This deeply targeted list of highly influential HCPs can then be activated in the channels that best fit their individual behavior using differentiated messages that are most likely to resonate. The list is rescored every month with newly uncovered influencers added. HCPs who fail to meet the applicable threshold of influence are dropped, ensuring the list remains fresh, relevant and valuable for clients.

The de facto HCP targeting strategies predominantly adopted by medical marketers result in comparatively wasted spend. In nearly every case, increased budgets can't mitigate limited reach due to the insurmountable hurdle of low audience quality. It doesn't create meaningful value for the brand and, in turn, doesn't drive Rx lift. However, by utilizing technology like VeraSpec Modeling, uReferral Graph, SOARdetect, practice affiliation analysis and hospital

and IDN affiliation analysis, it is possible to identify true influencers, effective brand advocates and rising stars. Once they are given access to the right audience, marketers have the power to create targeted messaging, maximize reach and increase returns.

At Swoop, we have seen the dramatic impact of AI/ML-generated custom segments designed for a specific DTC campaign – on average, approximately \$1 spent on a custom-built segment delivers the same results as about \$3 spent using a generic off the shelf segment at no cost to build.

That same concept of creating better audience quality by utilizing AI/ML/EC and RWD can now also be applied to HCP marketing, more efficiently increasing reach and creating more effective engagement with the influencers most likely to drive Rx lift.

About Swoop

Swoop (www.swoop.com), part of Real Chemistry, empowers the world's leading pharmaceutical brands to better-educate patients about disease states and the therapies that could remedy their conditions, as well as enable them to become active participants in their treatment journey. Swoop's HIPAA-certified and NAI-accredited system of engagement has uncovered over 3,000 unique target audiences for precisely activating patient populations and their healthcare ecosystems through omnichannel marketing strategies. By utilizing artificial intelligence, machine learning and evolutionary computation in conjunction with a real world data universe of over 300 million de-identified patients and 65 billion anonymized social determinants of health signals, Swoop's segments are superior in audience quality, lead to optimal conversion and drive increased Rx lift. It's no wonder that 18 of the top 20 healthcare marketing agencies and 42 of the top 50 pharmaceutical companies power their marketing efforts with Swoop. And we are just getting started.