

**Exclusive interview  
with the Healthcare  
Communication  
Association's  
Mike Dixon**

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**New survey reveals  
patients' changing  
opinions of pharma**

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# Communications

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**Plus: Digital comms  
in the COVID era**

**Virtual meetings:  
where are we now?**

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# Deep Dive: Communications 2020

**COVID-19 might have forced pharma to finally fully embrace digital comms, but it's been a steep learning curve and expertise varies across the industry.**

Speaking to the various experts in this issue, one theme that came up again and again was that the techniques for successful communication on digital platforms are completely different to those needed for traditional comms. For those companies still moving away from a mindset of physical communications and in-person meetings, there's never been a need for a faster digital transformation.

In this issue we hear from a variety of companies who are leading pharma comms into a new, digital era. Ian Daley and Jonathan Macdonald from EPG Health take us through best-practice techniques for producing content for HCPs; Impetus Digital's Natalie Yeadon looks at the evolution of virtual meetings over the course of the pandemic; and Martin Warters from Medscape looks at how medical education is embracing virtual patient simulations.

Elsewhere, OPEN Health's Beth Leshner and Annemarie Clegg examine what the convergence of med comms and market access means for pharma, and experts from ICON look at the specifics of making engaging scientific content for digital formats.


We also have an exclusive interview with Mike Dixon, CEO of the Healthcare Communications Association, to get his more general thoughts on the biggest challenges facing the industry and where it may be heading in the future.

Plus, we analyse new research from WEGO Health that looks at exactly what effect pharma comms are having on the industry's reputation among patient leaders.

I hope you're all staying safe in these unpredictable times!

I hope you enjoy the issue.

Kind regards,



**George Underwood**  
Editor, Deep Dive, Communications 2020

## **Next issue: Digital Health Innovation**

- The digital health ecosystem in 2020
- Cutting-edge healthcare technologies

Plus we will have an additional focus on:

- Making R&D more effective and efficient

## **Catch up on recent issues:**

[The Future of Oncology](#) – July 2020

[Market Access](#) – June 2020

[R&D Disruption](#) – February 2020

[Patient Engagement](#) – November 2019





## The right people and the right environment for innovative comms

Mike Dixon, CEO of the Healthcare Communications Association, discusses the biggest challenges facing the sector during and after COVID, from digital innovation to talent and sustainability.

With influence in areas as diverse as launch strategies, corporate reputation, and marketing, healthcare comms is something no company should be slacking on.

But Mike Dixon, CEO of the Healthcare Communications Association (HCA), says that comms teams within pharma still often find it difficult to get a seat at the top table to help convince leadership of the function's true strategic value.

He says this is partly due to big in-house comms teams being a relatively new concept for the industry.



“Comms has grown up a lot in the last 10-20 years,” Dixon says. “But it’s probably still in its infancy compared to, say, marketing.

“We need to establish the value of the communications function beyond just writing press releases and show the strategic side of comms. For example, one of the biggest hurdles companies face in the UK is getting reimbursement approval for their products, and communication is a key part of those strategies.

For communication agencies to be able to engage with pharma at the strategic level there are additional challenges:

**“The strategic expertise is certainly very strong in communications agencies but they need to be well networked at board level, otherwise there is the danger they are not given the opportunity to engage. More and more management consultancy companies are positioning themselves in the comms sector and are already interacting at that level, so may be better placed to engage in these communications strategic consulting opportunities.”**

## COVID accelerates change

With its membership covering all sectors of healthcare comms – from agencies to industry teams and charities – the HCA is often in a better position to identify and address common issues in the area than individual companies.





Dixon believes that great opportunities lie ahead for the industry, but there are still challenges that healthcare comms will need to address in order to remain relevant in a changing world.

Thankfully, healthcare comms has fared better than many other industries during the COVID-19 pandemic, putting the sector in a good position to harness and improve on the changes wrought by the crisis.

“About a third of our members say that they’ve had a negative impact from the pandemic,” says Dixon. “The rest are all positive or neutral – which is quite amazing when you consider how many other industries have been devastated.

**“Most of the negative impacts have come from the initial uncertainty around congresses, although many ended up still being held but reformatted virtually. Teams have had to think about how they take the communication strategies they had planned for those meetings and achieve the same goals in a virtual setting.”**

The forced switch to digital, he adds, has generated new business opportunities and has allowed teams to truly consider how they can use digital as a key part of their wider strategy.

Dixon says much of the innovation in the sector has come from strong individual players rather than being a paradigm shift for the entire industry – but this is changing.

“Thanks to COVID, organisations like the NHS will achieve aspects of their 10-year digital strategy in the space of two years – whereas before some people would have doubted they could even do it in 10. The same could be done for the comms sector, especially as clients are now more open to driving it.

“For example, we’re no longer asking whether we can use social media because of regulations – we’re now asking how we can use it, and how we can be better at it. We’re already seeing some amazing examples of how tools like that can be used.”





## The talent problem

But there are some difficulties the comms sector was facing before COVID that will continue to be pervasive even once the pandemic is over.

Dixon says that for a long time the most widespread challenge facing the industry has been finding, keeping and managing talent.

“The problem is that we are a specialist sector, and we need people who have specific skills and understanding. It’s not easy to transfer people from outside healthcare, so every company is poaching from the same, limited pool of employees. This is especially acute at the mid and senior levels, where you need people with years of experience.”

Dixon adds that agencies are increasingly hiring talent managers in order to recruit and retain the best people.

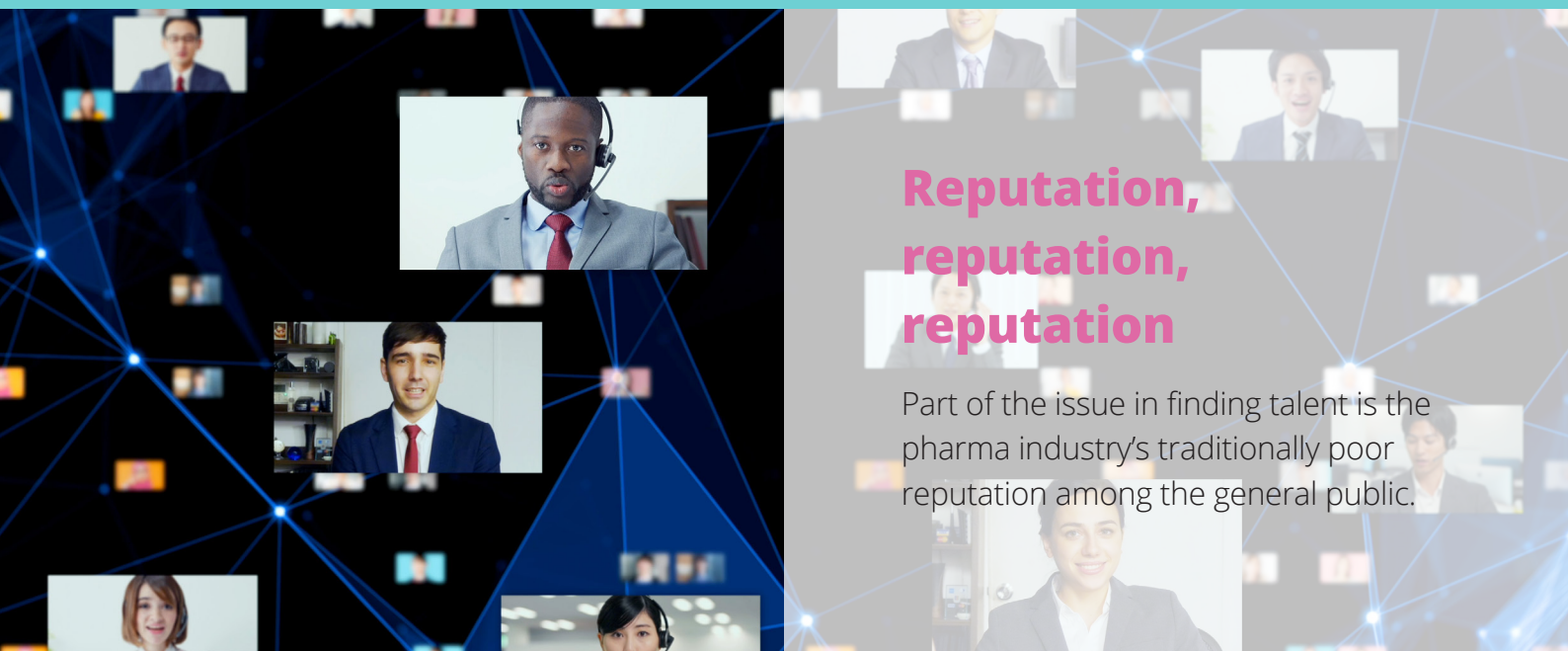
With the initial immediate upheaval of the pandemic now passed, the HCA will continue its initiatives encouraging people from other sectors with transferable skills to join healthcare comms. For example, the Association has set up a careers website that can help people understand what healthcare comms roles involve and hear from people working in the industry.

“People with related experience and a science background could be quickly transferred across to a healthcare comms role and be quickly trained up as a medical writer or even an account handler,” says Dixon. “That’s a great way to fill mid-level spots.

“I think it’s fair to say that historically most people have fallen into healthcare comms – for example through hearing about it from a friend – rather than specifically seeking it out.



“Going forward, what the healthcare community needs to do, and what the HCA has been trying to help them with, is get people to think about healthcare comms from the beginning of their career planning, and make it an attractive option for them. That will mean going out and talking to as many people as possible, showing that these roles and careers exist. That will be an ongoing task for years to come.”



Recent Edelman Trust Barometer data shows that people's opinion of the pharma sector has skyrocketed during COVID-19, although Dixon says the downside to that is that the industry needs to find ways and work hard to maintain that reputation.

“If the vaccine doesn't come through quickly enough, if the public doesn't understand the huge costs of developing drugs and see COVID treatments as being overpriced, pharma can easily lose that trust again.

“It's really important that we try and maintain that trust and highlight the important work the industry is doing. The more we can show that this is a sector that is adding value and doing good, the more people will want to join.”

There are also wider reputational concerns impacting other industries that pharma will need to reckon with – especially as Millennials and people from Generation Z start to enter the workforce.

For example, Dixon says that these generations are keen to work for companies that show social consciousness – which only adds to the litany of reasons sustainability should be a priority for healthcare.

**“It’s important to shareholders, it’s important to employees, and it’s important to the future of everyone’s health and wellbeing. Companies in other sectors, like Unilever, have done amazing things to start on the road to sustainability, and the communications professionals have been integral to that strategy. If we help champion the sustainability drive within pharma, it could help cement our position at the top table.”**

Another increasingly pertinent issue, particularly to Gen Z and Millennial workers, is diversity and inclusion.

“They want to see the companies they work for and buy products from showing more responsibility in that area,” Dixon explains.

“We still have a long way to go in the industry to fully achieve that. There are some positives – for example, our data shows that in the agency sector there are predominantly more women in senior leader positions than men – but you have to be very careful with statistics that might look good. Diversity and inclusion is about more than just numbers.

“We need to make sure that everybody has the same opportunity and is being treated the same way. If we’re mostly taking on graduates, for example, we’re already limiting ourselves to people who can afford to pay for three years of university, making the pool less diverse.

**“By no means do I think we’re the worst industry for diversity and inclusion, but we’ve got a long way to go. I hope that as a sector, because of who we are, we’re able to address those issues and learn and continually improve ourselves.”**

Beyond these concerns, Dixon notes that widening the talent pool will involve ensuring that new employees have the opportunities they need to build a long term career in comms.

“Generation Z is just coming into the sector, and they are mostly at junior levels. We’re hearing from our members that promotion and career progression are key concerns for them.

“Companies are working hard on making sure they do more regular appraisals and reviews, so that workers understand clearly what they need to achieve to advance themselves.”



## Fostering innovations

The ultimate benefit of bringing in people with more diverse experience and transferable skills is to further drive the innovation that is essential in the modern healthcare world.

"Generally in pharma we need to do a lot better at fostering innovation," says Dixon.

"Some might say it's harder to do that in healthcare, where we have more regulations and restrictions, but other regulated sectors deliver some very innovative comms, so that is more of an excuse rather than a reason.

"There's already some cracking work out there – many of the projects you see winning at healthcare comms awards are just as good as what you'd see in the consumer sector."

He concludes: "It's a question of having the right people who can have those innovative thoughts, the right processes, and the right environment to allow that innovation to happen. There's no point bringing innovative people into a sector then preventing them from capitalising on those skills because you have an environment that does not support innovation."

## About the interviewee



Mike Dixon started his career as a medical sales rep before moving into a professional relations role at Abbott in the UK. Moving to the agency sector he held senior positions at Burson-Marsteller and Ruder Finn before joining as a board director of VB Communications and managing director of their medical communications division, Jago Pearce. When bought by Huntsworth Health, Mike became the group's operations director before leaving in 2007 to set up echo, his own multichannel med comms agency. echo joined the Mission Group in 2015 with Mike moving to executive director of their Global Health network, Vivactis Global Health. Now, as well as his consultancy work, Mike also remains an owner and a working director at Specialist Publishers. In 2017 Mike became the CEO of the Healthcare Communications Association.

## Virtual meetings: Where are we now and where are we going?

Pharma has been forced to hold its meetings virtually for most of the year now – but despite having plenty of time to perfect the art of digital engagement, Impetus Digital's Natalie Yeadon says the industry still has a lot to learn.



A good virtual meeting doesn't necessarily follow most of, or even all of, the same rules as a good in-person meeting – but Natalie Yeadon, managing director of Impetus Digital, says that pharma's virtual meetings are still being held back by an in-person mindset, even with COVID being a reality for most of the year now.

"Companies are still bringing everybody together and gathering insights the same way they would in an in-person meeting, but now it's just through a virtual platform," she says.

"In practice, that means you might have a large group of people in a virtual room for hours at a time, and there are many issues with doing that. For example, people can get 'Zoomed out' and lose energy without the opportunities for energy dissipation that come with physical meetings – like getting up to go to the bathroom, going to get a coffee, or speaking to somebody in the hallway."

Yeadon says that the industry should leave behind the belief that it needs to continue having the same kinds of meetings it was having before the pandemic.





“You could, for example, do virtual meetings over a longer period of time. We’re no longer flying people into meetings – you don’t have to do them over a six-hour period back to back. Now, you can cut these meetings up into digestible one-hour segments. You can give people the power of time, so it doesn’t impact their schedule or their clinic or their family life.”

She adds that by splitting meetings up over multiple periods of time, you can also give people the opportunity to ruminate and process information, as well as consider what their colleagues are saying and put theory into practice in their day-to-day jobs.

This in turn helps participants build habits that facilitate adoption of new behaviours.

“Habits are generated by people when they have (a) the ability to do something, (b) the motivation to do it, and (c) the proper number of prompts,” says Yeadon.

“By using a series of touchpoints over time, those touchpoints act as prompts giving them digestible information and goals that they’re able to easily achieve, giving them a sense of completion and reward by being able to see their performance and get feedback.

“All of these things help to generate behaviour changes, improve adoption, and get people to think about your brand and your company in a new way.”



## Meetings on your own time

Going even further away from traditional synchronous meetings, companies can also embrace asynchronous engagement – where everyone participates at different times on their own schedule through a private, secure online platform.

“The asynchronous parts can be a compliment to the synchronous elements,” Yeadon says. “For example, before coming to the virtual synchronous meeting you can give the participants pre-work, preventing them from being riddled with long-winded presentations and seeing data for the first time in the meeting – which usually means that at best you get a knee jerk reaction.”



Yeadon notes that Impetus' data actually shows that asynchronous meetings reduced the cost per word of an advisory board meeting from \$22 to 55 cents.

"One of the key reasons for this is that in-person meetings often lead to production blocking. You can't all be speaking at the same time. For that given period of time, you're only getting a limited number of people speaking and ideas generated.

**"But if you use asynchronous engagement, everybody is using whatever time is convenient for them to get their ideas across."**

Likewise, data shows that electronic brainstorming (EBS) leads to 71% more ideas generated per participant than in-person meetings. Participants are not as distracted or "put off" by the more verbose or opinionated individuals, who often monopolise typical in-person meetings.

"The data also suggests that EBS results in less redundancy of ideas than if you were doing the brainstorming in person," Yeadon adds.



## Gamifying virtual congresses

Yeadon also hopes this technology will expand beyond internal meetings and into virtual congresses – and Impetus is already moving into this sector with its InSite Event Builder.

"Now that we've actually incorporated these technologies for virtual meetings, we're going to start seeing more hyper-personalisation and being able to give people more choices," she says.

"For conferences, we might say to participants that they can either attend in person or virtually in an asynchronous way. Purchasing a certain tier of ticket could even give access to both the in-person and virtual streams. We might actually find that online components work better for some streams, such as networking."



By harnessing technology in the right way, Yeadon says virtual conferences will start to feel a lot more like in-person congresses – with people presenting information on a ‘main stage’ and breakouts, workshops, exhibitor booths and other streams happening concurrently, with users able to go in and out of these rooms as they like.

Yeadon also speaks to the idea of “gamifying” exhibitions, allowing people to receive points for going to see a certain number of exhibitors.

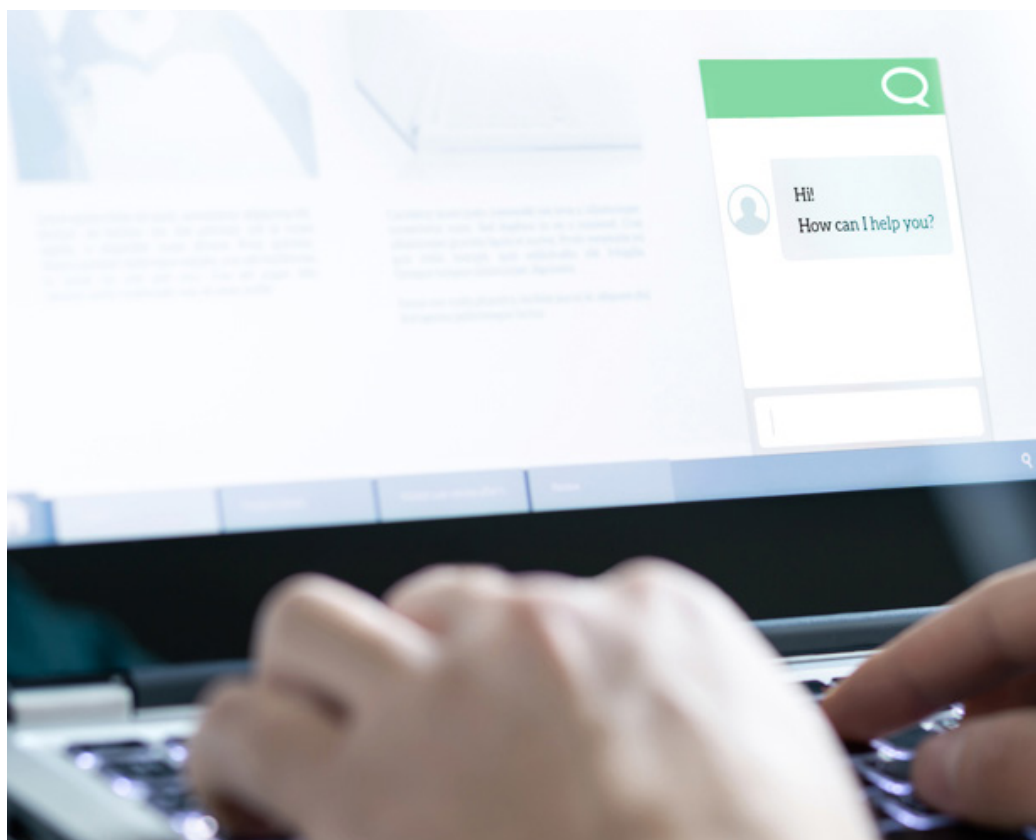
But one of the most important problems Impetus wants to solve is doing networking properly.

“A lot of these in-person congresses are almost overwhelmingly massive,” she says. “You go wanting to meet as many people as you can, but you’re inundated with gigantic exhibition halls and thousands of people, and you have no idea who anybody is. There’s got to be a better way to do that.”

Yeadon says one solution is to allow participants to tag people to meet, notify them, and immediately pre-book meetings on the event platform.

And the technologies to enhance meetings will only continue to develop further.

“We’re excited about the possibility of eventually incorporating things like chatbots, as well as voice and facial recognition for security purposes,” says Yeadon.





“We may also be able to include immersive experiences like virtual and augmented reality – allowing people to actually meet in VR – or even using holographic technology to literally beam people up onto the virtual main stage, enhancing that gravitas for a great speaker, allowing you to feel the energy of the people around you.”

She adds that there is a great opportunity for new conference business models.

“I think we’ll actually see a lot more attendance at these conferences, especially when we have tiered pricing for different streams. There could also be a whole slew of new opportunities for sponsorship.

“I see the conferences of the future probably being even better than what we have today,” she adds.

## Changing views

It seems that the idea that nothing beats an in-person meeting is quickly becoming outdated.

“People made very similar arguments against ebooks when they first started becoming popular,” says Yeadon. Although it has been a slow progression, and although you will definitely have a certain cohort of people who will never leave behind traditional hardbound books, the ebook has now become ubiquitous across a number of formats and devices.

“Our belief systems are evolving in so many ways, and the industry is seeing ways to make online engagement truly authentic.”

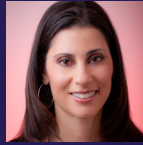
She adds that, ultimately, these technologies and ways of working will help companies “engineer serendipity”.

“We want to be able to increase those random collisions as much as possible, so that we can generate more of those eureka moments.

“There are so many opportunities for personalisation and for absolute optimisation of the user experience and value creation. We are excited to be at the forefront of this groundswell of innovation momentum.”



## About the interviewee



Natalie Yeadon has over 18 years of experience working in several different roles in the pharmaceutical industry. Currently, she is the co-owner and managing director at Impetus Digital.

## About Impetus Digital



Based in Toronto, Canada, Impetus Digital offers a range of digital and professional services and best-in-class online stakeholder engagement tools to help life science clients collaborate and create sustained and authentic relationships with their customers, virtually.



A close-up photograph of a hand holding a smartphone. The background is heavily blurred, showing colorful bokeh lights in shades of orange, yellow, and blue. The hand is positioned diagonally across the frame, with the thumb and index finger visible. The smartphone screen is partially visible at the bottom right, showing some indistinct blue and white patterns.

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# New survey reveals patients' changing opinions of pharma

Exclusive research from WEGO Health has revealed patients' changing attitudes towards the pharma industry and how they want to see companies improve. We look at the latest research and reflect on how COVID-19 has changed perceptions as industry races to develop new vaccines and therapies.

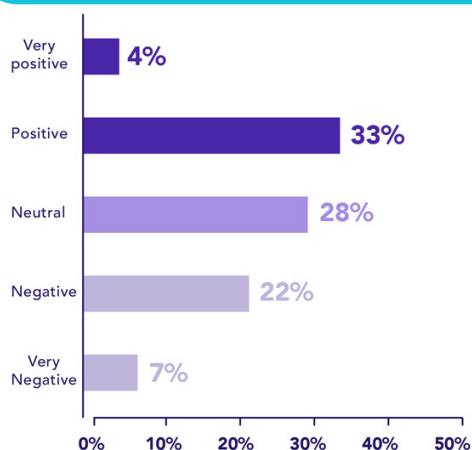
The performance of the pharma industry is under scrutiny like never before as the COVID-19 pandemic unfolds, with countries in desperate need of vaccines and therapies to protect the population and allow normal life to resume.

WEGO Health, a worldwide network of over 100,000 patient leaders, has revealed how far the industry has to go before it wins over the population at large.

A new survey from the company deals with how perceptions have changed over the last five years, which have been tumultuous in terms of the reputation of the industry.

Pricing scandals have involved some of the biggest names in pharma as well as small players who were caught manipulating the costs of generic drugs.

## What are patients' overall perceptions of the pharma industry?



This has weighed on some patients' perception of the industry, according to WEGO Health. Results from the survey of 217 patients showed a fairly even split – 27% said perceptions had not changed, while 37% said the industry's reputation had suffered and 36% said it was more positive.

Findings from WEGO Health followed a report from FutureBrand at the beginning of August showing that perception of pharma and medical product companies has improved markedly since the beginning of the COVID-19 pandemic.

Roche, AstraZeneca, Novo Nordisk and Sanofi have all shot up the rankings in the first edition of the FutureBrand Index since the start of the coronavirus crisis.

## Pricing concerns, but better patient engagement

The WEGO Health survey findings gave patients an opportunity to elaborate on their answers, and it is no surprise that pricing is a problem for those who have to contribute from their own pockets.

One patient reliant on intravenous infusions to stay alive said it was “upsetting to see companies increase the cost of life saving medications that were previously affordable in order to make a profit”.

Another said that “unreasonable price increases in the face of large corporate profits don't create confidence”.

Other issues raised in the free text section relate to the opioid crisis in the US, where pharma companies have been implicated for mis-selling addictive painkillers.

On the positive side, respondents listed personal interactions with pharma companies, while others noted they are becoming better at engaging with patients.





One noted that “Pharmas have finally begun to engage with patients early in the process of clinical trial development.”

This enables patients to influence pharma companies to produce “truly meaningful treatments”, they said.

Another said that although pharma companies are “money hungry” they are prepared to help those on low incomes.

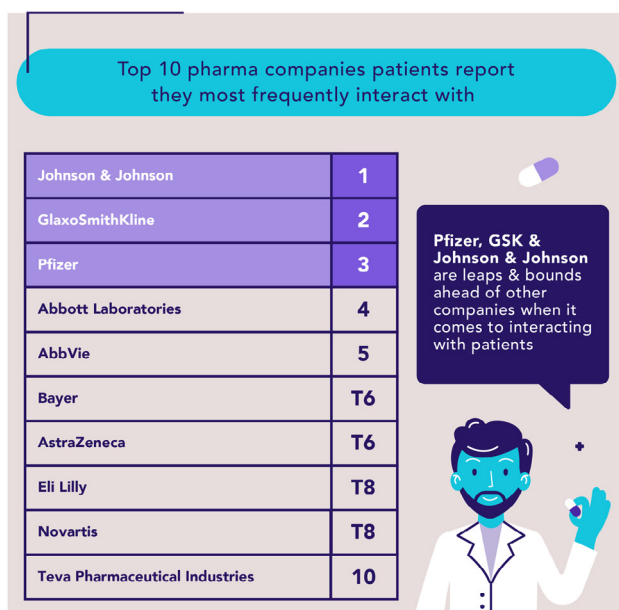
## Influencing perceptions

The free text responses suggest that pharma companies are able to create a positive perception when efforts to engage with patients are going well.

WEGO Health’s survey asked respondents to rank which information source had the most influence on their perception of industry.

They were asked to rank five different information sources in terms of importance, with patient online communities scoring the highest, followed by healthcare professionals, press or media stories, friends and family, and social media.

This could be an encouraging finding for pharma, as trusted advisors like patient communities and HCPs are key stakeholders that they can foster relationships with and grow trust among.





The survey also identified three companies that are head and shoulders above the rest in terms of their positive perception in patients who had worked directly with them.

Pfizer, GlaxoSmithKline and Johnson & Johnson fared the best with scores of 21, 22 and 23 respectively.

This score was considerably higher than the next on the list, which was Abbott Laboratories with a score of 14.

Working with a pharma company is also a clear predictor of a positive response – 57% of respondents who worked with a drug company walked away with a positive experience, 33% had a neutral experience and only 10% had a negative view.

## Progress, in the past and future

Respondents listed the industry's achievements in R&D as the area where the most progress has been made in the last five years.

It was the landslide winner, cited by 29% of those questioned, during a period which has seen the first gene therapies marketed, as well as innovations such as CAR-T.

Other areas of progress were patient support programmes (17%) and disease management (16%).

The industry has also made progress with patient education, according to 14% of respondents.

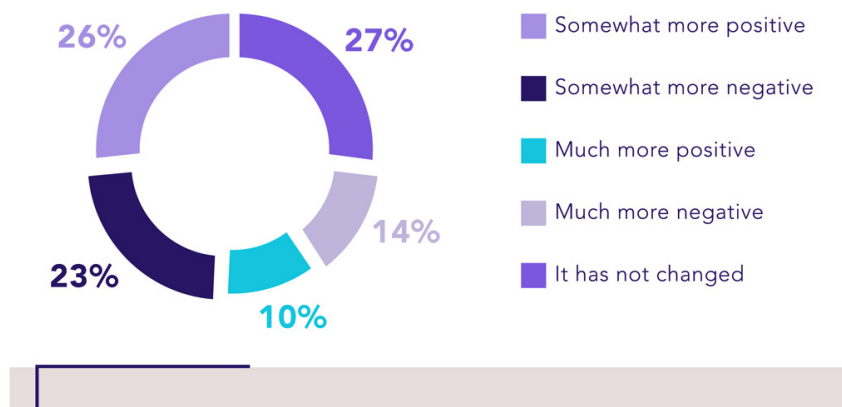
But there were inconclusive responses to the area where respondents thought that progress was lacking with similar responses for all the main categories.

Looking forward, the survey found that respondents expect the trend towards personalised medicine to continue, with 34% listing this area as the most promising in terms of health innovation.

Genetic screening was listed as important by 22% of respondents, followed by digital health technology such as wearables and apps (16%) and digital medicine products (11%).



## How has patient perception of the pharma industry changed over the last 5 years?



There was also a clear message about how pharma should be setting out its priorities in the coming years.

Lowering the cost of medications was listed as being the most important area for improvement, an unsurprising conclusion given the comments about changing perception over the last five years.

Developing new treatment options, and medicines with fewer side effects were also important, although there was less support for better disease management and communication about existing treatments.

While the COVID-19 pandemic has led to the largest public health challenge in a generation it also gives pharma an opportunity to demonstrate its ability to produce innovative solutions to changing health needs around the world.

WEGO Health's findings on pricing will come as no surprise – but the industry is at a critical juncture where it can win over hearts and minds as it strives for effective drugs against cancer and other deadly diseases, as well as the coronavirus scourge.

*For more information on this survey, visit [WEGO Health's website](#) to download the full findings report*

*All infographics courtesy of WEGO Health*

## About the author



Richard Staines is senior reporter at pharmaphorum. He has been a journalist since the 1990s and has written for websites, newspapers and magazines. He has always had an interest in health, and has been focusing on the pharma industry since 2010, interviewing industry leaders and covering stories on topics including regulation, mergers and acquisitions, and the latest clinical developments.



# EPG HEALTH

## Cutting through the noise for HCPs

In a world producing more content than ever before, getting information to time-poor HCPs can be incredibly difficult – even if they want to find it. Ian Daley and Jonathan Macdonald from EPG Health tell us how pharma can take cues from digital publishing and companies like Amazon to make sure their messages get heard.

We're a long way from the times when doctors would get most of their medical information from print journals and medical meetings. Even before COVID-19, physicians were becoming more and more digitally savvy, especially as millennials entered the workforce.

But this has not necessarily made pharma's life easier. The industry still often struggles to deliver their messages to HCPs and engage with them effectively.

### The top 10 challenges reported by Pharma in relation to HCP websites:



The Evolving Role of Websites for Healthcare Professionals, 2019

### Geographic market

Based in the UK, supporting pharma companies globally, reaching over 1 million HCPs worldwide

### Clients

30+ current sponsors including Novartis, Pfizer, Takeda, Janssen, AstraZeneca, Biogen, Boehringer Ingelheim, Lilly

### Learning Zones

50+ disease or condition focused 'Learning Zones', containing 1000s of individual digital assets

### Core areas of expertise

REACH, ENGAGE, MEASURE:

- Targeted HCP audience acquisition
- Independent channel for medical education
- Delivery of Key Educational Messages
- Optimising content for digital
- Virtual meetings and enduring output
- Personalised user journeys
- Multichannel integration and outreach
- KPIs and metrics for meaningful insight
- Tactics for ongoing and repeat interaction
- Strategy support for digital excellence

### Therapeutic Focus

Experienced in a wide range of specialty and disease areas, including chronic and acute conditions, both common and rare

### Our mission

Easing the discovery and consumption of valuable medical education to support better outcomes for all stakeholders





“One phrase I’ve heard is that ‘information is available for those who want it, not those who need it,’” says Ian Daley, chief digital officer at EPG Health, which publishes the medical website Medthority. “If you’re hell bent on finding information, you probably will, but you’ve got to know where to look for it and invest time in reaching it, whereas people who are busy need information quickly and on a device that works for them, but have trouble finding it.”

KEY INSIGHT

HCPs voted  
**‘lack of time’** their  
**no. 1** of 10  
possible obstacles to  
accessing medical  
information online.

EPG Health Research (2019).  
The Evolving Role of Websites for  
Healthcare Professionals

Few people are busier than HCPs – and this, in addition to the oversaturation of information available online, means that many of pharma’s communications will simply not reach them, let alone engage them.

For this reason, Ian believes that pharma needs to “do the hard work for the HCPs” and actively bring information to them via new digital tools and ways of working.

Moreover, he says that pharma needs to think hard about the kinds of content they are producing for HCPs, and whether these are actually engaging and suitable for a digital world.

Jonathan Macdonald, EPG Health’s Chief Operating Officer, says that the company’s research into [The Evolving Role of Websites for Healthcare Professionals](#) has given them a sense of what kinds of content HCPs actually want to see.

“They want peer-to-peer information,” he says. “They want independent, trusted sources. They want short-form content, where it’s very clear what the learning will be very quickly. Then they also want access to longer-form content at a time that’s right for them.

“Multimedia content like webinars and podcasts are also becoming more and more popular.”

Nonetheless, Macdonald says that pharma still struggles to find ways to meaningfully engage with HCPs.

“Meaningful engagement involves being able to easily discover relevant content. Pharma needs to be able to say, ‘This healthcare professional from this region with this specialty has engaged with these messages, and we’re going to re-engage them with these additional messages.’ We want them to go on a unique, smooth journey through relevant, actionable content.”

## Learning from other industries



Before joining EPG Health, Daley worked primarily in publishing technology, finding ways to boost content engagement for fast-paced organisations like the Financial Times, Pearson, and Daily Mail Group.

He says he saw a chance at EPG Health to bring similar methods into pharma to help bolster HCP engagement via digital disruption.



“Pharma is behind the curve compared to sectors like retail, financial services, and eCommerce when it comes to embracing digital transformation,” he says. “With EPG Health, I saw an opportunity to leverage some of those tried and tested techniques from other industries and apply them to the med comms space.”



One philosophy he has brought over into med comms is the importance of building a “membership economy” and fostering habitual engagement, which he has applied to EPG Health’s Medthority.

“We want to be in a place where people start to rely on us and see us as a regular check-in resource, and when doing that we want to present them with something new at regular intervals. That builds a habitual relationship.”

Daley says this can be achieved by studying websites like Amazon and how they use recommendation services and intelligent search – experiences that are currently lacking in the healthcare sector.

“When you search for something on Amazon, it will tell you what other products people who searched for that item bought. That promotes other content that might actually be wider than the scope of your initial search. If you’re looking for a radio-controlled car, for example, it might also recommend batteries.

#### Content needs to be:

- C** **Current**  
up-to-date and date stamped
- R** **Relevant**  
surfaced based on the customer’s needs
- E** **Educational**  
unique learnings
- A** **Actionable**  
clear how to put into practice and why
- T** **Trustworthy** scientifically accurate,  
transparent, fair and balanced
- E** **Engaging**  
interesting, easy to access and consume

“We are taking the Amazon model and applying those techniques to content for HCPs. When a cardiologist visits our site – and we know they’re a cardiologist either because they’ve registered with us or their behaviour on-site tells us so – we’ll start to promote content to them that we think they’ll be interested in. The dashboard will show them new updates in their speciality area, tell them what events are coming up, or show them what articles their peers are reading.”

He adds: “You should never show users the same information they accessed last time they were on the website; you should show them the next most relevant message in that series. That means you get as much information in front of the user as possible, and your website feels alive.”

## Writing for digital



But doing the hard work for HCPs and pushing content to them is not enough on its own to make sure pharma’s messages are heard – the content pharma is producing also needs to be tailored for digital engagement, and they need to adapt their ways of working in order to achieve this.

“One of the things that pharma has traditionally suffered from, because of its strict regulations and the influence from academic environments, is having content that is created in a very sequential, long-form format,” says Daley.

“These days, the industry needs to think about content with more of a digital publishing mindset – start with the conclusion and summarise the key takeaways early on, then let people read the deep dive if they want to. You could even start with highlighting the five key points everyone needs to know about the topic.”



He adds: “My belief is that 20% of our content will be right for 80% of our audience most of the time. On that basis, pharma needs to adopt a ‘writing for digital’ mindset. Think about an HCP on a train looking at something on their mobile – you’ve got to design for that person, that channel and that device.”

Daley notes that the traditional publishing model, before digital became ubiquitous, was that writers and journalists wrote whatever they wanted, assuming that they knew best, and that people would read it no matter what.

“It didn’t really consider what someone was doing, what they were looking at, where they were spending time,” he says.

#### KEY INSIGHT

### Content **formats** preferred (out of 20 options)



Downloadable



Bite-sized /  
short form



Video / animation

### Content **types** needed

1. Disease information –  
**89%** search weekly
2. Prescribing information –  
**59%** search weekly
3. Scientific meeting output –  
**54%** search weekly

“Now we can look at our website and identify the areas that are getting lower traffic, then identify why that is the case. Is it because it’s dull? Is it hard to find? Today we have the opportunity to have that two-way discussion.”

But Daley says that many pharma companies have not yet adopted such a customer experience-focused way of working.

“We sometimes find that clients have invested a lot of money and time in their assets and are rightly proud of them, and that they have a strong idea of how they should be presented.

“Usually that is the kind of format that would look brilliant if it was going in an old-school textbook, but it’s not going in a textbook – it’s going on a digital platform to get in front of time-poor HCPs. You have to make it super engaging. You need to think about the hook that will get people to read the content.

“If you put the key points at a summary level and showcase them very early on, even if people engage with a fraction of the content, they’ll probably take away enough to capture your message.”

Daley cautions, though, that this is not as straightforward as just reordering existing assets.

“It’s a case of what story you’re trying to tell and why. Then you ask what content you would use, in what order, and how you can supplement that with other material – as well as how you make the content enjoyable to read.

“That can take quite a lot of effort. Often, clients might have produced 20 education videos that are technically and factually brilliant, as well as perfectly compliant, and they think that all we need to do is put those in front of HCPs and they will invest time to watch them.



“We need to acknowledge that we’re competing for a slice of an HCP’s time. I personally don’t believe there’s much brand loyalty in most spaces these days, and if it’s easy and intuitive to use people will use it. People will gravitate to the place that presents content in a meaningful way.”

This doesn’t mean abandoning in-depth content altogether. Daley says that pharma should still put out deep dives for those physicians who want them, making sure that they are easy to find – but the industry can’t expect every HCP to consume that kind of content.

“People don’t consume information like that in their social life. Why would they do it in their workspace?” he says.

# Ten steps to meaningful engagement

The new technologies, channels and ways of working required for digital transformation cannot be implemented overnight, and pharma companies need collaboration and focus across the business to make it successful.

Luckily, Macdonald says that there are ways to make the process as smooth as possible – for example, EPG Health has brought its research and real world learnings together into an ‘Ten step roadmap’, published in the whitepaper [Accomplish Meaningful Engagement Online](#), to help pharma make sure they are getting meaningful engagement and delivering value to HCPs.

“First of all, we work with the pharma company to define what success would look like to them and the HCP,” says Macdonald.

“The next step is to think about how the HCPs are going to interact with that user experience. What are they searching for? Is that different between specialties or personas?”

“At that point you can start thinking about the digital channels and the key messages you want to use. Once we’ve defined that, we’re then able to think about the content types that are going to best suit that user experience and best convey those key messages.

“Then you need to think about how you’re going to track all this, and what success metrics and KPIs you’re going to place around each content type.”

From there, Macdonald says, companies need to think about how they’re actually going to engage the audience.

## We follow and recommend the following ten steps:





"It's important to put in place a multi-channel communication strategy to nurture the audience. That can involve email, social media, reps and working with associations and charities, etc."

Again, some of the tactics pharma can employ to make sure users go through these journeys are navigation techniques, such as pushing new content via dashboards and allowing HCPs to bookmark pages, but companies can also get more granular than that.

"We spend a lot of time within the science, commercial and digital teams, both internally and within our client organisations, to understand how each journey is going to be different for a healthcare professional based on their speciality," says Macdonald.

"The user journey of a primary care physician might be very different from a consultant, and it will vary depending on how they accessed the content in the first place. You need to consider how they're going to navigate their way through the different key education messages from there and what the best experience looks like."

## Measuring and adapting



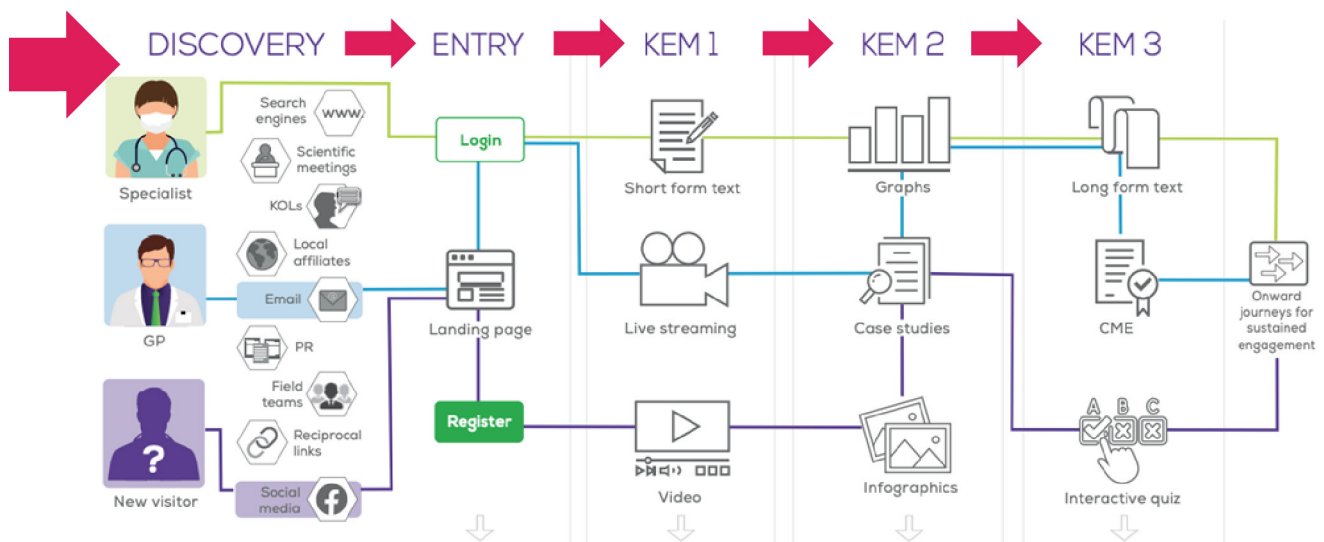
Finally, companies need to be regularly monitoring their KPIs, analysing how users are engaging with content and adjusting accordingly.

"A lot of organisations will look at viewer numbers and average time on page, but those traditional analytics are open to interpretation and ambiguity," Daley points out. "Instead, it's better to analyse Key Educational Message consumption and the degree of engagement that people had with those messages to demonstrate the quality of the view. For example, you can tell them that out of five key educational messages, 70% of their audience engaged with three or more.

"You can also look at how far a user gets through content before they drop off. Clients may well feel that they're happy with them dropping off after a certain point if they've still got the salient points across.

"Unmet search needs are another key insight. If people keep searching for a topic for which we lack content, that tells us it's an area we should explore more widely."

The [insights from Medthority](#) show some interesting trends in how HCPs' viewing habits are evolving.



[How EPG Health create journeys through Medthority](#)

"We're seeing that users like interactive content – e.g. surveys, polls, quizzes, and decision trees. They're really good at keeping people on-site and engaged," says Daley.

Similarly, the company has seen good engagement from virtual patient animations. These are less than one and a half minutes long, which is not a burdensome time for HCPs, and can effectively put across key messages.

Daley says that he can see interactive, visual content like this becoming even more popular in the future.

"This could include things like maps you can hover over and get, for example, information on hotspots for COVID-19 – where you could zoom in on certain areas or expand criteria dropdowns. Textual formats will probably take a backseat, and interactive, animation, and video content will play a huge part in how people are perusing information.

**"That kind of visual content also works very well on mobiles, and I've been really pleased to see the high degree of mobile engagement we're getting. I always thought that this industry would be focused on desk reads, but we get a pretty even split between mobile and desktop usage."**

He says that making content as relevant as possible will also be key to improving engagement as hyper-personalisation becomes more feasible.

"Communications are going to have to become hyper-targeted, because people simply don't have the time to be bombarded with content that is interesting but not that meaningful for them.

"That content will also need to be disseminated through as many different channels as possible. Companies will be making much more use of things like social media, and lots of content will be presented in teaser formats that link to a deeper dive. Snippet style content in easy-to-digest content blocks is going to dominate."

Beyond these changes to the content itself, Macdonald says that HCP behaviour is also evolving. "They're becoming far more digitally savvy, and with that, they're inevitably becoming more demanding as well," he says.

"What we know is we need to continue to deliver relevant up-to-date content for our audience.

"What's exciting is that the digital spaces will become even more useful and even more important for our audience going forward, and I think we're in a great place to support that."

## About the interviewees



**Jonathan Macdonald**

Jonathan is chief operations officer at EPG Health. Since joining in 2018, he has been responsible for aligning commercial, scientific and digital operations. With over 15 years experience in the pharma and medical device sector, he has specialised in sales excellence, marketing, CRM and data solutions, product launches and lifecycle management, leading several organisations in their optimisation of multichannel approaches when engaging with HCPs.



**Ian Daley**

As chief digital officer at EPG Health, Ian is responsible for driving digital strategy by shaping and implementing a multi-year transformation roadmap to grow HCP audience and deliver online personalised learning experiences for them. Prior to joining in 2017, Ian worked as a 'commercial technologist' within the publishing industry, defining 'build for the future' initiatives for the Daily Mail Group, Pearson and Financial Times.

## About EPG Health and Medthority

### EPG HEALTH

EPG Health is the publisher of [Medthority](https://www.medthority.com), an independent medical website for healthcare professionals (HCPs). Supporting modern digital behaviour and preferences, Medthority provides a trusted learning environment with convenient access to content that drives better treatment decisions and patient outcomes. With an actionable reach of over a million HCPs globally, EPG Health provides pharmaceutical companies with an integrated toolset to reach and engage target audiences with Key Educational Messages (KEMs) while measuring the outcomes.

For more information visit [www.epghealth.com](https://www.epghealth.com)

## About the author



George Underwood is a senior member of the pharmaphorum editorial team, having previously worked at PharmaTimes and prior to this at Pharmafocus. He is a trained journalist, with a degree from Bournemouth University and current specialisms that include R&D, digital and M&A.





# Responding to dynamic shifts in value communications

OPEN Health's Beth Lesher and Annemarie Clegg examine what the convergence of medical communications and market access means for pharmaceutical companies.

Value in healthcare is a continually changing concept. As the needs of different stakeholders evolve and gain in prominence, pharmaceutical companies must be prepared to address value from various viewpoints using a variety of different metrics.

The evolution of value in healthcare is a trend that has important implications for communications, particularly because 'value' is very much in the eye of the beholder. For a physician, value may centre around safety and efficacy whereas healthcare decision makers and regulators may place more emphasis on cost. Patients may place more value on cost when dealing with a chronic disease and quality of life when dealing with an end of life illness.

As patients play a more active part in their own care, physicians grapple with the ever-changing nature of medical science and payers are continually pushed by budgetary constraints, it's important to understand that how you communicate value to the industry's various audiences needs to be different.

Furthermore, these rapidly changing definitions of value have led to a convergence of clinical and health economics outcomes research (HEOR) communications, which are frequently presented together to deliver an integrated value narrative that is relevant to various stakeholders.



# The evolution of value

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For the purposes of this article we're talking about value communications supporting the treatment of disease.

It's an area that has traditionally been centred on the twin concerns of efficacy and safety, which align with outcomes used to make regulatory decisions. Historically, value communications were geared towards physicians and, as the nature of prescribing has shifted, it has more recently expanded to encompass allied health professionals as well.

With the growing awareness of increasing healthcare costs, the audience for value communications expanded to including payers. Looking to the US, for example, this change has been driven by more active management of pharmacy cost categories – something that, perhaps 10-15 years ago, we really didn't see as widespread.

This was, of course, followed by the rise of today's prominent patient focus and the drivers for this are two-fold. Firstly, the increase in new treatments for disease areas where patients are traditionally strong advocates for themselves, for example in rare disease and oncology. Adding to this expansion of patient advocacy, we also see an increase in patient-reported outcomes (or even patient-focused outcomes) being collected during clinical trials that look beyond markers of disease to things like quality of life and functional status, and that's where you start to see a pivot to more patient-directed communications.



Overlaying all of this is the ability of patients to access healthcare information through the internet. A July 2020 study by the Pew Internet & American Life Project found that 80% of US internet users, some 93 million people, have searched for a health-related topic online, such as information on a particular treatment or disease. Added to this, from a US perspective, are DTC advertising and managed care organisations (through prior authorisation and formulary management), which also have a role in leading patients to play a more active part in their care.

Together, these changes are evident in the shift to HEOR publications, which saw a 160% increase in the medical literature from 2005 to 2015. These publications are more geared towards payers and regulators than clinicians with many incorporating the patient voice. We would expect this increase in HEOR publications to continue to grow as healthcare continues to shift from being purely focused on safety and efficacy to more of a focus on value, as defined by not only physicians, but also payers and patients.

Consequently, the evolution of value to date requires pharma companies to increasingly consider more varied and diverse audiences in their value communications planning.

## New ways of communicating needed

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Pharma's challenge is that it's no longer enough to just prove that a product they are bringing to market is safe and effective – data must also be generated and communicated that evaluate cost effectiveness, budget impact and quality of life impacts.

But demonstrating these additional outcomes requires an additional line of communications and a re-framing of the conversation – plus new competencies and ways of thinking than would be applied within a traditional clinical efficacy and safety framework. Key players from both clinical and HEOR need to pull together to develop cohesive stories and narratives that highlight both clinical, economic and humanistic outcomes.

Traditional, data-rich, content-heavy approaches have to be broken down into smaller pieces that are easily digestible and more visual – acknowledging that what works well in print does not always work as well when viewed from a phone or tablet screen. Additionally, the broadening of pharma's audience means that companies must adapt their materials for wider levels of health education, presenting data in ways that patients, payers and clinicians can understand.

A coherent value communication plan should be developed early in the drug development process and periodically updated throughout the product life cycle to ensure timely, ongoing communication with key stakeholders. Market access must be considered as regulatory approval alone does not guarantee uptake and widespread use of a product. As part of an evidence generation plan, the clinical, humanistic, and economic burden of disease should be clearly defined and disseminated. These data should be incorporated into dossiers that serve as a backbone for development of submission documents to health technology assessment bodies to support reimbursement. Evidence generation and dissemination should begin early in the approval process as healthcare decision makers are requesting information prior to drug approval as noted by the release of guidance by the Academy of Managed Care Pharmacy for an Unapproved Product Dossier in 2019.







There needs to be a broadening of scope, in terms of who's sitting at the table, who's driving the conversation and who's framing the story, and all of this needs to take place much earlier in the planning and communications process. One of the challenges for pharmaceutical companies has been just getting the timing of strategic planning right, so that it can occur at a stage where it's still possible to make changes that can influence the downstream value story.

Successfully communicating value presents pharma with an adaptability challenge and also a perspective challenge to take a more holistic view.

## Forming collaborative partnership models

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The new evolving definitions of value require a collaborative partnership between clinical and HEOR teams to keep pace and ensure a narrative is developed that is adaptable and relatable, and that can proactively identify data gaps and make recommendations for filling these gaps.

Collaborations work well when initiated early in strategy development, ensuring capture of all internal stakeholder perspectives, so that the entire team is invested in the data generation plan and the value narrative it supports.

Partnerships are key to successful value communications. When thinking about your overall product strategy and narratives, value must be woven throughout and that requires a synthesis of communications and HEOR.



Start early in strategy development to make sure all the different perspectives are captured, then revisit this often, and maintain clear lines of sight to the various activities that are going on as the product progresses. This is more challenging the closer you get to launch and commercialisation because of the high levels of noise and activity typically encountered during that stage.

Having a clear direction of travel from the outset is also important. It then becomes a bit easier to tick off the boxes as you go and ensure everyone's aligned in terms of what the next stage of the messaging is or what the next iteration of the narrative is going to be.

This collaboration should not only occur on the pharma side, but also between pharma and their chosen service providers. This can help pharma teams ensure their service provider's skills and competencies match and complement those they have internally so that true peer-to-peer interaction can be had.

## Skills for communicating value

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There's a need for medical communication experts that also have a background in health economics and outcomes research, so that they can fully understand not only the outputs from patient-centred studies and economic models, but also the methodologies used to derive the data. Familiarity with guidelines for reporting economic or quality of life studies are needed to ensure research is correctly reported and key data incorporated.

Incorporating a medical writer with HEOR experience into a project team can expedite dissemination of study data. Often scientists, by necessity, not only develop an economic model or patient-reported outcome measure, but also develop and submit the manuscript for publication. Whereas input from scientists is needed to summarise methods and results and provide context on study results, these scientists lack the expertise that a medical communications professional can provide. Medical writing professionals are experienced in medical communications and can facilitate the submission process, ensuring compliance with meeting or journal requirements as well as with company standard operating procedures.

Added to this, trained medical writers will also communicate in a voice and tone that resonates with the particular audience, improving the relatability of the value story and incorporating visual elements where needed. This also helps develop value communications that are scientifically sound, concise, relevant and engaging.





What we're going to see happening is more of a merger of HEOR and medical communications expertise that brings together experts who know how to write manuscripts or value communication pieces, working more with scientists who then can focus on the methodology, results and interpretation and contextualisation of results.

Just as healthcare value is changing, so are the skills needed to understand the unique perspectives of HCPs, payers and patients and tailor value communications to them accordingly. Choosing service providers with experienced HEOR and medical communication professionals can benefit pharmaceutical companies in terms of compliance and efficiency that ultimately may decrease time to publication.

## A dynamic field

We need to be able to communicate effectively and efficiently to all stakeholders, and this will require further work on incorporating various perspectives, including the patient perspective, into value communications.

As the number of real-world and health economic studies in the published literature continues to grow, we should challenge ourselves to ask, 'what do patients really value?' It's only by asking the right questions that pharma companies can correctly direct their endeavours to improve patient outcomes.

Armed with information tailored to its key stakeholders, the industry has an opportunity to change traditional medical communications, translating what can often be dense, data-rich outputs into more easily digestible and engaging pieces that are understood by various audiences.





As value communications continues to advance and grow to include clinicians, payers, regulators and patients the need for experienced communications experts is evident. Value in healthcare as defined today is not what we're going to see in five or 10 years and communications experts with the skills to clearly present these data will be invaluable to pharma companies. Messages have to be simplified to incorporate a broader range of health education and expanded to include not only the clinical value but also the humanistic and economic value. Companies should expect that the use of visual communication will continue to grow, and new, innovative tools will be developed and introduced as mainstream as what is already a very dynamic field continues to evolve.

## About the authors



Annemarie Clegg is senior vice president, strategic services at Peloton Advantage and a medical professional with more than 15 years of scientific, medical strategy, publication planning, business development and integration experience. Before joining Peloton Advantage, Dr Clegg was senior vice president, global value communications and strategic services for ICON Commercialisation and Outcomes Division.





Beth Lesher is a director in the Strategic Market Access Center of Excellence, located in Pharmerit's Bethesda, MD office. Dr Lesher has more than 20 years of medical writing experience in a variety of therapeutic areas. For the last 15 years, Dr Lesher has primarily focused on HEOR medical communications including the dissemination of information on economic models and patient-centered outcomes. Dr Lesher is a board-certified pharmacotherapy specialist and a member of the ACCP and the AMCP, serving on the Format Executive Committee.

## About OPEN Health

OPEN Health is a family of expert practices working in partnership to drive positive change in healthcare communications and market access globally. It all started with a vision for improving the lives of patients, worldwide. The OPEN Health vision has manifested with the integration of experts from Pharmerit and Peloton Advantage to create a new unique entity equipped to be a global leader in HEOR, market access, medical and patient brand communications and digital services.

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# Developing enhanced digital content to increase physician engagement

With in-person scientific congresses an impossibility for the foreseeable future, researchers and publishers have to adapt how they foster scientific exchange. Experts from ICON tell us how they have found success in using enhanced media fit for the digital age.

It would be easy to assume that researchers and physicians have been dragged reluctantly into having to get scientific information from online sources rather than physical meetings during COVID-19 – but in truth things were heading this way long before the pandemic.

In 2015 research from SSCG Media found that 59% of physicians preferred to receive information about clinical trials through print media, but similar research by PM360 in 2018 found that only 34% preferred traditional sources, compared to 40% who have shifted over to a combination of print and digital.

Meanwhile, 26% of physicians indicated that in the future they would not have time for print at all.

But reaching busy physicians with scientific news is about more than just putting existing scientific posters online in a digital format. More than ever, physicians are in need of research summaries in formats that are quick and easy to understand, and pharma must consider carefully how it adapts content to an online world.







One rapidly growing area is the use of enhanced digital content to make publications more visual, more engaging and easier to digest. This enhanced content can take many forms, including:

- Graphical abstracts
- Video abstracts
- Audio
- Augmented reality
- Podcasts
- Text messages or shortened URLs
- Journal-specific websites and microsites
- Plain language summaries

Already, most journals are including enhanced content developed by the journal or the authors – with many smaller journals actually requiring graphical abstracts with submissions – and these techniques are becoming increasingly common when building digital scientific posters.

## Enhancing posters

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Using enhanced content to help physicians access and engage with the latest research might sound obvious given the world we now live in, but, as ever, the life sciences sector has been slower than other industries in adopting these more user-friendly, digital approaches.

“We’re all users and we’re all living in a world where we’re used to having information at our fingertips,” says Travis Tingey, digital marketing manager, creative and digital services at ICON. “Medical communications were lagging behind by being beholden to live conferences and printed posters, but there has been a slow transition into the digital world, accelerated by COVID.”

To this end, the team at ICON have been working on improving the designs of scientific posters so that they work better in a digital format. But simply putting an existing poster online as a PDF is unlikely to engage many readers. This is especially true when viewing them on small smartphone screens, which make full-sized content difficult to read – the busier HCPs get, the more important smartphone engagement will become.



Instead, teams like Travis' are developing posters that cover the same type of content, but with an enhanced, more user-friendly layout.

He says this often involves using tried and true techniques for developing websites, and simply applying those to medical communication content.

"A lot of the time these new offerings are really just taking a printed poster and applying some common sense user experience to it," he says.

And these user experience considerations apply to the offline world as well as digital platforms – even in physical meetings, poster sessions face difficulties in standing out from the crowd, as these sessions are typically short and are held in crowded exhibit halls where hundreds of posters are vying for attendees' attention.

As such, enhanced content techniques were becoming more and more commonplace long before the pandemic hit. This includes the use of more infographics to attract the audience's attention and clearly and succinctly communicate key data – acting as an easy way for physicians to digest the main takeaways. In fact, Tingey says that in some cases they can turn a poster into one large interactive infographic (see box).



# The Real-Life Burden of Neurogenic Orthostatic Hypotension: A Patient and Caregiver Perspective

JESSIE I. SELLERS, MSN, RN, AGPCNP-BC,\* CHRISTINE B. HUNTER, RN, BSN\*

\*Vanderbilt University Medical Center, Nashville, TN; \*Parkinson's Disease Center and Movement Disorders Center, Baylor College of Medicine, Houston, TX  
\*Presenting author.

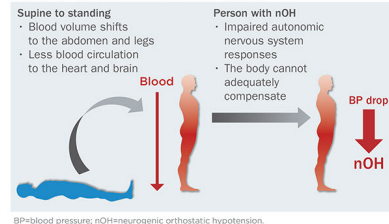
## KEY POINTS

- Patients with neurogenic orthostatic hypotension (nOH) may experience severe and burdensome symptoms that can lead to functional impairment and reduced quality of life.
- Nursing professionals can play a key role in the recognition and diagnosis of patients with nOH.
- There are treatment options available that could potentially improve nOH symptoms.
- Treatment of nOH symptoms may improve patients' ability to function in daily activities and benefit their sense of well-being.

## INTRODUCTION

- Orthostatic hypotension (OH) is a sustained drop in blood pressure (BP) upon standing (Figure 1).<sup>1</sup>
- OH can be caused by numerous factors (eg, hypovolemia, medications); when OH has a neurogenic cause (ie, as a consequence of autonomic nervous system dysfunction), it is called nOH.<sup>1,2</sup>
- nOH is common in patients with neurodegenerative diseases such as Parkinson disease, multiple system atrophy, pure autonomic failure, or other neuropathies.<sup>1,2</sup>

### FIGURE 1 - THE PATHOPHYSIOLOGY OF nOH\*



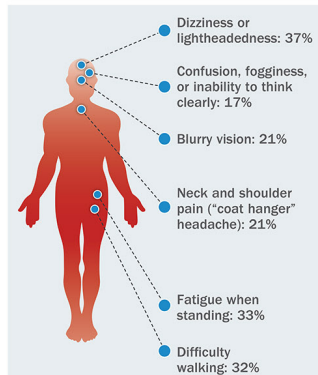
## OBJECTIVE

- To examine aspects related to nOH, including symptom burden, diagnosis, and management, by literature review (including a survey of 363 patients and 128 caregivers regarding nOH symptoms and their impact\*) and collection of perspectives from a patient with nOH and his caregiver (wife).

## SYMPTOMS

- The BP reduction associated with nOH causes organ hyperperfusion and can manifest as various symptoms that occur upon standing (Figure 2).<sup>1,2</sup>
- Because symptoms of nOH are nonspecific, patients may not recognize that nOH is a separate condition from the underlying neurodegenerative disease or other comorbidities.

### FIGURE 2 - PERCENTAGES OF RESPONDENTS REPORTING PERSISTENT\* nOH SYMPTOMS IN A PATIENT SURVEY\*



nOH=neurogenic orthostatic hypotension.

\*Multiple times a day or every time when moving to sitting or standing, standing for long periods, or with position change.

### PATIENT PERSPECTIVE ON nOH SYMPTOMS

"Initially, I did not realize that I had nOH."

"I would have a tendency to be slow getting started in a movement, getting sleepy during the day and dosing, overall lethargic feeling, difficult to get motivated in the morning in getting dressed and things like that, I would be frozen, and during the day, I would get sleepy, I would try to get up and walk around, but it was hard to get up."

"As the day progressed, I became slower and slower and the symptoms were more pronounced... sometimes, I would go to bed at 8:00 PM, which is abnormal for me."

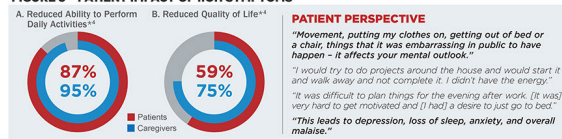
"Looking back on it, I think it had an impact on my cognitive behavior."

"I attributed all of [the symptoms] to PD [Parkinson disease]... it became evident that the nOH was causing me to feel more 'stuck' or 'frozen' than I would otherwise feel as a Parkinson's patient."

## IMPACT OF SYMPTOMS

- The symptoms of nOH can impair patients' ability to perform daily activities and reduce their quality of life (Figure 3).<sup>4</sup>

### FIGURE 3 - PATIENT IMPACT OF nOH SYMPTOMS



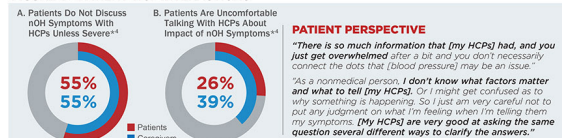
nOH=neurogenic orthostatic hypotension.

\*Percentages reported are respondents agreeing with the statement in a survey of patients and caregivers. Patient and caregiver respondents were not paired.

## INTERACTIONS WITH HEALTHCARE PROVIDERS

- Despite the negative effects of nOH on their lives, patients may not discuss nOH symptoms with their healthcare providers (HCPs; Figure 4).<sup>4</sup>

### FIGURE 4 - PATIENT-HCP INTERACTIONS



HCP=healthcare provider; nOH=neurogenic orthostatic hypotension.

\*Percentages reported are respondents agreeing with the statement in a survey of patients and caregivers. Patient and caregiver respondents were not paired.

## DIAGNOSIS AND MANAGEMENT

- Patients can find the path to a diagnosis of nOH frustrating; however, they also report improved management of their symptoms after diagnosis (Figure 5).<sup>4</sup>

### FIGURE 5 - PERCEPTIONS ABOUT nOH DIAGNOSIS AND MANAGEMENT



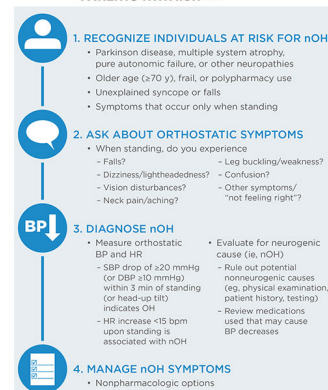
HCP=healthcare provider; nOH=neurogenic orthostatic hypotension.

\*Percentages reported are respondents agreeing with the statement in a survey of patients. Caregiver information was not reported.

## CARE OF PATIENTS WITH nOH

- Nursing professionals should ask patients at risk of nOH about symptoms and take orthostatic vital signs to identify those who may benefit from symptom management (Figure 6).<sup>1,2,4</sup>

### FIGURE 6 - STEPWISE APPROACH TO CARE OF PATIENTS WITH nOH\*\*



BP=blood pressure; DBP=diastolic BP; HR=heart rate; nOH=neurogenic OH; OH=orthostatic hypotension; SBP=systolic BP

### CARE OF PATIENTS WITH nOH

"I would suggest... to keep a journal of BP, medication changes, environmental changes, and a detailed account of any changes in how [you] are feeling and/or functioning... a [healthcare provider] might be able to look at it and say 'this guy could have low blood pressure.'"

"It is very easy with Parkinson's to lose sight of your goals and to not fully appreciate the changes that might be happening over any given period of time."

## CONCLUSIONS

- Patients with nOH may experience burdensome symptoms, functional impairments, and a decreased sense of psychosocial well-being.
- Patients and caregivers may not proactively discuss nOH symptoms with HCPs.
- Nursing professionals can facilitate recognition and diagnosis of nOH by discussing symptoms with at-risk patients and their caregivers and measuring orthostatic BP.
- nOH symptoms can be managed using nonpharmacologic and pharmacologic approaches to decrease symptom burden and improve functionality in daily activities.

## ACKNOWLEDGMENTS

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## DISCLOSURES

JIS received support from Lundbeck for travel and registration fees and received research support and compensation for speaker bureau participation from Teva Neuroscience. CBH reports advisory board participation for Acorda Therapeutics.

Source: Lundbeck

For this poster, ICON and Lundbeck worked together to find a compelling, compliant way to integrate a patient/caregiver story into posters via the use of infographics. The Lundbeck Publication team was instrumental in spearheading the development of these posters and shaping how this tactic was developed and applied.

ICON has also found that adding eye-catching links to the poster that lead to downloadable plain language summaries (PLSs) can improve the reader's experience and facilitate data dissemination to congress attendees who may not be well-versed in the disease state.

In one [case study](#), QR codes were used to monitor downloads of the infographic poster and PLSs; results were compared across posters as well as to poster downloads from the same congress from the previous year. The number of times the QR code was scanned increased by almost 400% for the infographic poster compared to standard posters from the previous three years; downloads were also higher than the standard posters at the same meeting. Downloads of standard posters with PLSs also increased by about 250% compared to standard posters without PLSs from the previous year.

“Right now, more content is being published than any other point in history,” says Tingey. “That’s why we’re seeing physicians consume the content the way they do and why videos, infographics, and microsites are so important. They cut through the noise.”

Most of the time, Tingey says, it's best to use microsites to house the information accessed via links and QR codes on the poster.

“If you’re just putting the poster online as-is, users are going to have to pinch and zoom to see some of the info, whereas with a microsite you can better craft that experience, provide additional resources, and be more strategic by connecting to additional content, such as videos, interviews with an author, and podcasts,” he says.

Nicole Gudleski O'Regan, a senior scientific director at ICON's global medical communications group, adds that microsites are becoming increasingly popular with pharma and biotech companies.



“One thing they like about microsites is being able to link a poster to all of their presentations at a specific congress – in essence, it is a virtual congress compendium. For example, when a user scans a QR code on a poster they will be directed to a site that enables them to easily access everything presented for that product, in addition to any additional information they wish to provide including plain language summaries.

“There has also been a push to link QR codes to static figures in a poster – researchers can scan the code linked to the figure and an animated version of the figure will pop up, with a voiceover to describe it. That’s relatively quick and easy to create and can be quite impactful.”

## Understanding users

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Underpinning all these design decisions is an understanding of the behavioural science that explains how users engage with content, especially time-poor users like physicians.

“There is plenty of evidence-based research around user experience, such as eye-tracking studies that try to determine how the common user scans a page,” says Tingey. “We know that is often an F-shaped pattern, starting from the top of the screen reading from left to right, scanning less as your attention goes down. That tells us where we should put key information.

“We have to stay up to date on the best practices in terms of user experience so that we can apply them to materials.”

Greg Kloiber, director of client engagement, global medical communications at ICON, adds that the company also has to pay attention to shifts in how physicians prefer to receive information – but it’s important to keep in mind that this can vary greatly by audience.

“You should never take a one-size-fits-all approach,” he says. “It’s really a matter of crafting and adapting your communication platform to the user and creating enough points of access that people can choose to receive and digest the information in a way that works for them.”



Nevertheless, Tingey notes that the best approach is often to cast as wide a net as possible.

“It costs very little to do something like creating a QR code or using SMS campaigns – most of the work is spent setting the website up – so we aim to do anything we can to try and drive people to that site.

“We’re essentially taking an agency approach and thinking in terms of user engagement, even though we’re not talking about a product.”

This goes beyond the main content of a poster or publication – Tingey adds that it’s important to build in as many mechanisms of engagement as possible to give users multiple ways to access the information, for example by leveraging social media channels and video content.



“When you can’t present a poster in person, you need to figure out how you pivot and adapt that content to allow the author to present the poster in their own words,” he says.

Video content is becoming an increasingly popular alternative to poster presentations. This usually involves taking the same poster content and putting together a video presented by the author.

“We run through a script with the author, and we then take that audio and create a video where we are either showing slides that were developed by the medical communications team or actually zooming in on a poster and allowing the author to narrate as we’re walking through it,” says Tingey. “We’ve also been able to take figures and animate them then provide a narration on top of that.”

He adds that, as with enhanced content posters, oral presentations augmented with PowerPoint slides have received more downloads and more engagement than traditional flat posters.

## Getting buy-in

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But despite evidence to show physicians' preference for enhanced content, and successful data from implementations, not every company in the industry has yet embraced such tools.

"There are some companies that are pushing the boundaries and others that are not," Kloiber says. "Within companies themselves, different therapeutic groups often vary in terms of how accepting they are of enhanced content.

"It really boils down to the company's interpretation of guidelines and how they can work within those guidelines to utilise digital tools.

"And, of course, you need buy-in from leadership. Showing that data backs up the popularity of enhanced content can help convince them that it's something worth doing."

Gudleski O'Regan adds that she has noticed differences between large and small pharma companies in their willingness and ability to utilise enhanced content:



"When you're using something like microsites, our experience suggests that larger pharma companies often have a lot more hoops to jump through with regard to compliance, while smaller companies can implement it a lot quicker," she says.





Likewise, even the visual elements of an enhanced content poster need to be rigorously reviewed to make sure they are compliant with guidelines.

“As designers, we obviously want things to look very attractive and pretty, but we have to be cautious and make sure that nothing appears promotional or looks like it’s trying to skew data,” says Tingey.

“It’s important to partner with the medical communications group to take a fine look at the way we’re emphasising information in our infographics, so that we’re avoiding bias or leading conversations.

“That can even come down to things like colour choice – e.g. should we make something green because green has a connotation of ‘good’? We need to be really thoughtful and precise in how we approach the creative aspects of these enhancements.”

Tingey hopes that the creative execution of publications will evolve from today’s rudimentary approaches over time as the industry becomes more comfortable with enhanced content.

“Resistance from those legal teams that don’t want to step into digital will start relaxing, and we’ll start seeing a bit more sophistication in terms of what content is being put out there.



“It’s really important for us as an agency to be good stewards of understanding content and guiding companies through the process – but there also needs to be significant involvement from the client. Companies need those thought leaders and advocates within their organisations to push for that. Partnership is really key from all groups.”

Kloiber says that the utilisation of microsites is probably going to be the biggest growth area in the near future, as pharma companies recognise they can be used to host content in an accessible and med-legal format.

“That allows these companies to expand the scientific exchange as much as possible, gives physicians an easy way to consume content and, ultimately, achieve the aim of every company in the industry – improving healthcare.”

## About the interviewees



Nicole Gudleski O'Regan, PhD, joined ICON in 2012 and serves as a scientific advisor to numerous pharmaceutical clients, providing publication and strategic support. In her current role as a senior scientific director, Nicole leads an editorial team and oversees the development of a range of innovative publication tactics and deliverables, including congress materials, reviews and clinical study manuscripts, plain language summaries, infographic posters and enhanced content, and publication strategies.



Greg Kloiber has over 25 years of healthcare communications experience spanning medical affairs, pharmaceutical sales and marketing, publishing, and certified medical education. At ICON he supports client engagement in the areas of global medical communications, health economics, global pricing, market access and reimbursement.



Travis Tingey joined ICON in 2012 and is responsible for the leadership and growth of ICON's creative and digital services group. He manages the planning, strategy, organisation and execution of digital projects for pharmaceutical, medical device and biotech clients. He also liaises with internal and client IT personnel to determine needs and provide customised content for multichannel solutions. Prior to joining ICON, he held designer and developer positions for large and small marketing agencies.



*Additional thanks: Meghana Karnik-Henry, senior medical publications manager, Lundbeck, and Salma Sayeed, formerly AD, medical information and medical communications, Lundbeck, for the release and utilisation of the poster infographic depicted above*

## About ICON

ICON plc is a global provider of outsourced development and commercialisation services to pharmaceutical, biotechnology, medical device, government and public health organisations. ICON supports programs across all stages of drug and device development, from endpoint selection and PRO development, through clinical trials, to post-approval and scientific publication. ICON delivers integrated market access, pricing, communications and health economics solutions to demonstrate product value and support brand success around the globe. For more information visit: [www.ICONplc.com/access](http://www.ICONplc.com/access)

## About the author



George Underwood is a senior member of the pharmaphorum editorial team, having previously worked at PharmaTimes and prior to this at Pharmafocus. He is a trained journalist, with a degree from Bournemouth University and current specialisms that include R&D, digital and M&A.





## The tools and techniques making virtual patient simulations more realistic than ever

Patient simulations have been a key tool for educating physicians in some form for hundreds of years – and now cutting-edge technologies are helping them become more realistic and informative than ever. Medscape's Martin Warters tells us more.

Learning from a textbook can only take you so far, and when doctors need to put theory into practice in a safe environment, they often turn to patient simulations that use a case study approach to emulate real life clinical scenarios.

Modern day recognisable simulations have been used in medical education since the 18th century and have evolved into realistic and medically accurate physical and digital solutions designed to allow learners to simulate a scenario-based encounter with a patient in a safe environment.

This has ultimately led to the development of virtual patient simulations (VPS), which have become one of the most impactful ways clinicians can learn.

Virtual patient simulations take place online and aim to be goal-orientated, case-based, and rule-based, encouraging learning through active decision making and developing competencies that can be applied in real-world practice.

Often, this will involve virtual patient avatars that realistically respond to treatments. Physicians may be able to take a reading from a virtual blood metre and listen to an MP3 recording of a real heartbeat to determine a diagnosis for a specific case study.





The technology is also now evolving to include things like virtual reality (VR) and natural language processing (NLP) to make these interactions even more life-like.

“We often equate virtual patient simulations to flight simulations when first introducing the concept to people,” explains Martin Warters, Medscape’s director of learner experience, “although that’s not a completely accurate definition, as patient simulations take more of a cognitive behavioural approach to learning, focusing on application of knowledge and behaviour change, whereas flight simulators are more procedural.

“In virtual patient simulations, learners have the opportunity to interview the patient, to make diagnoses and orchestrate follow-ups. Every single decision they make will be referred back to clinical guidance for immediate feedback on the appropriacy of that decision.

“The goal of a virtual patient simulation is to, at every step, mimic a real-life clinical setting in a psychologically safe environment where the learner can experiment, make decisions and receive guidance on what they’re doing.”

Though patient simulations have been around in one form or another since the Middle Ages, modern simulation can mostly trace its roots back to the 1960s and 70s and the development of standardised patients.

Standardised patients involve an actor playing the role of the patient with a given condition, who can be interviewed by medical students.

With the advent of the internet, though, patient simulations were able to reach “the next level”, says Warters, who worked in teacher training and curriculum design before joining Medscape.

“All the benefits of digital learning – such as the standardised nature or the ease of access – really gave patient simulations the opportunity to be more cognitively driven. Now they are more focused on making decisions and receiving feedback, rather than on the conversational skills that were being practiced before with standardised patients. As with all other industries, it has opened up new ways of thinking about educational design.”

## From AI to holograms

The technology supporting virtual patient simulations is only going to keep evolving – for instance, natural language processing (NLP) techniques based on AI technology could be a game-changer for patient simulations.

NLP allows computers to better understand normal human speech and respond in a realistic way.

“At the moment, physicians have to type in their questions and responses or select them from a list. Now, though, developers are trying to produce a much more natural way of communicating with virtual patients, where the learners can actually speak to them and the software can understand them and give realistic answers.”

Meanwhile, with the Internet of Things and other advances in tech, the industry may be able to get to the stage where virtual patient simulations are used as a direct learning tool in the clinic.

“For example, if you knew you were going to see a patient with diabetes, before they arrived you could generate a virtual patient with the same conditions, the same comorbidities, and the same history to try out different aspects of patient management,” says Warters.

Looking even further into the future, Warters says that volumetric holograms may one day allow patient simulations to hit new heights of realism – perhaps sooner than we think.





"We've tentatively started exploring that technology – it would be really cool if we were able to put a 3D patient in front of the learner, so that they can perform all the same tests they would use in a clinical setting. It sounds incredible to even be saying that, but that's certainly one way we see the technology evolving."



Until then, technologies that are more within reach, like virtual reality (VR), are starting to show their potential in making simulations even more immersive.

"VR in patient simulations is mostly in the proof of concept stage right now," says Warters, "but it could be a great vehicle for virtual patient simulations. For example, we recently created a really compelling programme about an Alzheimer's patient, where you could see the same event from four separate viewpoints – the patient, the doctor, the patient's caregiver, and the patient's son – through the VR headset, and we worked in a narrative about the different dynamics going on."

Warters stresses the importance of keeping up to date with the latest technology developments to see if they can be applied to patient simulations – and that includes not just monitoring the medical education sector, but also entertainment industries like film to see how they are using the same tech.

"These technologies have limitless applications, but they're also so new that everyone is still figuring out how to best harness them."

Ultimately, though, Warters says that a blended approach is likely to dominate simulations of the future, and there will always be room for different tools in different circumstances.

"In complex, treatment-heavy disease states with comorbidities, techniques such as NLP might not be that applicable, but things like psychiatry lend themselves really nicely to that technology."

He points out, though, that virtual simulations can already be incredibly realistic – and this will only improve further as technology evolves.

"Technology is really the only limitation we have right now. Virtual simulations can be as digitally realistic as any current online application – for example, with the graphics engines we have now we're already able to create some very realistic and compelling patient avatars that can respond realistically to medications. That's only going to develop further. "The methodology and approaches are in many ways already there – we're just waiting for the technology to catch up with that."

# What makes a good simulation?

These methodologies have seen as much evolution as technology over the years, and Warters points out that running a good virtual patient simulation is about more than just the digital tools – it's also about telling a story.

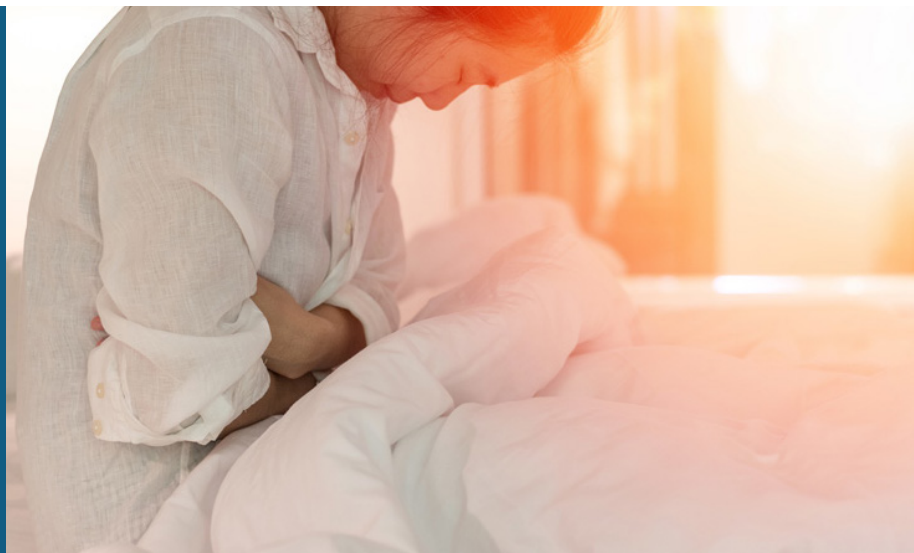
"You need to take really dry clinical facts and turn them into compelling narratives to really help with the learning process.

"Take a patient who is unable to walk four flights of stairs without shortness of breath as an example. You could look at the barriers preventing that patient from receiving the best care – perhaps she is a single mother with small children, from a low socio economic background, and her main concern could be not being able to look after her children. You could ask why she is walking so much – does she live in a fourth-floor apartment, so she has to walk up four flights of stairs every day?

"That turns the case into a humanised patient that is in front of you, who you're able to treat in a more immersive environment. That's key to the success of a virtual patient."

Medscape also listens to HCPs to find out what they want to see from a good virtual simulation programme.

"They tell us that they like to see more of a continuum of care, and simulations that take them through different stages of a disease state," says Warters. "In real life, they might see a patient one week who has shortness of breath and put it down to seasonal allergies, but then they come back two weeks later to say it has progressed. That's the kind of progression we want to emulate more often."



Warters adds that it's also important to ensure the learning environment is "psychologically safe" for HCPs.

"For a lot of people, the idea of making mistakes and causing harm in a real-life human is mortifying. It's important to set up a learning environment that both reflects real-life practice but is also safe.

"If you make mistakes, no one's going to get sued – there are no virtual lawyers with virtual lawsuits looking at malpractice cases. Physicians have free reign to make as many mistakes as they want, with the ultimate goal of learning from them.

"That also encourages experimentation. Doctors might have types of patients that they see every week, where they have a pre-determined idea of how best to treat them. With a safe virtual patient platform, they have the opportunity to try out new things, whether that be a new treatment, a new algorithm, or a new testing protocol."

## COVID and beyond

Ultimately, the combination of evolving technologies and improved methodologies will work towards better patient outcomes.

"A third of all medical knowledge is outdated every five years, and then every 15 years the body of knowledge doubles," says Warters. "If you consider the fact that the average working career of a doctor in the US is 36 years, that's a lot of new insights and new innovations for them to take in over the course of their life.

"We've got doctors coming towards the end of their career who went into practice when AIDS/HIV was first becoming a recognised disease, and were literally learning in the field with the patients who were coming in. They needed continuous education and patient simulations to manage that.

"On the other hand, there are going to be so many health challenges that the world will see in the future, and students coming into the field right now are going to need education on them."



Warters says that COVID-19 is a prime example of this.

"The virtual patient is a great way to disseminate the current best-practice knowledge of a disease state and allow the learner to apply this new knowledge in a risk-free, frictionless environment, so they can learn from what they're doing, see what mistakes they could potentially make and discover the benefits, pros and cons of each treatment – with the ultimate goal of getting this knowledge into the patient population."



## About the interviewee



Martin Warters is the director of learner experience at Medscape. He has over 15 years' experience creating simulations, having worked previously in the fields of Aviation and the Energy Industry. For the last nine years he has been working in the realm of Virtual Patient Simulation, spearheading the design of MedSims. Martin has a background in Educational Technology, Serious Games, and XR. His role at Medscape is dedicated to the development and advocacy of innovations and solutions within the field of emerging and immersive technologies for healthcare professional education. Martin's area of expertise is in the educational design and theory in the design of Virtual Patients.

## About Medscape

Medscape Education is the leading destination for continuous professional development, consisting of more than 30 specialty-focused destinations offering the latest medical news and expert perspectives; essential point-of-care drug and disease information; and relevant professional education and CME. Medscape Education offers thousands of free CME and CE courses and other educational programmes for physicians, nurses, and other healthcare professionals. Medscape Education is part of WebMD Health Corp., an Internet Brands company.

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George Underwood is a senior member of the pharmaphorum editorial team, having previously worked at PharmaTimes and prior to this at Pharmafocus. He is a trained journalist, with a degree from Bournemouth University and current specialisms that include R&D, digital and M&A.



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