_Autumn 2025_Edition #23

HAVAS Lynx

The Algorithm will see you now

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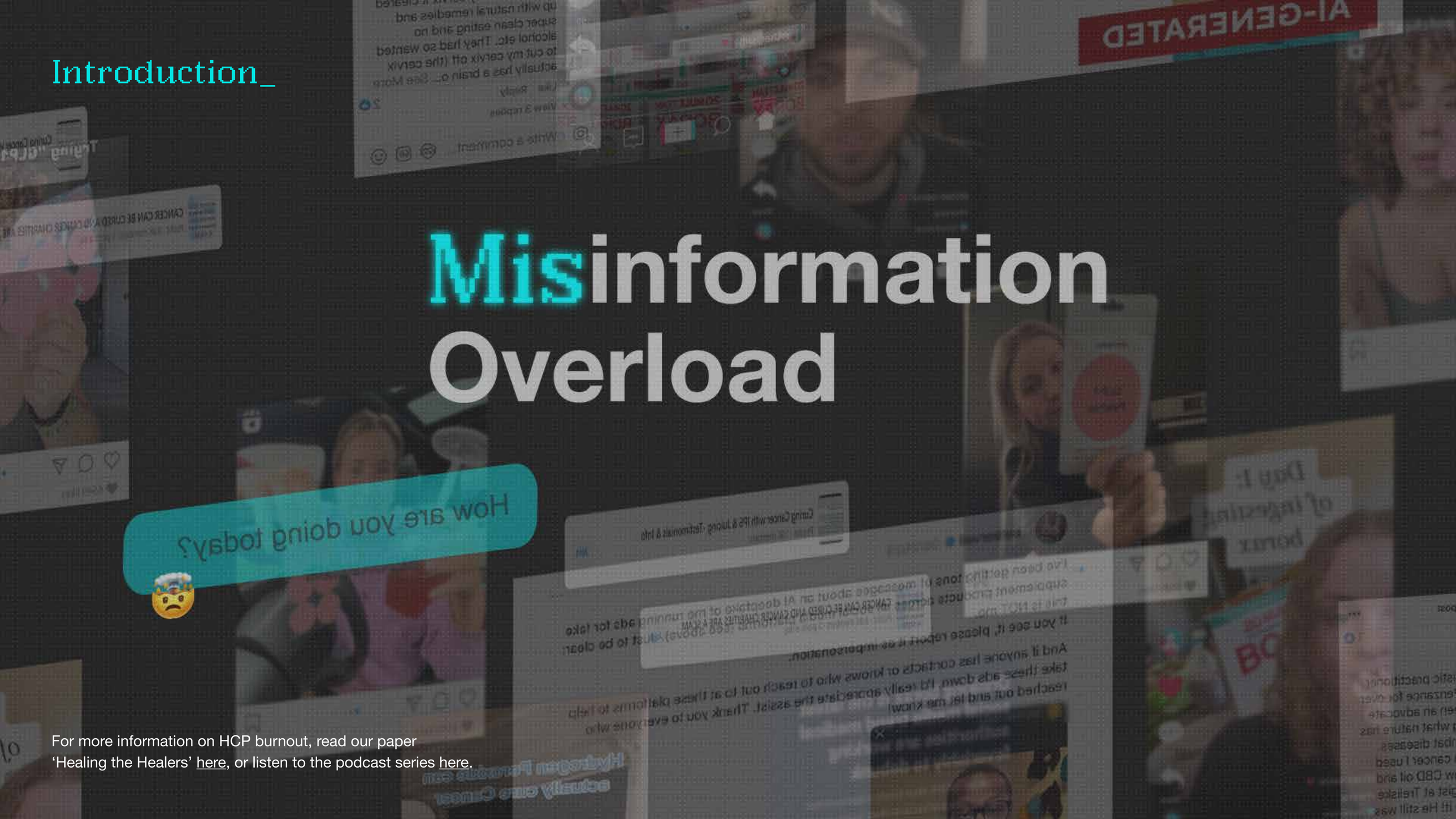
Introduction_

Misinformation Overload



For more information on HCP burnout, read our paper ‘Healing the Healers’ here, or listen to the podcast series here.

Healthcare systems around the world are buckling under unprecedented strain. Rising patient numbers, spiralling financial pressure, and waves of burnout spread through our healthcare professionals (HCPs), triggering the fastest deterioration in HCP wellbeing in recorded history (particularly among millennial and Gen Z clinicians).[1]

For more information on HCP burnout, read our paper 'Healing the Healers', or listen to the podcast series here. The traditional model of care has been dismantled by relentless time constraints. In its place, a new paradigm emerged: one where patients are no longer passive recipients but active participants in their own care. Patient empowerment has become the backbone of modern healthcare, born out of both necessity and favour.[2]

At its best, this shift towards patients taking an active role in their health is transformative. Empowered patients are more engaged, more proactive and tend to have better health outcomes as a result. They adhere better to treatment plans, recognise symptoms earlier, and seek timely medical attention which can, in turn, help to reduce the overall cost of their care. Technology has been a powerful enabler of this movement, connecting patients across geographies, democratising access to information, and giving voice to those navigating complex or rare conditions.[2,3]

But increased connectivity and the ability for anyone, anywhere, to share health opinions, has become a double-edged sword. The same digital platforms that connect and inform can also mislead. The internet is awash with health information - some of it credible, much of it not. Patients, now more autonomous than ever but with shrinking contact time with medical professionals, are left to navigate a minefield of conflicting claims, faceless advice, viral trends, and persuasive influencers, many of whom lack medical expertise or operate with ulterior motives.

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Introduction_Misinformation Overload

What happens when empowerment turns into confusion? When misinformation delays treatment, encourages harmful practices, or erodes trust in evidence-based medicine? These are no longer hypothetical questions.

4 in 5 HCPs believe their patients have experienced physical or mental harm due to misinformation[4]

Misinformation is a key feature of academic focus at congresses, from The American Society of Clinical Oncology (ASCO), to European Society of Clinical Microbiology and Infectious Diseases (ESCMID)

ASCO AMERICAN SOCIETY OF CLINICAL ONCOLOGY

ESCMID

Medical associations worldwide, including the World Health Organization (WHO) and the European Centre for Disease Prevention and Control (ECDC) have issued guidance on the issue

World Health Organization

ecdc EUROPEAN CENTRE FOR DISEASE PREVENTION AND CONTROL

Misinformation and disinformation are now the top short- to medium-term global risks according to The World Economic Forum[5]

WORLD ECONOMIC FORUM

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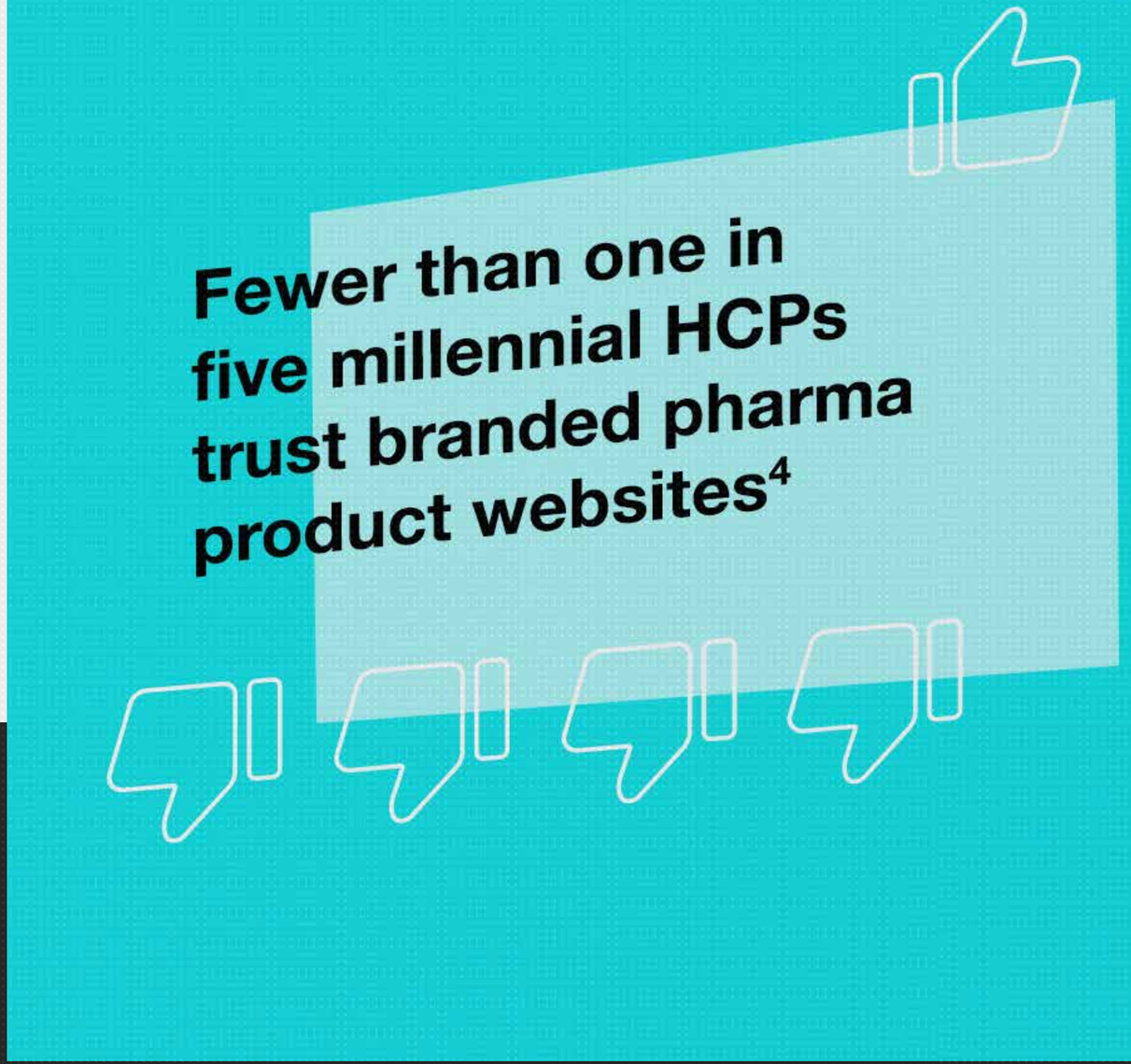
Introduction_Misinformation Overload

The pharmaceutical industry is disproportionately affected by the widespread dissemination of health misinformation - from anti-vax fears to patients opting for unproven alternatives over evidence-based treatments - the industry feels the full force of its impact both ethically and commercially. The rise in misinformation compounds the long-standing distrust of the pharmaceutical industry too - fewer than one in five millennial HCPs trust branded pharma product websites, and only a third of US patients trust direct-to-consumer (DTC) advertising.[4,6]

Tackling health misinformation is an opportunity for pharma to deliver on its ethos of improving patients' lives, rebuilding the trust and credibility among society that is essential to its future success.



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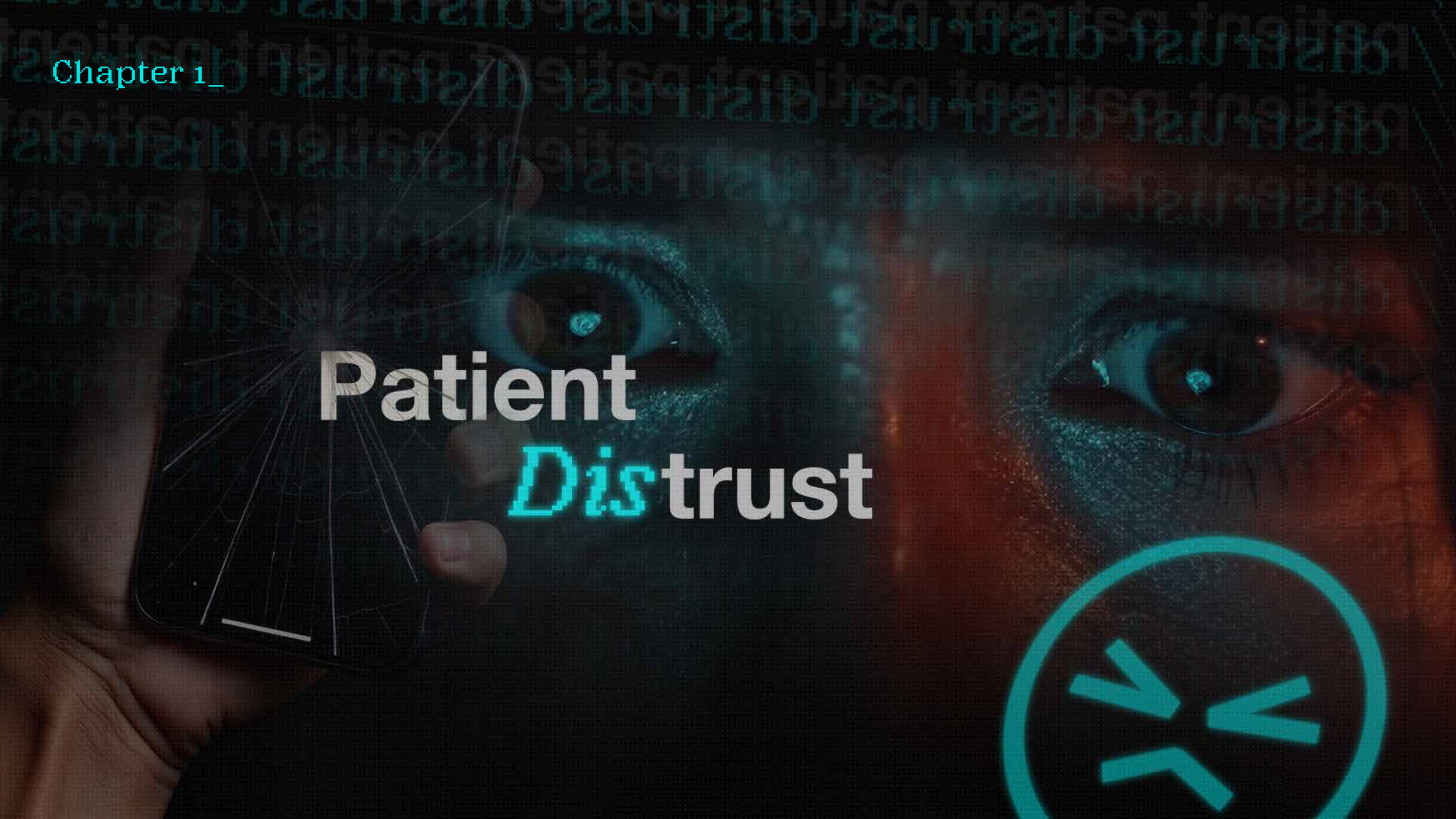
Chapter 1_

Patient *Dis*trust



It’s more vital than ever that pharma are attuned to the decay in trust being witnessed, and the damage misinformation can cause.

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Look at the mission statement of almost any pharmaceutical company and it will state that their main goal is to improve patients' lives. Pfizer's purpose is "breakthroughs that change patients' lives".[1] Sanofi "chase the miracles of science to improve people's lives".[2] Bristol Myers Squibb's vision is to "transforms patients' lives through science".[3] So naturally, pharma needs to be a part of the conversation when it comes to trust and misinformation. Particularly, as the debate swirls around the future role of direct-to-consumer (DTC) advertising in the US market, with the current administration enforcing FDA oversight and regulatory frameworks around drug advertising, and the calls to redesign the commercial model of medicines, it's more vital than ever that pharma are attuned to the decay in trust being witnessed, and the damage misinformation can cause on the very lives of patients they're trying to improve.

Historically, the structure of trust in health was local, personal, and authoritative. The 'family doctor' knew each patient by name, their history, family, and circumstances. Care was continuous, and relationships were built over years, often under a paternalistic model where medical authority was rarely questioned. Accelerated by the end of World War II, health authority scaled upwards. Global and national institutions like the World Health Organization (WHO), and the NHS emerged as symbols of stability and expertise, reinforcing a top-down model of trust that shaped global health for decades.

But today, that model is under strain. Resentment not just of institutions but of 'the system' at large is growing across the world.[4] During the last few decades Western countries have seen a colossal loss of confidence in traditional political parties, giving rise to "anti-party parties" and a cascade of anti-system political victories. A series of high-profile betrayals ranging from the global financial crisis to media misconduct and corporate fraud have further eroded public confidence, with the fear that government, business leaders, and journalists purposely mislead them at a global all-time high.[5] Healthcare has not been immune. The opioid crisis is an obvious example of where deceptive and harmful practices from within the pharmaceutical industry have caused lasting damage not only in the lives of those affected by addiction and inadequate care, but in the deep mistrust many now feel toward pharmaceutical companies. Today, pharma remains one of the least trusted industries, with polls placing trust in the sector below that of oil companies and banks.[6]

Trust in primary care providers has declined over generations: 74% of trust from boomers, 70% from Gen X, 65% from millennials, and 57% from Gen Z.[7]

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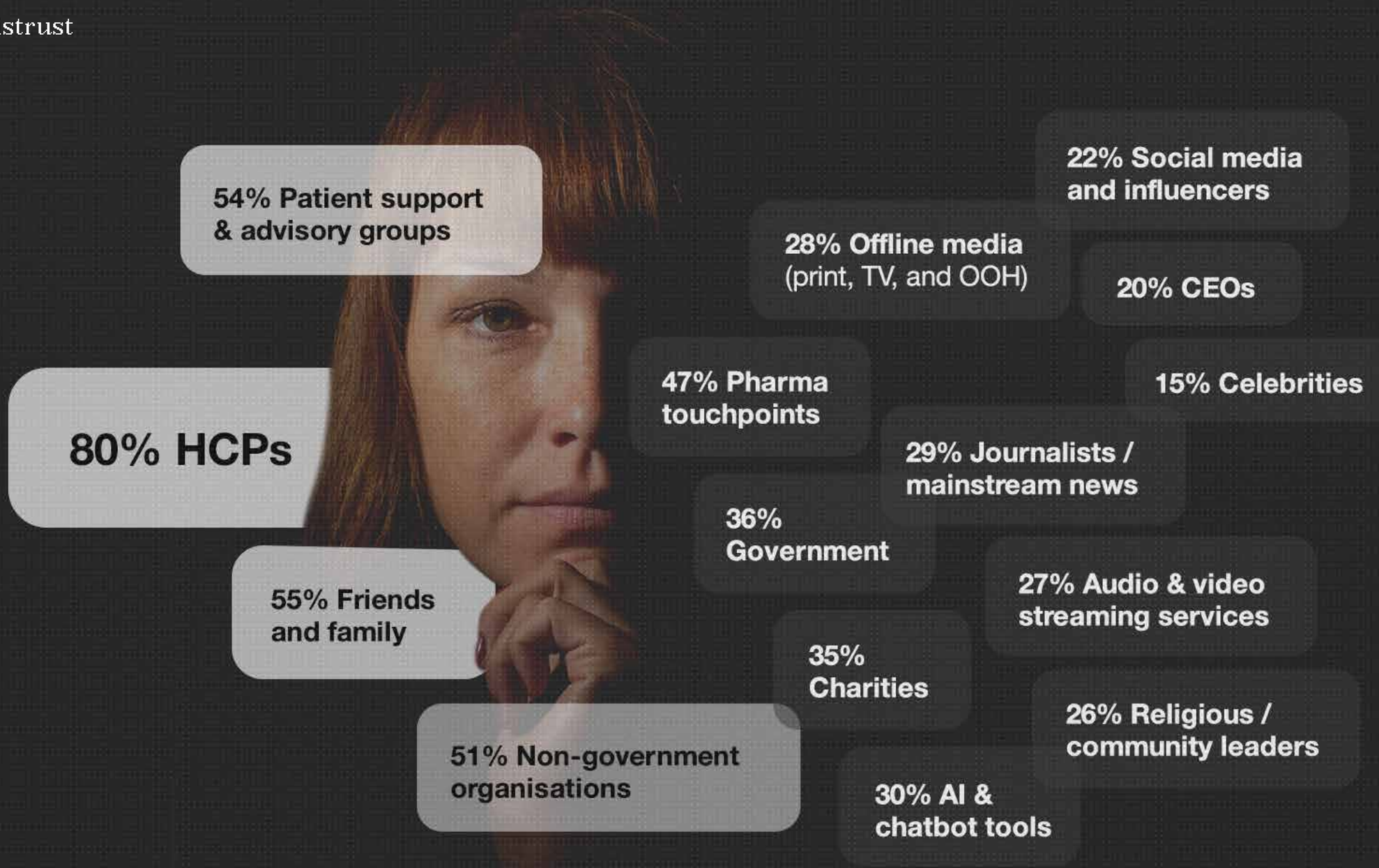
1_Patient Distrust



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1_Patient Distrust

The perception of elitism around science and academia – that it exists in an ivory tower, disconnected from the concerns of everyday life – fuels this distrust and division.[8] Today, science isn't just debated—it's politicised. Whether it's disputes over vaccines or public health measures, the 'us vs. them' mentality is leveraged to undermine trust in evidence-based science. Once steadfast organisations like WHO – "trusted to care for the world's health" – have themselves become polarising.[9] Point.1, our proprietary data platform, reveals that just half of patients trust health information from non-governmental health organisations, signalling how fractured confidence in global health institutions has become.[7]

As previous pillars of authority falter, patients are bypassing traditional health authorities in favour of informing themselves via patient-led communities that feel more relatable, and more responsive, than official sources.[7] HCPs, too, are moving away from traditional pharma-led education toward peer-driven communities and digital learning: when looking to understand new information about a disease, HCPs are significantly more likely to be influenced by non-pharma owned media, than media owned by pharma.[7] Former Oxford University Trust Fellow Rachel Botsman argues that this flattening of hierarchies is reshaping how trust is built and where authority resides. In the digital age, she says, trust now flows "sideways, instead of top-down".[10] In other words, people are no longer looking upwards to authority figures or institutions for health guidance – they're looking across to their peers, communities, and networks that offer authenticity, transparency, and shared experience.

Already, patients and HCPs are gravitating towards educational, disease-focused content. Pharma-sponsored awareness campaigns are outperforming traditional DTC in trust and engagement. Brand-owned platforms, accessed post-prescription, are seen as more credible and useful. If pharma can pivot from promotion to public health shapers, from selling to serving, it can reclaim its relevance. By becoming data-driven disease educators, not simply prescription pushers, pharma has the chance to make a meaningful impact – not just on patient lives, but on public trust itself.

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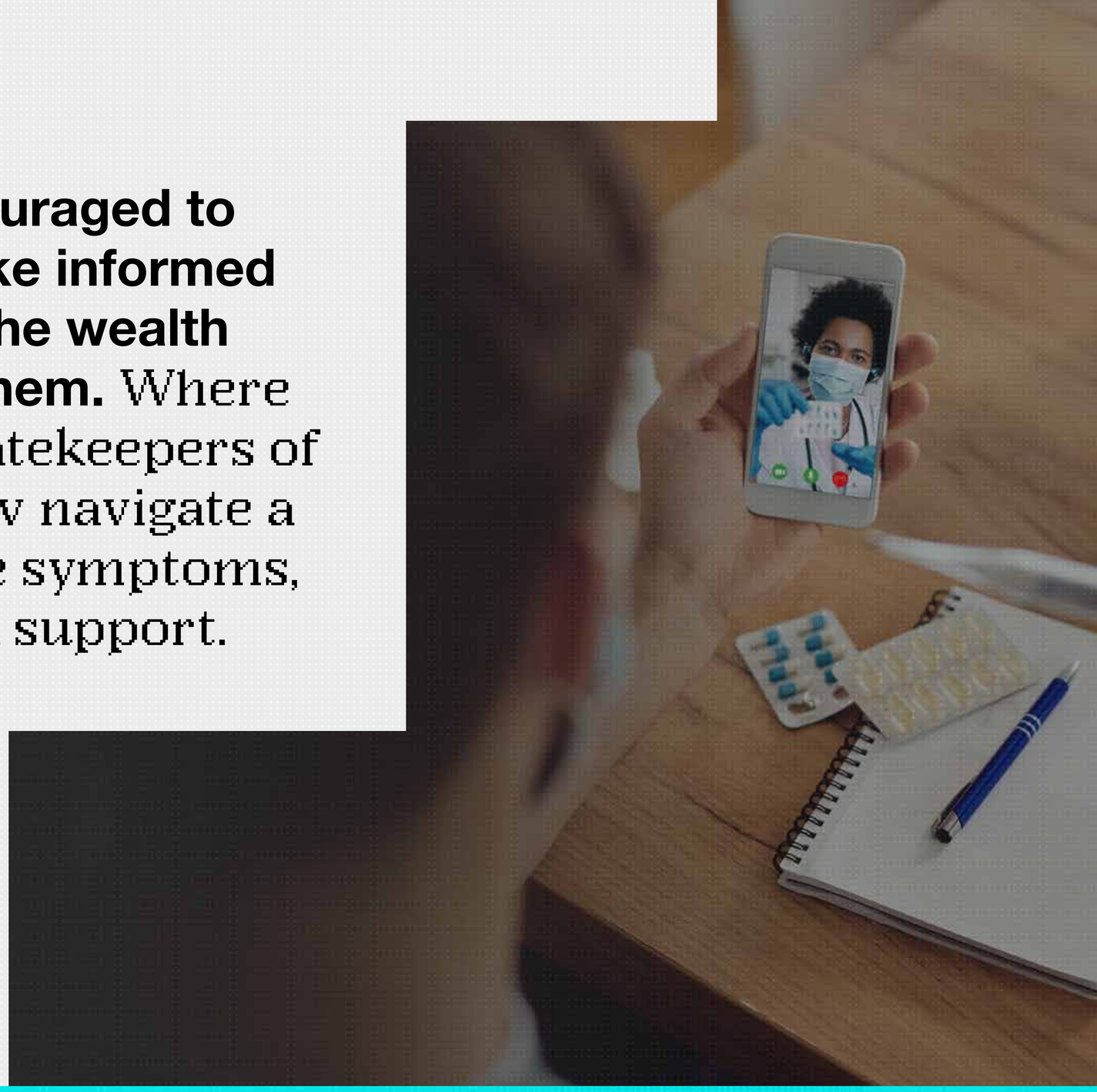
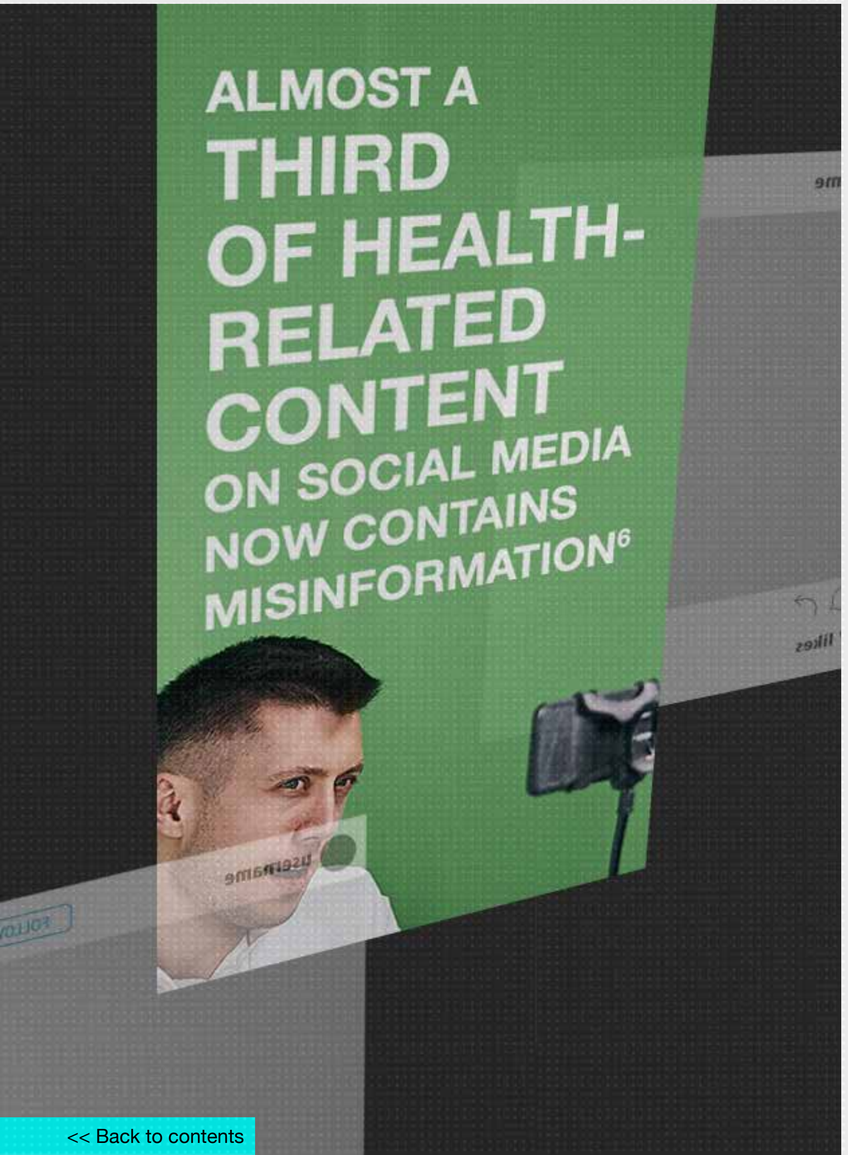
Chapter 2_


The
Rise of
Online
Health
a Breeding Ground for Misinformation

As patients are increasingly encouraged to research, ask questions, and make informed decisions, they naturally turn to the wealth of online resources available to them. Where physicians were once the sole gatekeepers of medical knowledge, patients now navigate a vast online ecosystem to explore symptoms, understand diagnoses, and seek support.





From early message boards to today's TikTok, each wave of technology has brought new ways to share experiences and build communities around everything from chronic illness to mental health, fertility journeys, rare diseases, and wellness trends. Today, over 80% of internet users seek out health information online, and for many facing isolating or emotionally difficult diagnoses, these online spaces offer connection and a sense of agency that formal healthcare systems may not always be able to provide.[1]

The evolution of breast cancer support communities offers a clear example. In the early 2000s, platforms like Breastcancer.org pioneered peer-led support through structured message boards, helping patients and caregivers connect across geographies and stages of illness. As the internet matured, so did the formats. By 2010, Facebook had introduced closed groups, enabling more private community spaces to emerge. Within just a few years of groups becoming a core feature of Facebook, English-language breast cancer groups had amassed a combined total of over 1 million members.[2] Today, image- and video-based social media platforms like YouTube, Instagram and TikTok have given rise to ‘cancer influencers’, who document treatment journeys, explain clinical terms, and share their emotional highs and lows. This evolution from static forums to real-time, personality-driven content in breast cancer support reflects a broader transformation in how health knowledge is created and consumed across therapy areas. Alongside this vast expansion of platforms, the digital health economy has surged and is now projected to exceed a value of $946 billion by 2030.[3]

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While the broad democratisation of health content has brought clear benefits, it has also created new vulnerabilities. Humans have always been capable of spreading false information, but the vast expansion of online health sources and design features of social media algorithms have accelerated this capability to an alarming degree. Some individuals use the reach of social platforms to exaggerate or fabricate illness narratives for fame or attention, while others promote unproven or harmful treatments in an attempt to profit off patient vulnerability. As the moderation of online content dwindles – with Facebook ending partnerships with third-party fact checkers and TikTok cutting human moderation teams in the UK in favour of AI alternatives – misinformation can continue to amplify unchecked.[4,5] Studies have found that up to almost a third of health-related content on social media now contains misinformation.[6] As digital platforms continue to shape public understanding of health, a dual reality of widespread access and rising risk has emerged.

“While online health information empowers patients with greater access, speed, and community, it also carries the risk of misinformation, confusion, and inequity - making trusted, transparent communication more critical than ever. We all should include misinformation as a critical aspect of our customer journeys.”

Alejandro Rodriguez, GSK

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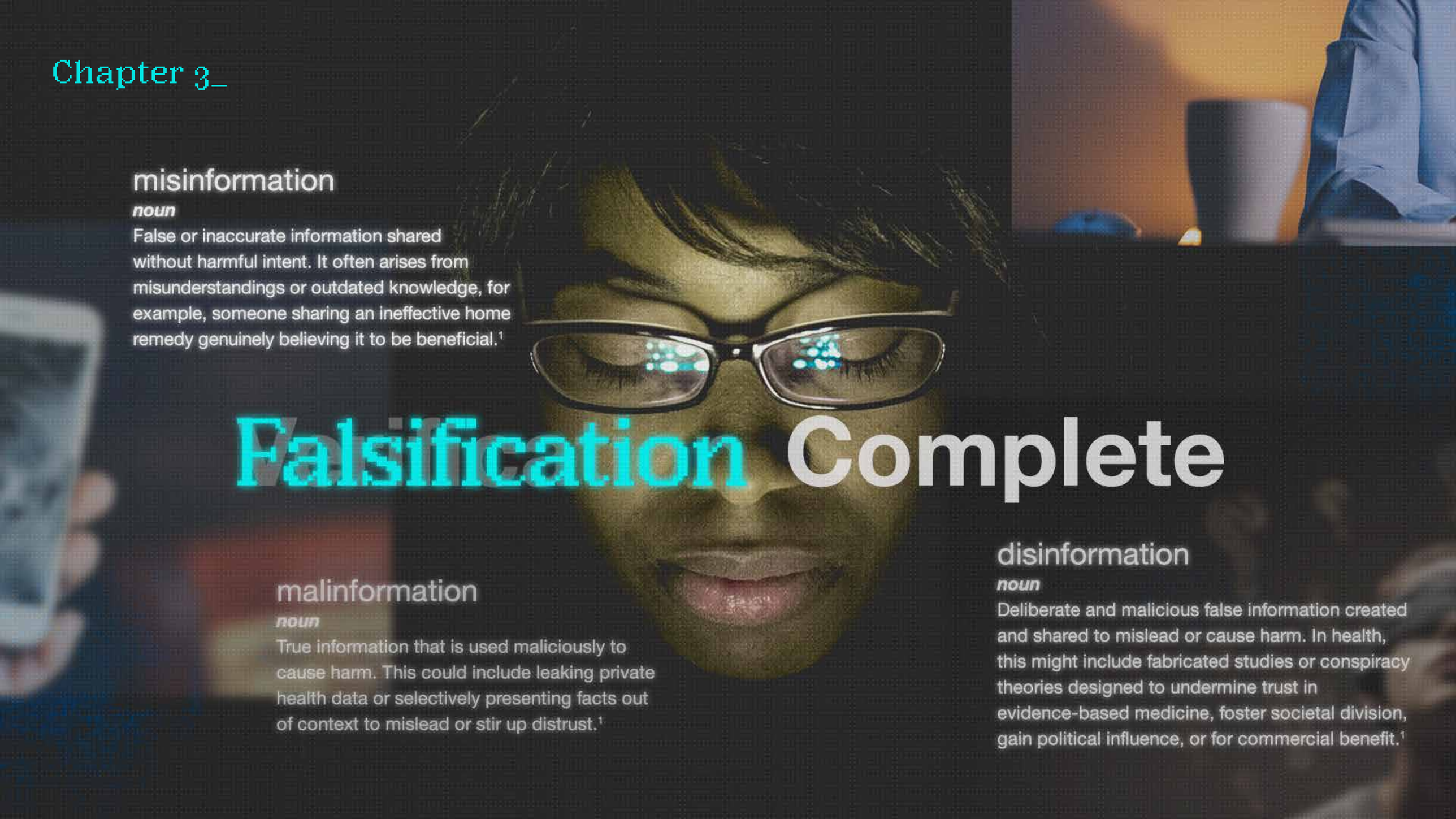
Chapter 3_



misinformation

noun

False or inaccurate information shared without harmful intent. It often arises from misunderstandings or outdated knowledge, for example, someone sharing an ineffective home remedy genuinely believing it to be beneficial.[1]

Falsification Complete

malinformation

noun

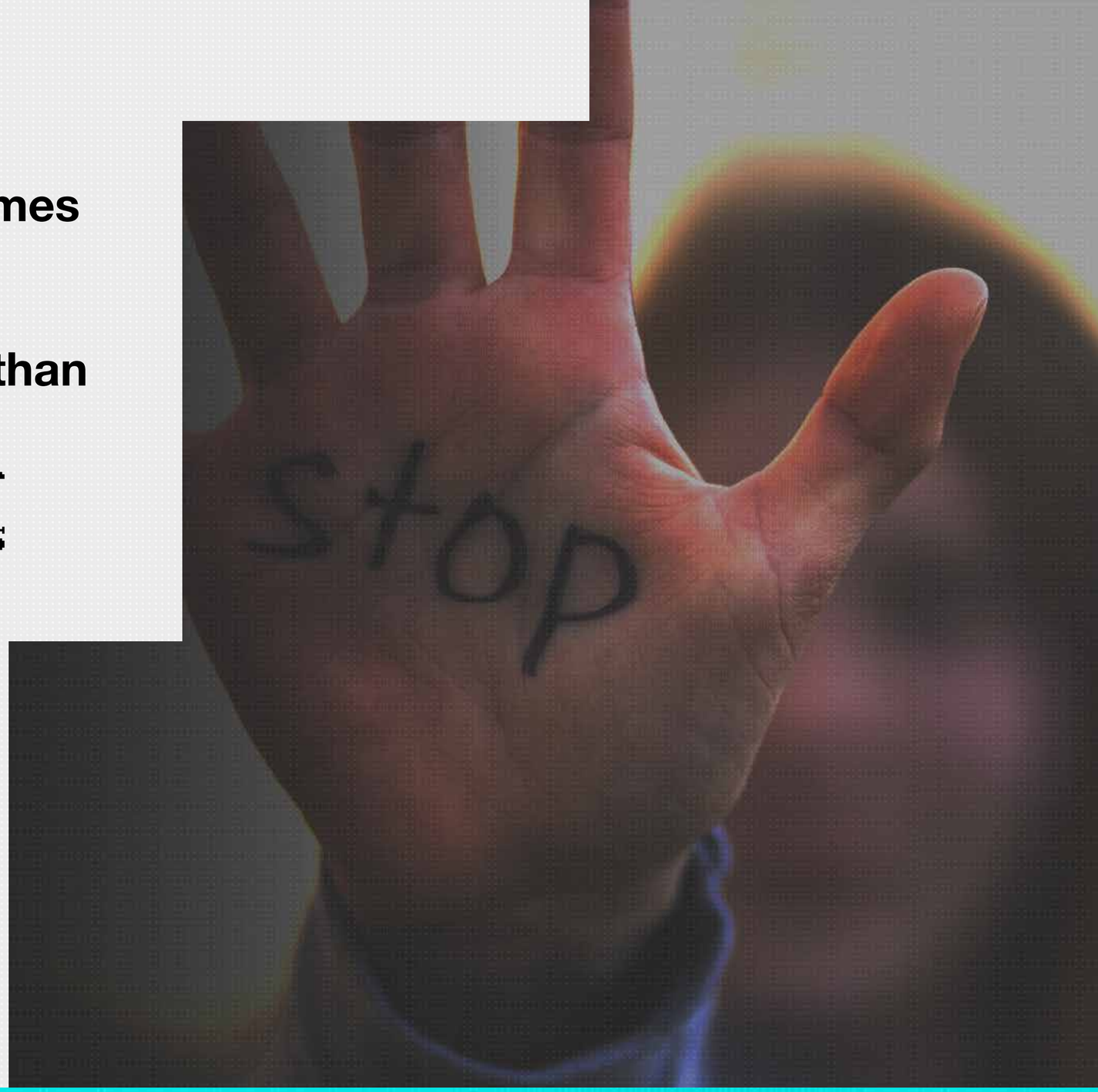
True information that is used maliciously to cause harm. This could include leaking private health data or selectively presenting facts out of context to mislead or stir up distrust.[1]

disinformation

noun

Deliberate and malicious false information created and shared to mislead or cause harm. In health, this might include fabricated studies or conspiracy theories designed to undermine trust in evidence-based medicine, foster societal division, gain political influence, or for commercial benefit.[1]

Misinformation tends to flourish in times of uncertainty, distrust, or instability, when simple, emotionally appealing narratives can feel more comforting than complex, nuanced truths. Of course, for those that are experiencing poor health, this emotional melting pot is exacerbated. In such environments, misleading claims can offer a sense of clarity, control, or even belonging, especially to those who feel alienated from mainstream systems of authority.



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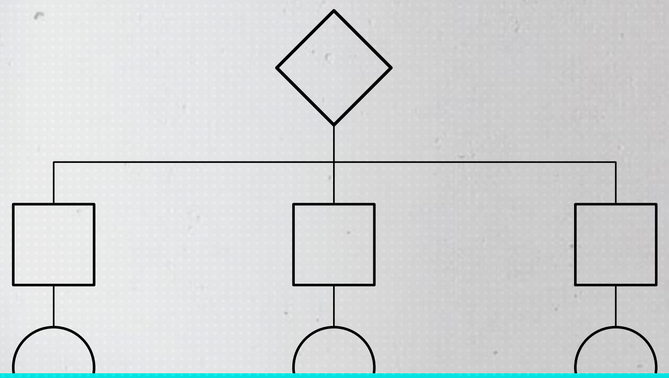

Echo Chambers of Misinformation

Once acting as a digital mirror of our real-life social networks, many platforms have evolved into algorithmically curated spaces, where content is tailored to maximise engagement. Equally, algorithms reward engagement rather than accuracy, allowing emotionally charged misinformation to spread more readily. Research shows the scale of the problem: over an 11-year period, one study found that it took about six times as long for the truth to reach 1,500 people compared to a falsehood on X (formally Twitter).[2]

At the individual level, algorithms tend to promote content similar to what users have previously interacted with. Once someone engages with misinformation, they're likely to see more of it, reinforcing false beliefs and deepening echo chambers. Misinformation can continue to influence people's reasoning, even after they have been presented with the correct facts; this is known as the continued influence effect. This feedback loop, driven by algorithmic design and emotional resonance, and paired with a decrease in attention span potentially impacting critical thinking skills, makes misinformation not only more visible than ever, but also more potent and persuasive.[3]

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Daily dose of misinformation

Alarmingly, Point.1 data shows that over 80% of healthcare professionals now express concern about the impact of misinformation on their patients' health.[4] Patients report encountering false or misleading health claims across nearly every domain of daily life: from social media and podcasts to celebrities, religious figures, government, and even their friends and family.[4] In fact, 67% of patients believe they have been exposed to misinformation about their condition in the past 12 months.[4]

Social media algorithms have moved misinformation from the shadows and fringes of the internet, into mainstream, globally popular platforms. One prominent example of this increasing presence and normalisation of misinformation in everyday life is the popular podcast "Diary of a CEO".

Originally focused on business and entrepreneurship, its content has increasingly shifted toward health and wellness. This pivot has driven a surge in monthly YouTube views, from 9 million in 2023 to 15 million in 2024.[5] However, with this growth has come controversy. A 2024 BBC World Service investigation reviewed 15 health-related episodes of the podcast and found that each contained an average of 14 harmful health claims that directly contradicted established scientific evidence.[5] These claims from guests included assertions that cancer could be treated with a ketogenic diet instead of proven medical treatments, anti-vaccine conspiracies, claims that eating gluten causes autism, and the suggestion that evidence-based medication is "toxic" for patients. When misinformation is pervasive in daily media, and propagated by seemingly "expert" guests, the path in navigating truth from falsehood, and helpful from harmful, gets increasingly complex.

80% of healthcare professionals now express concern about the impact of misinformation on their patients' health.[4]

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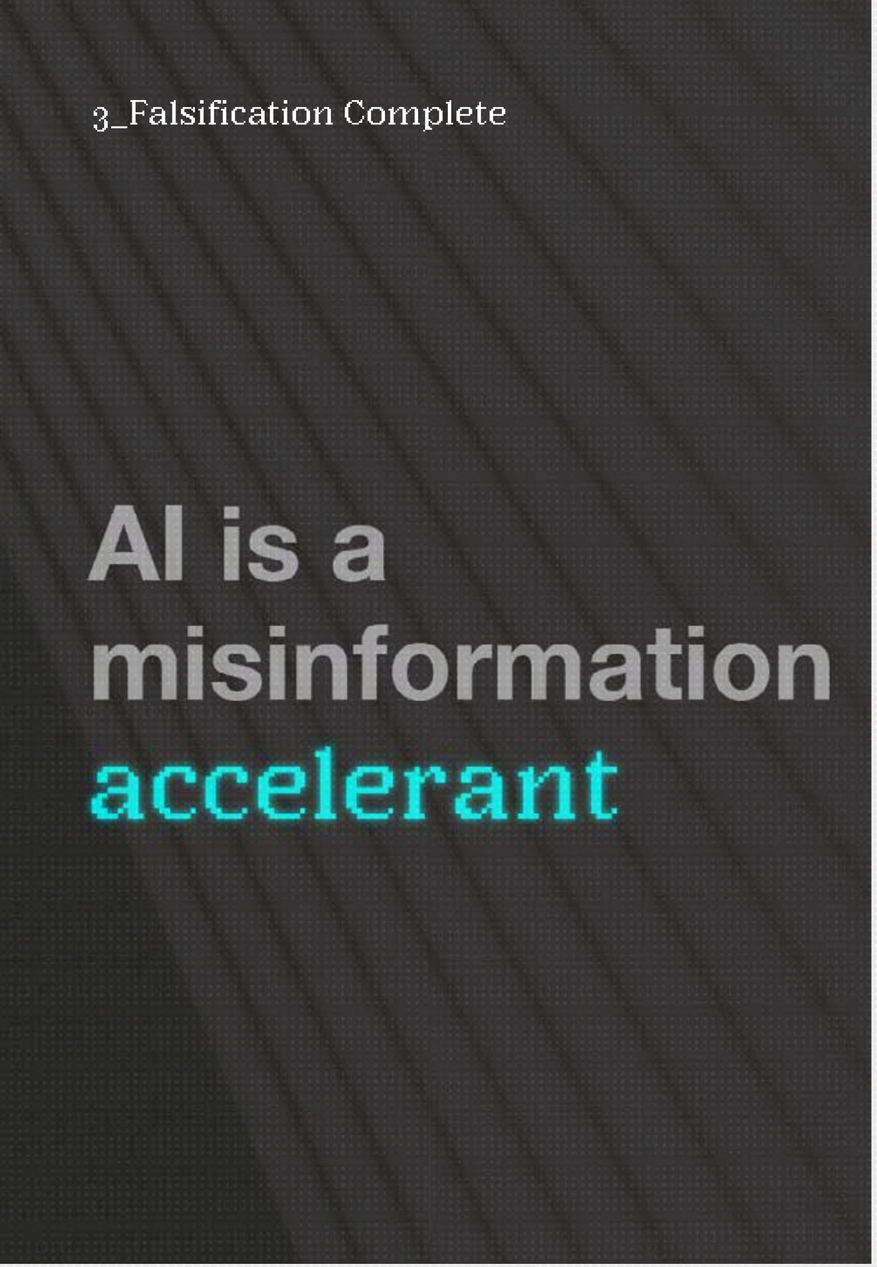

Just as social media reshaped the information landscape, AI is poised for an even more profound transformation of healthcare. The potential benefits are endless and genuinely exciting. Imagine algorithms that detect subtle patterns of diabetic retinopathy from an eye scan years before a human ophthalmologist could, or AI models that analyse a patient's unique genomic data to predict their response to a specific cancer therapy. These tools promise to accelerate drug discovery, personalise treatment plans, and streamline administrative tasks, freeing up HCPs to focus on patient care as it is so desperately wanted. In an ideal world, AI would serve as a powerful co-pilot for clinicians and an empowering, reliable resource for patients.

However, this same technology is fuelling a tsunami of misinformation. AI is a powerful accelerant, capable of generating convincing content at an industrial scale, mimicking the voice of authority, and amplifying falsehoods with unprecedented speed. AI models can produce full articles, social media posts, and video scripts in seconds, all tailored to exploit common health anxieties. These systems can adopt a confident, clinical tone, cite fabricated studies or impersonate medical experts with chilling accuracy.

This AI-generated content is then fed into the same engagement-driven algorithms that govern social media, creating a hyper-efficient engine for spreading misleading and dangerous health narratives.

This new reality has created a complex and contradictory dynamic for patients. Point.1 data highlights this paradox: 46% of patients report using AI tools like chatbots to check health-related information in the last month, despite 44% stating they do not trust these tools as reliable sources.[4] This behaviour reveals a critical vulnerability in the modern patient journey. The information vacuum created by systemic pressures and delayed access to care is now being filled by AI's promise of instant resolution, creating a perilous new dynamic.

46% of patients report using AI tools like chatbots to check health-related information in the last month, despite 44% stating they do not trust these tools as reliable sources.[4]

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3_Falsification Complete

Healthcare professionals are witnessing the fallout firsthand; with 32% now believing that AI tools are a direct contributor to the spread of health misinformation.[4] Unlike misinformation from a human source, which is limited by effort, AI's ability to generate and adapt content is limitless, creating a unique and persistent challenge. The solution, therefore, is not to reject the technology, but to establish robust guardrails, such as verification systems, digital watermarking for AI-generated content related to healthcare, and a renewed focus on public health literacy to harness its power for good, while mitigating its capacity to harm and mislead patients.

Just as with social media, AI holds the power to revolutionise the way patients manage their health. Its potential to transform models of care is boundless. Yet, if left unchecked, it becomes a breeding ground for misinformation. It can cause profound harm if in the wrong hands, much like all powerful tools. So why has misinformation gripped our social media and AI-driven world so tightly? The answer is all too familiar: money and power.

"OpenAI has done work on health benchmarking and includes guidelines in their terms and conditions, but that's about as far as they go. Some companies are grounding their models on trusted health information, though I'm struggling to think of many doing this effectively for public consumption."

Dr Keith Grimes, Founder & Partner, Curistica

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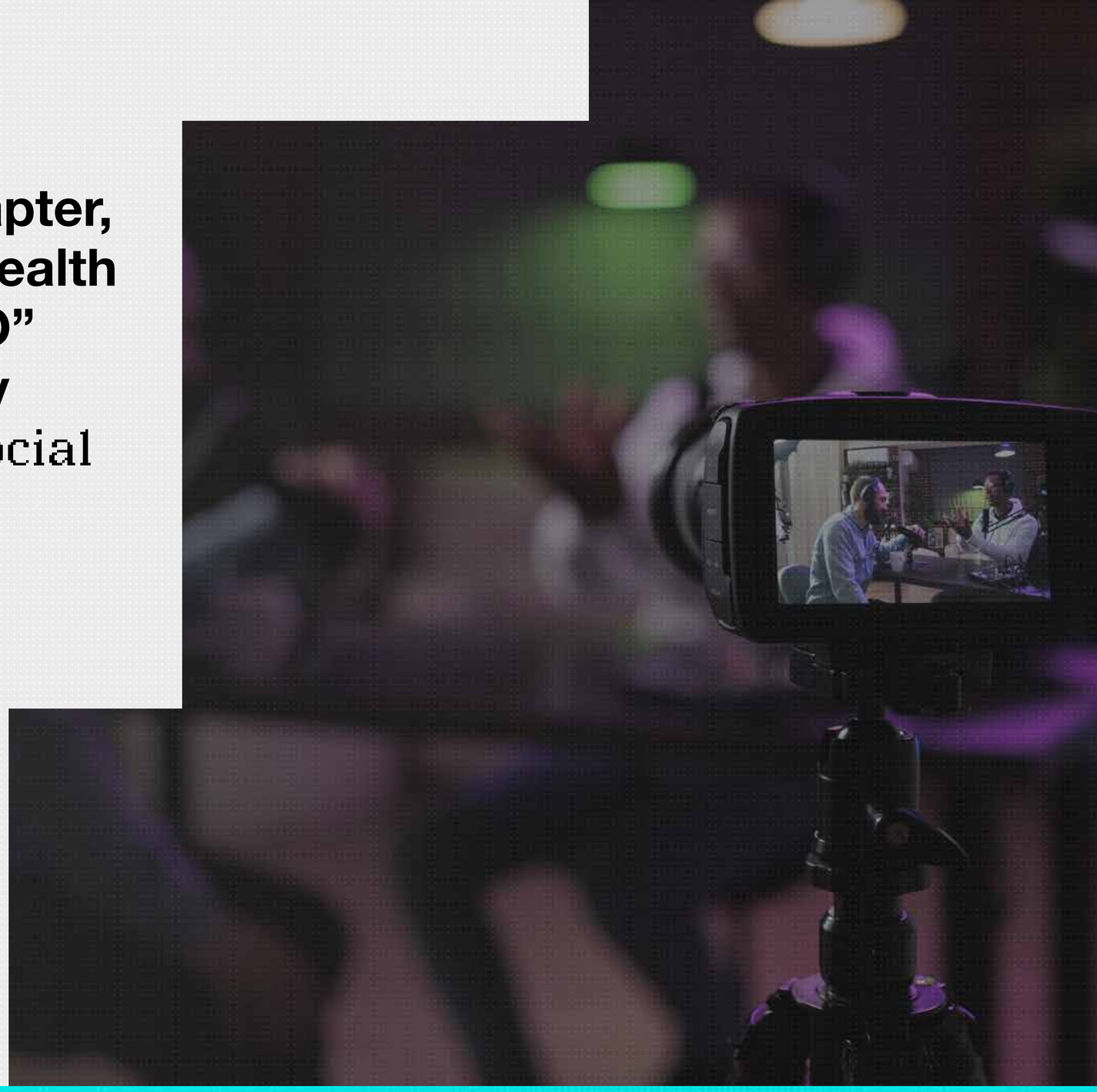
Chapter 4_

Wealth Conscious Consumption

As mentioned in the previous chapter, since shifting its focus towards health and wellness, the “Diary of a CEO” podcast has become increasingly popular — and in the world of social media influencers and content creators, popularity is synonymous with profitability.



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Host Stephen Bartlett said he expected it to make revenues of £20 million in 2024, primarily from advertising.[1] Platforms and creators alike have learned that health content performs exceptionally well online, with posts about wellness, longevity, disease prevention, or “natural” cures reliably generating high engagement.

In this context, the phrase “health is wealth” has taken on a new dimension. Savvy content creators, organised groups, and global enterprises now deliberately exploit the dynamics of digital platforms to monetise false health information and make a stake on the almost $1 trillion industry. Some do so opportunistically; others build entire business models around it. This monetisation can be broken down into several key revenue streams:

Donations

Direct financial contributions, encompassing everything from cash donations, stocks and shares, and cryptocurrency to bequest via wills, represent a significant revenue stream for individuals and groups disseminating misinformation. Frequently adopting the rhetoric of grassroots social movements, these actors cultivate a sense of community and loyalty among a sympathetic audience, who are then encouraged to contribute financially to a cause they believe in.[2]

This approach is entirely legal and often adopted by groups spreading misinformation surrounding vaccinations. One study found that 85% of anti-vaccination websites showed some attempt to monetise their activity.[2] In 2023, Informed Consent Action Network (ICAN), one of the most influential anti-vaccine organisations globally, reported a total revenue of $23.2 million, with $23.1 million (99.5%) of that coming from contributions and donations.[3]

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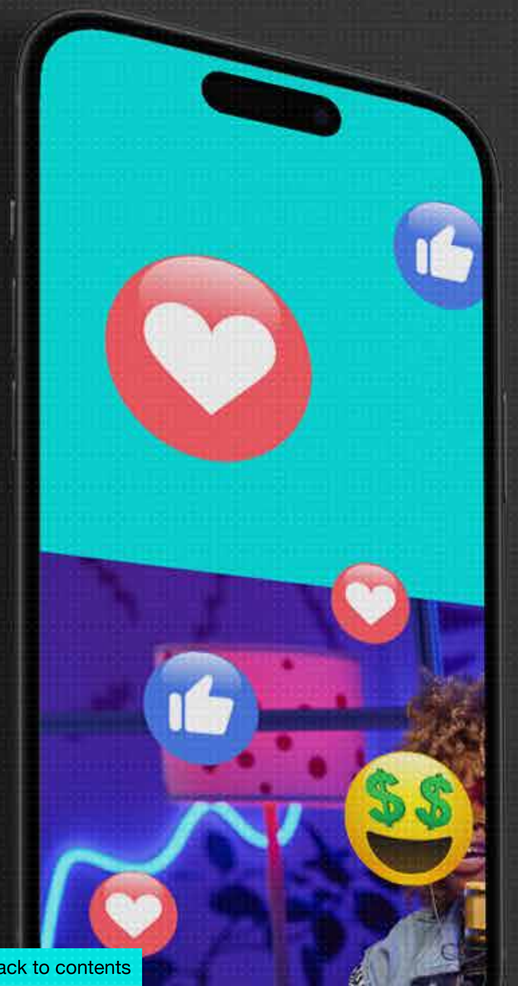

Platform Monetisation

Many social media platforms directly compensate content creators based on metrics such as views, watch time, and overall engagement. The business model incentivises emotionally-charged content with high viral potential.

The Wall Street Journal reported on a creator whose video about their experience on a weight-loss drug earned $2,371 through YouTube's monetisation program — but failed to cover some of the negative side effects they experienced.[4] Creators note that posts highlighting risks attract fewer views and therefore generate lower earnings, showing how platform incentives can encourage the creation of attention-grabbing, but incomplete health narratives.[4]

Product Sales

This revenue stream converts audience trust and attention into purchases, encompassing a wide array of offerings from branded merchandise and digital products to unproven 'natural remedies' or health solutions.

Deepfake technologies, such as AI-generated videos and cloned voices, increasingly exploit the credibility of known personalities to drive product sales. A report in the British Medical Journal found that deepfakes of high-profile celebrity doctors were being used to entice viewers into buying bootleg or illegal medicines, that were being falsely advertised to treat conditions from high blood pressure to diabetes.[5]

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Advertising Revenue

Whether directly negotiated or facilitated through third-party advertising networks, the sale of advertising space relies heavily on creators generating high traffic and engagement to maximise ad impressions and clicks.

This revenue stream is often exploited by sites that imitate the appearance and style of legitimate news outlets, but intentionally publish hoaxes, sensationalised stories, or highly distorted versions of real events, including false health content. The fake news industry in North Macedonia (particularly in the city of Veles) has gained international notoriety, with some creators able to make an income of more than €7,500 in a single month from advertising revenue in a country where the average monthly salary is around just €690.[6,7]

Political Value of Misinformation

Misinformation is not only a powerful tool for financial gain, but also a global and growing weapon among political groups.[8] Political dis- and misinformation is spread to ‘pollute’ otherwise healthy information ecosystems, often targeting emotional and divisive topics.[9] These methods are used to undermine trust in institutions, shift public perception, and influence political outcomes.

Cambridge Analytica allegedly collected personal data from millions of Facebook users without explicit consent. This data was reportedly used to build psychological profiles, exploit emotional triggers and micro-target voters with personalised political content, potentially influencing the outcome of political campaigns.[10] Discrediting scientists and health professionals have also become tactics used for political gain.[11] A notable example was during the COVID-19 pandemic, where unreliable media sources and political figures pushed disinformation to support their agendas.[12] Common false narratives claimed the virus originated from bioweapons research, biological attacks, or military operations.[13]

Whether disguised as activism, entertainment, or expert advice, the entanglement of misinformation with money and power is a particularly insidious byproduct of a largely unregulated media environment, where anyone with an internet connection can publish, promote, and profit from content regardless of its accuracy. Patients searching for health information in times of deep vulnerability, fear or desperation are now all too often met with grift and greed.

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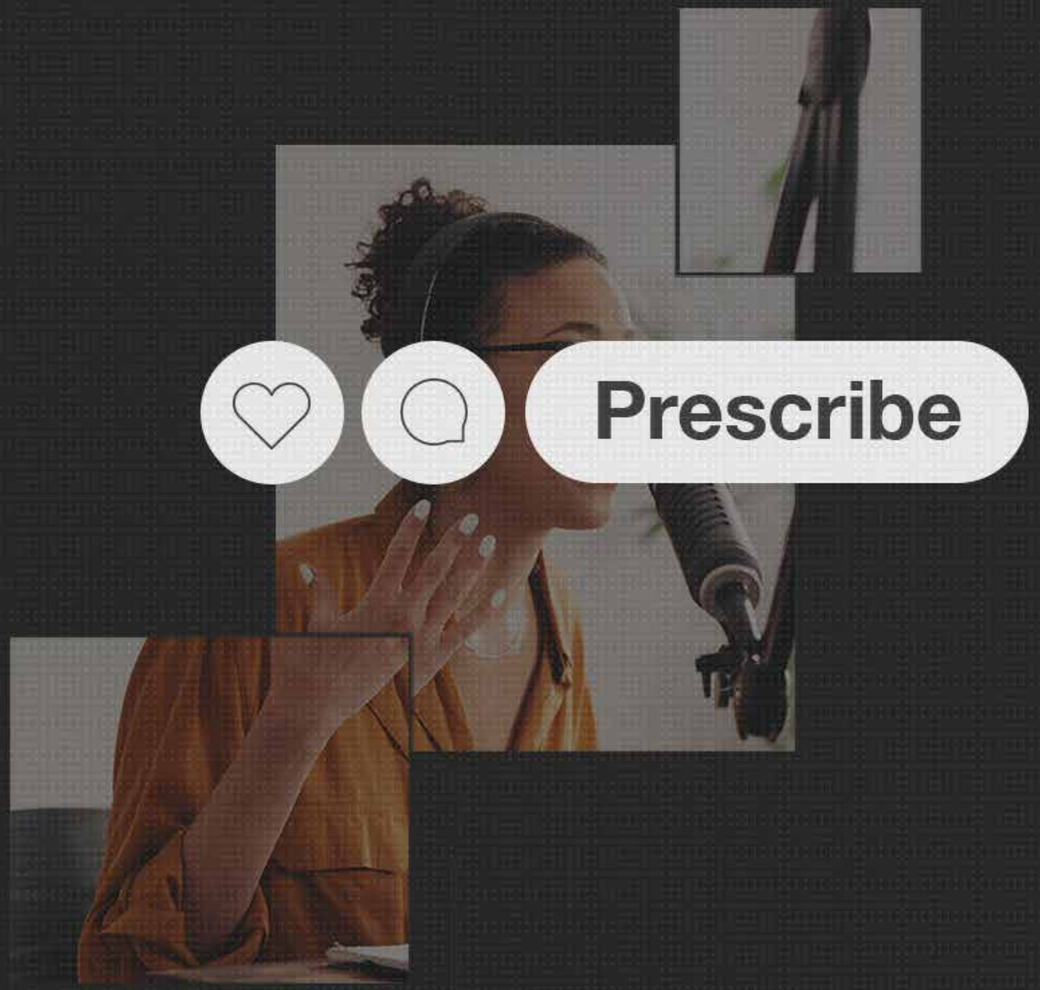
4_Wealth Conscious Consumption



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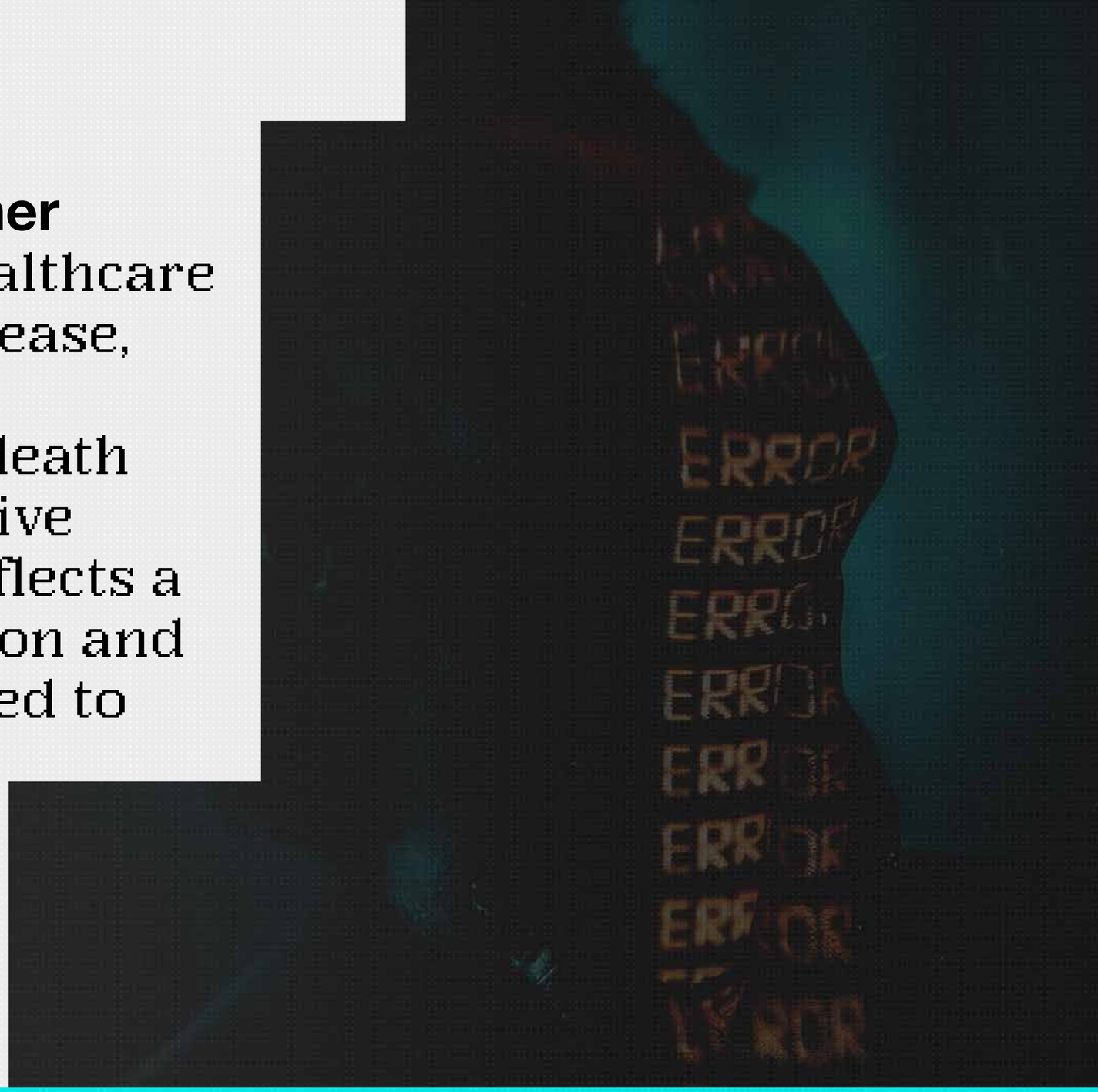
Chapter 5_

No Therapy Area is Immune

In 2022, then-FDA Commissioner Dr. Robert Califf stated that healthcare misinformation (not heart disease, cancer, or even COVID-19) had become the leading cause of death in the United States.[1] Provocative though it sounds, his claim reflects a growing reality: misinformation and disinformation are not confined to any single illness.



5_No Therapy Area is Immune

The impact cuts across all diseases and every domain of public health, often with devastating consequences. In the first three months of 2020 alone, more than 6,000 people in the US were hospitalised due to pandemic-related misinformation.[2] Similarly, the Canadian Medical Association recently reported a dramatic 35% increase in the proportion of Canadians who avoided effective health treatments because of false information.[3]

Misinformation and disinformation surrounding public health in the US is believed to account for the fact that life expectancy is 3–5 years lower than other high-income countries.[1]

In contexts where scientific understanding is limited or access to care is constrained, misinformation can resonate deeply with patients who are actively seeking reassurance and support. They often turn to the internet or social media in search of answers, which are rife breeding grounds for misinformation — Facebook alone produces 67% of the misinformation among all social media platforms.[4]

Patients across all conditions have encountered some form of misinformation that has impacted their treatment journey:

What percent of patients believe misinformation has negatively impacted their treatment journey?

(per treatment area)

Breast cancer 32%

Obesity 42%

Prostate cancer 47%

Type 2 diabetes 34%

Adapted from Point.1 research.[5]

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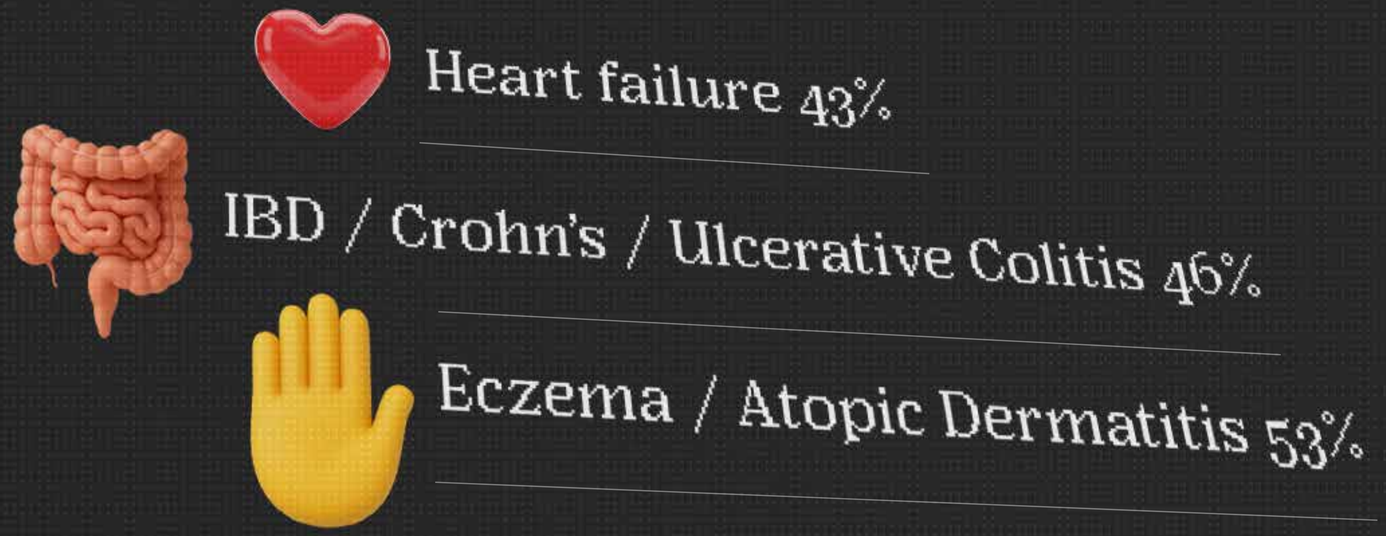
What percent of patients have felt overwhelmed or experienced anxiety and confusion whilst trying to navigate conflicting health information?

(per treatment area)



Adapted from Point.1 research.[5]

Certain therapy areas are especially vulnerable to the threat of misinformation, with those marked by emotional distress, complex science, or limited treatment options particularly exploited. In the following sections we deep dive into the impact of misinformation across oncology, multiple sclerosis, obesity, chronic pain, infectious diseases, and mental health.

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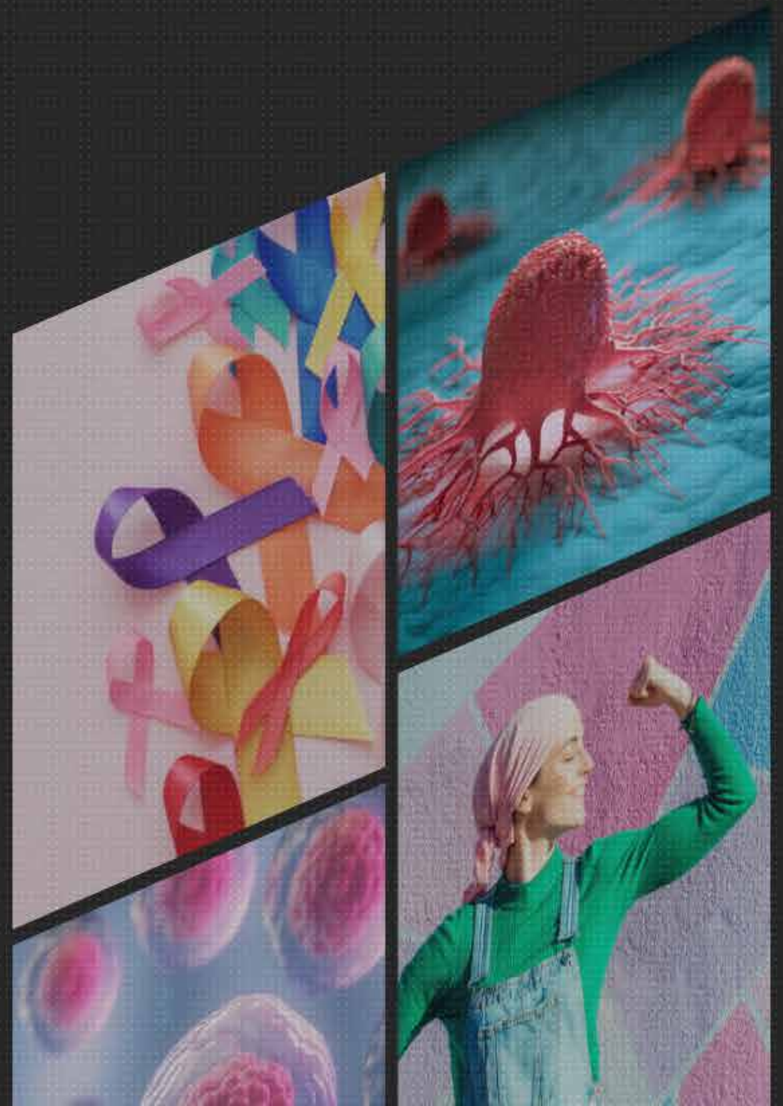
Oncology

“Young people are dying unnecessarily as we speak because they are believing what they see on social media over what their doctors tell them. Lives are being lost every day, and it needs to stop. It's real.”

Dr Liz O-Riordan, former consultant breast surgeon, and patient advocate

Cancer remains one of the most intensely studied and emotionally charged health conditions and, consequently, is one of the most exploited by misinformation in the digital age. Globally affecting 1 in 5 people in their lifetime, the prevalence of cancer drives a widespread desire for information around prevention, treatment, and cure.[1]

One study found that 94% of cancer patients desired as much information as possible, regardless of the positive or negative nature of the information.[2] Another study showed less than half of cancer survivors were concerned about the quality of the cancer information they searched for.[3] This hunger for understanding increases their exposure and susceptibility to misinformation. Cancer is also a much-feared disease, with a third to half of the general population in the US and UK saying they fear cancer more than any other disease.[4] When medical science cannot give concrete answers, and the clinical benefit from evidence-based therapies comes with serious side effects, misleading narratives around “natural cures”, miracle diets, and unproven alternative therapies become very appealing to hopeful cancer patients. By seeking solace in the promises of the modern wellness movement, cancer patients and their families are sometimes met by those wanting to use misinformation to monopolise on their fear for personal gain.



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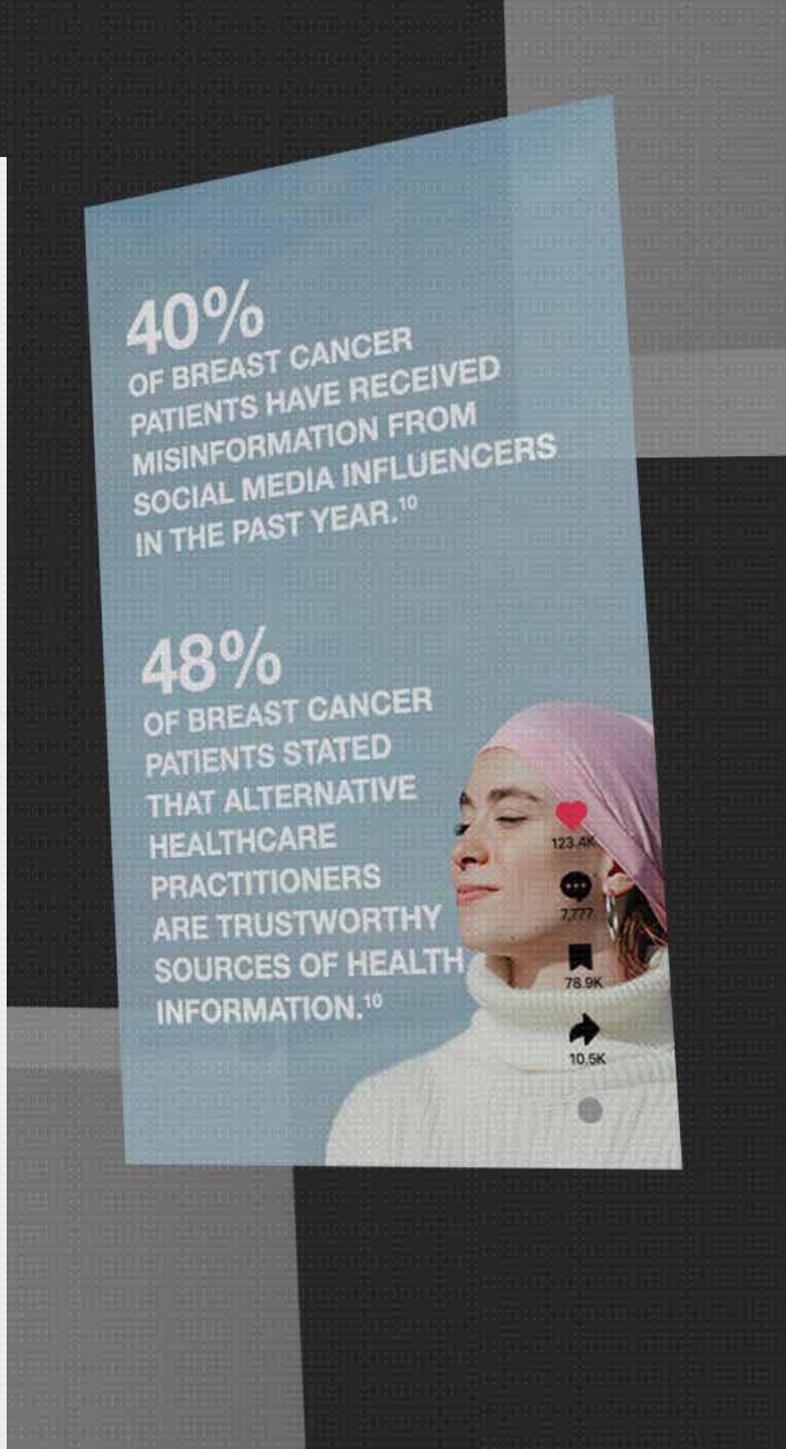
5_No Therapy Area is Immune_Oncology

The case of wellness influencer Belle Gibson, dramatised in the Netflix series Apple Cider Vinegar, is one high-profile example.[5] In 2012, Gibson attracted 200,000 Instagram followers claiming she was able to keep her terminal brain cancer at bay through healthy eating, exercise, and natural alternative therapies.[5] The catch? She had never been diagnosed with cancer and built her lucrative career and wellness empire on a lie.[5] While the Netflix series raises awareness that misinformation can be monetised and amplified, especially when it appears to offer hope to those navigating cancer, the same patterns of exploitation persist today.

More than a decade after Gibson's false claims were exposed, BBC Panorama reported on the story of Paloma Shemirani, who, in 2024, was diagnosed with cancer, but died seven months later after refusing chemotherapy treatment that doctors told her could have saved her life.[6] Paloma's brothers blame their mother Kate Shemirani, disgraced nurse-turned-medical-conspiracy-theorist influencer, for misleading their sister with misinformation, which may ultimately have cost her her life.[6]

Cancer nutrition is an area that is particularly rife with potentially deadly misinformation on social media. This is pertinent because nutrition and malnutrition are hugely important in cancer, in fact one in five cancer patients don't die from cancer — they die from malnutrition.[7] Therefore, it is natural that many cancer patients seek nutritional advice online to help improve their prognosis. That proactive mindset to nutrition in cancer is, however, exploited by mis- and disinformation for commercial gain. A 2020 study that searched Pinterest three times daily for two weeks for the terms "cancer recipe" and "recipe for cancer" found that 48.5% and 34% of results were for-profit or selling a product, respectively.[8] Health claims that purported to prevent (41.8%), treat (27.2%), or cure (10.7%) cancer were common too.[8] Similarly, a 2025 study found that 81% of analysed posts related to cancer on TikTok touted untested, alternative treatments with almost all false and misleading content being monetised, directing the viewer towards purchasing a range of products from oils to animal wormers.[9] It remains the case that patients seeking reassurance and solutions in the face of a cancer diagnosis are too often met by those selling them false hope for profit, potentially at the expense of patients' lives.



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“Several patients of mine wanted an all-natural treatment approach. They go online and find a clinic in Mexico which promises an all-natural treatment for cancer, which includes caffeine colonics, vitamin C infusions…”. While some patients eventually returned and were transitioned to evidence-based care, others did not. “[Sometimes] I would learn within nine months they tragically had died.”

Dr Julie Gralow, ASCO Chief Medical Officer.[11]

Even if cancer patients can distinguish credible sources from questionable ones, can they trust that the data has been reported accurately without spin or inference? One study showed that 58% of the media articles covering the 50 most shared academic oncology articles in 2015 inaccurately reported the question, results, methodology, or population of the study.[12] Another study found 77% of the most popular social media articles shared on Facebook, Reddit, X, or Pinterest on each of the four most common cancers (breast, prostate, colorectal, and lung) posted between 2018–2019 contained harmful information that could lead to adverse consequences.[12]

When left unchecked, the rise of misinformation and the atmosphere of confusion it creates could permanently erode trust in the expertise of the medical scientific community. A paper presented at the 2025 ASCO annual meeting showed that, whilst most people trusted doctors, more than half feel experts contradict each other and 1 in 20 had no trust in scientists to provide cancer information.[3]

“A woman came to me saying my breast surgeon and my oncologist told me that deodorants are safe to use after breast cancer, but I saw a TikTok video saying deodorants are dangerous. So, I'm coming to you, Doctor Liz. Who do I believe?”

Dr Liz O-Riordan, former consultant breast surgeon

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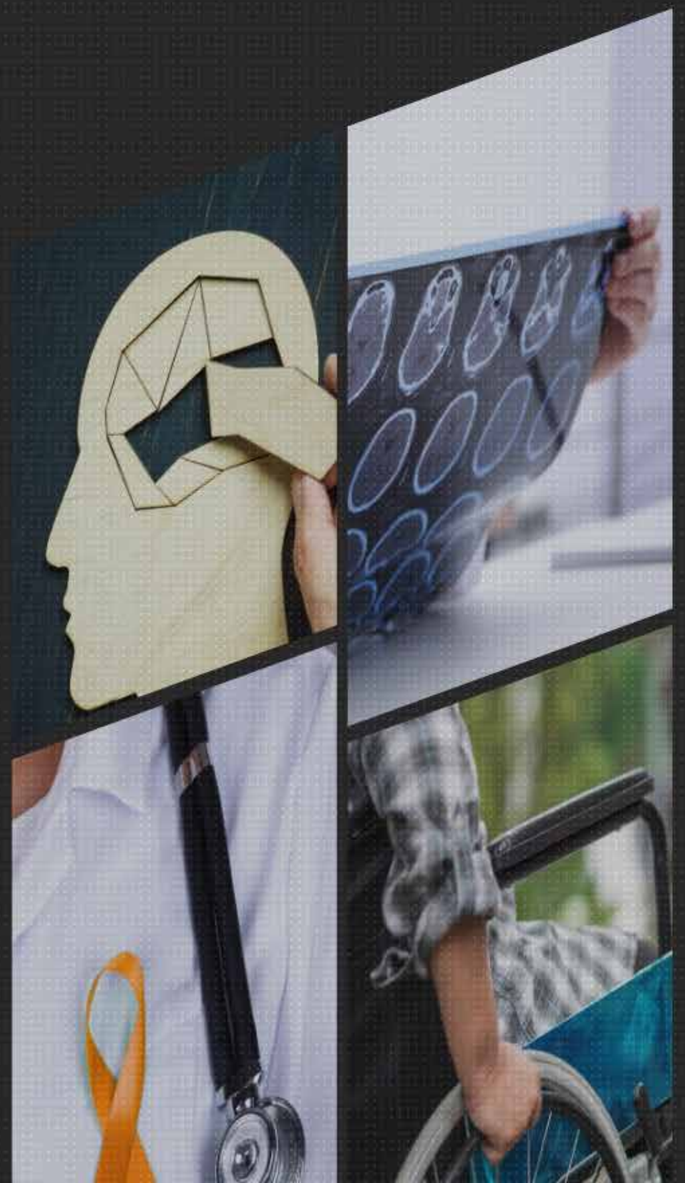
Multiple Sclerosis

In the past two decades there have been remarkable breakthroughs in understanding, diagnosing, and treating Multiple sclerosis (MS).[1] Despite the emergence of disease-modifying and symptomatic therapies, ultimately there remains no cure — meaning MS patients are faced with a chronic, progressive, and disabling neurological disease which significantly impacts their quality of life.[2]



Coming to terms with the progressive nature of the disease and limited pharmacological solutions can have a huge emotional toll on those impacted by MS. Those living with MS therefore turn to each other on online forums to learn from each other's lived experiences on how to cope with a varied and unpredictable disease — 39% of people living with MS using social media to seek the opinions of others on specific MS topics.[3] MS-related Facebook groups, with some dedicated to specific MS treatments, are particularly popular.[4]

"Whether it is due to new symptoms and they want to hear how others have dealt with them, or they think something might be an adverse event caused by their medication, online activity among a large portion of those with MS involves finding out what others think about their current crisis situation."

Jeri Burtchell, MS patient advocate and founder of Partners in Research[3]

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The strong community element of MS care means that anecdotal myths and inaccurate advice can spread from patient to patient and go unchecked.[5] Ed Tobias, award-winning journalist, patient moderator on MS News Today, and person living with MS, shares his concerns on the spread of misinformation in MS support groups on Facebook:[4]

Though there's a great deal of useful information in these groups, there's also a danger of incorrect information being spread. [e.g.]: "Now that flu shots are available if you have the JCV virus, you can't get the shot. It may cause PML. Have it listed on your medical allergies…" There was no evidence presented to support this claim… Fortunately, several members of that Facebook group jumped in to debunk this "advice."[4]

As of 2025, Meta has decided to abandon the use of independent fact checkers on Facebook and Instagram, leaving users to discuss the accuracy of posts collectively in "community notes".[6] Mark Zuckerberg said third-party moderators were "too politically biased", wanting to "get back to our roots around free expression".[6] Without the presence of specialist moderators, Facebook groups and other forums used by people living with MS can become misinformation hotspots.

The internet is often the first source of information lots of people living with MS turn to. Several MS societies have 'myth busting' websites to try and dispel common misconceptions — refuting ideas like 'MS is contagious', and 'only effects young white women'.[5] Their higher-than-average use of the internet and propensity for online resources make those living with MS super-adopters of emerging e-health trends, and particularly vulnerable to the pitfalls of misinformation.[3] This is especially true because many patients don't cross-check the information they come across online with healthcare professionals — one study found that whilst 82% of people with MS gathered information on the web, only 36% discussed this information with their doctor.[7] A 2018 study of the MS social media network (SMsocialnetwork.com) found over a three-month period that, whilst 308 posts contained useful medical information, 72 included fake or misleading medical information — despite the presence of neurologists and psychologists supervising the content flow.[8]

YouTube videos, despite being a popular educational tool for the MS community, were deemed by one study to "not provide reliable and high-quality information related to MS for patients".[9] Of the top 99 videos discussing MS on YouTube, over 43% were classified as "poor" or "very poor", leading the researchers to conclude that "sufficient, reliable and useful content is not provided" via the channel and urged viewers to verify information using more reliable sources.[9]

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5_No Therapy Area is Immune_Multiple Sclerosis

“At first, I would take everything everyone said as fact, or if they provided links to websites that purported to have the miracle cure, etc., I’d get excited and think maybe they were onto something. This would lead to a cycle of getting my hopes up, followed by having them dashed, and finally becoming jaded to anything I read or heard.”[3]

Jeri Burtchell, activist and MS patient advocate

Those living with MS turn to online communities, forums, and resources to try feel more hopeful about their condition — but when met with misinformation and unproven therapies time and again, they can become disillusioned with all advice, helpful or not. The rise of MS misinformation therefore not only has the power to disempower patients and their families, but cause them to lose faith in legitimate medical advice they should be able to trust.

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Obesity

Society's preoccupation with body shape and size has long been problematic. Despite the rise of body-positivity and neutrality movements, weight remains a major source of insecurity. These ever-changing ideals, amplified by the internet, blur the line between health and appearance, providing fertile ground for quick fixes and misinformation to thrive.

42% of people with obesity stated they had received misinformation from both mainstream and social media in the past year.[3]

Within this context, one drug class has become increasingly attractive to the masses: GLP-1 receptor agonists, such as Ozempic and Mounjaro. Initially used to treat people with Type 2 diabetes, they now have expanding indications into weight-loss, with intrigue in their potential garnering huge media exposure, being described as 'miracle drugs' and 'game changers' in the news.[1] While they show real promise when prescribed appropriately, their rise has been accompanied by widespread misuse and misinformation.[2]

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“It’s always been a challenge to communicate new technical information to patients and their health-professionals, but this challenge is now amplified by the amount of misinformation and its level of prominence across different platforms.”

Dr Sheuli Porkess MA, BM, BCh, FFPM, FRCP, GFMD President, Faculty of Pharmaceutical Medicine

Celebrity influence and social media have undoubtedly fuelled GLP-1 mania. Rumours of “Ozempic parties” in Hollywood and secret celebrity usage have only added to its mystique. Whilst some celebrities have been open about their use of GLP-1 receptor agonists — such as 23 Grand Slam title winner Serena Williams, even becoming a spokesperson for Ro, which sells GLP-1 brands like Wegovy and Zepbound (Mounjaro in the UK), — others have come under scrutiny for keeping the cause of their dramatic weight loss under wraps.[4] This secrecy has further catalysed public curiosity in this apparently exclusive and mysterious class of drugs.[5] The pop-culture rise of GLP-1s shows in the data: TikTok’s #Ozempic tag has racked up over 690 million views, and there are more than 50,000 Instagram posts about the drug.[5] Notably, public discourse skews heavily towards Ozempic vs. other clinically available solutions — a testament to the power of celebrity and media-driven narratives.

But this fame comes at a cost. An investigation by Cyabra, providers of advanced AI solutions detecting disinformation online, revealed a concerning rise of disinformation.[6] 21% of the profiles discussing Ozempic on X during July 2024 were fake, spreading rumours about celebrity endorsements and negative side effects. The 503 posts and comments created by these fake accounts received over 3,700 engagements with the potential to reach an audience of over 5.9 million views.[6]

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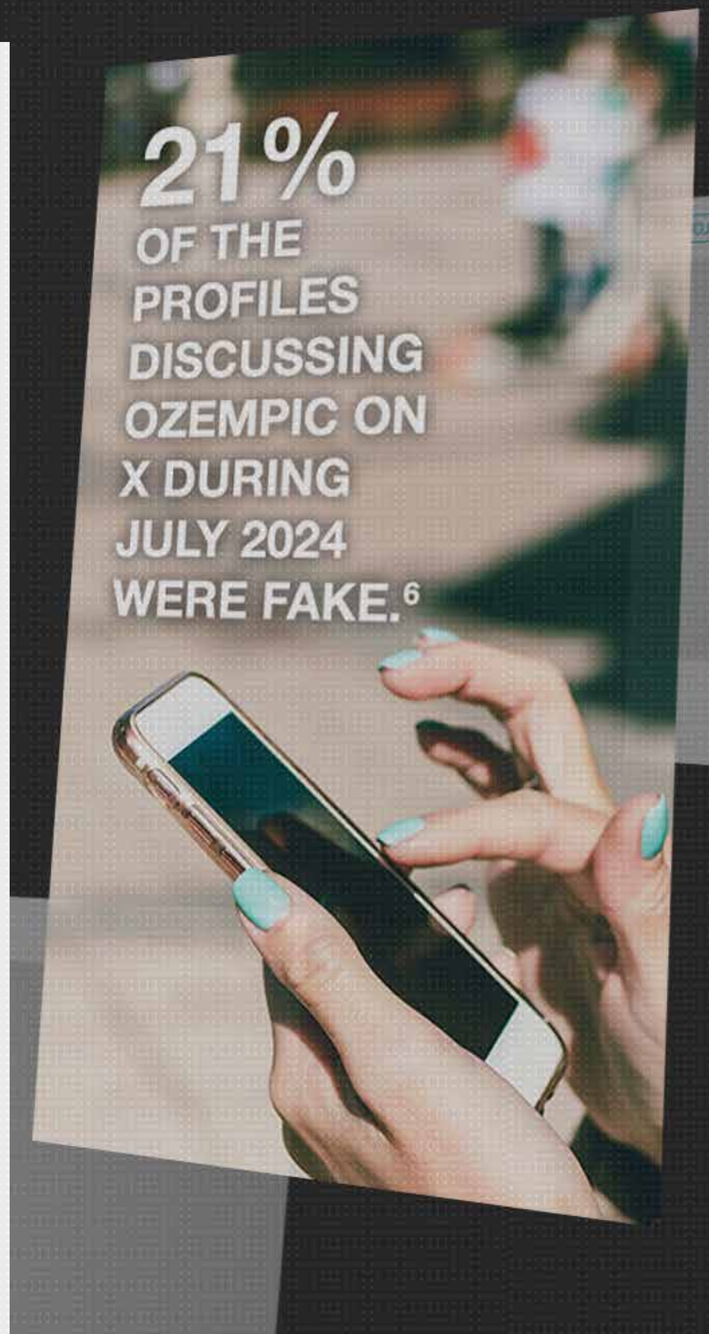
5_No Therapy Area is Immune_Obesity

Many have been quick to attempt to capitalise on the hype surrounding GLP-1 receptor agonists. In the first half of 2024, there was a 1,200% increase in violative or problematic GLP-1-related ads compared to all of 2022, ranging from exaggerated claims about the efficacy of the medications, to the promotion of counterfeit products.[7] In 2024, Kourtney Kardashian's wellness brand launched a weight management supplement, naming it 'Lemme GLP-1 Daily'.[8,9] Despite its name, the product does not contain GLP-1 or synthetic GLP-1, and is not a GLP-1 agonist, but has led some consumers to believe it can mimic the effects of prescription medications.[8] Consequently, two class action lawsuits have since been filed against Lemme Inc., alleging false advertising and misleading consumers with false weight-loss claims.[8]

When consumers buy GLP-1 medications, legitimate or not, via app-based telemedicine on X or Facebook, they miss out on the necessary health assessments and follow-ups required to keep them safe which can ultimately lead to misuse of the drug with dangerous consequences.[5,6] The portrayal of GLP-1s as "quick fixes"—often ignoring the need for medical supervision and lifestyle changes—has fuelled demand and, with it, a growing black market.[6]



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5_No Therapy Area is Immune_Obesity

Some alternative or counterfeit GLP-1 products contain the wrong dose, the wrong ingredients, or are administered in a different way. This has led to multiple dosing errors when self-injecting, with patients drawing up to 5–20 times more than the intended dose, requiring medical attention or hospitalisation.[10] In the UK, one person was hospitalised after injecting fast-acting insulin sold as a GLP-1. Since January 2023, the MHRA has seized 369 potentially fake semaglutide pens, warning consumers against buying online or through social media.[11,12] This is a global issue, with the WHO issuing a 2024 alert after detecting falsified GLP-1 drugs in the US, UK, and Brazil, with fake semaglutides spreading across multiple regions since 2022.[13]

Now that more than 1 in 8 American adults take a GLP-1 drug, it is vital that misinformation around these drugs is challenged to prevent consumers from the dangers of misuse and maintain confidence in legitimate GLP-1 agonists which, when used correctly, can change lives for the better.[14]

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Chronic Pain

Chronic pain is one of the most enduring targets for misinformation, because it is debilitating, socially isolating, and often has no clear cure. This can make patients feel desperate, seeking out any possible solution when conventional medicine fails to provide adequate relief — even unverified treatments.

One such remedy long pre-dates the internet era and is also now a lasting symbol of pseudo-medicine: “snake oil”.[1] Snake oil was originally a traditional Chinese remedy made from the oil of the Chinese water snake, rich in omega-3 fatty acids, and used to treat joint pain and inflammation.[1] However, the term gained infamy largely due to Clark Stanley, a quack doctor who marketed snake oil as a so-called treatment for everything, from chronic pain, to frost bite, baldness, and even cancer.[1] Chinese water snakes were not found in the US, so Stanley first used rattlesnake oil for his remedy, eventually producing it with no snake-derived oil at all.[1] He managed to deceive customers for over two decades, cementing the term “snake-oil salesperson” as shorthand for fraud and deception.[1] To crack down on counterfeit goods and other so-called ‘miracle elixirs’, the Pure Food and Drug Act was passed in 1906 to ensure manufacturers like Stanley couldn’t market their medicines with lies — medicines had to list all their ingredients, including harmful ones like cocaine and morphine.[1] This pivotal act ultimately led to the creation of the Food and Drug Administration (FDA) in the US.[2]

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Clark Stanley captivated audiences with dramatic live demonstrations, attracting the attention of journalists with his carefully crafted larger-than-life persona.[1] Spectacle, sensational claims, and influencer charisma are tactics that still thrive today on platforms like TikTok to spread misinformation and promote unproven or harmful remedies to massive audiences. One example of this is ‘The Borax Challenge’; a dangerous social media trend that encourages individuals to ingest or bathe in borax, a white mineral typically used for household cleaning.[3] Despite being dismissed by experts as “the stupidest health trend”, the challenge gained traction. A single Facebook video promoting borax for arthritis was viewed 64,000 times and shared over 1,400 times.[3,4] Borax, however, is classified by many countries as dangerous: it is banned from food products in the US, deemed toxic to reproductive health by the European Chemical Agency, and classified as a poison by Australia’s Therapeutic Goods Administration.[3,4]

Another misconception is the fact that borax is naturally occurring implies that it is safe to eat – which Dr Idz, an NHS doctor with 8 million followers on TikTok, refutes:[5]

“For the love of your kidneys, just because it's natural it doesn’t mean it’s good for you to eat. Remember that arsenic is also natural.”

Sadly, sometimes misrepresentation of scientific research can occur from within our industry when marketing pharmaceutical drugs. Several studies have shown that the majority of people today don’t trust the pharmaceutical industry — a YouGov survey found that 57% of British people believe drugmakers put profits ahead of consumer health, whilst a study of high-risk cardiovascular patients found that 36% of individuals did not trust pharmaceutical manufacturers.[6,7]

48% of rheumatoid arthritis patients stated they have felt overwhelmed trying to figure out which health information to trust.[8]

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5_No Therapy Area is Immune_Chronic Pain

The opioid crisis, beginning in the 1990s, is a widely known example of misinformation that still causes harm and undermines trust in the pharmaceutical industry today. Between 2003 and 2023, over 768,000 people died from opioid-related drug overdose in the US.[9] In 2013 alone, around 1.9 million people abused or were dependent on prescription opioid drugs.[10] Health and social consequences included record high rates of neonatal opioid withdrawal syndrome, more children entering foster care, and a decline in workforce participation in areas with relatively high prescribing rates.[11] Today, the opioid crisis has swung from overprescription to widespread fear and avoidance, leading to acute pain patients needlessly suffering and a rise in undertreating postoperative pain.[9,12]

In a post-truth era where misinformation threatens to drown out scientific and medical expertise, it is essential that all stakeholders rebuild the integrity of the pharmaceutical industry by learning from its past mistakes.

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Infectious Disease

Unlike legitimate scepticism of different treatments or care options, misinformation can undermine people's trust in life-saving medical interventions. Perhaps nowhere is this felt more strongly with such far-reaching consequences than in infectious diseases and the rise in distrust of vaccinations — aka the 'anti-vax' movement. Whether an individual chooses to be vaccinated not only impacts their health, but that of others too — influencing the protective herd immunity of the community and the likelihood of outbreaks in the future.

"Misinformation spreads easily when people feel shame or desperation, for example with conditions like COVID-19, HIV, or herpes. Because they may be too embarrassed to talk openly, people become vulnerable to exploitation and more likely to believe ideas that "feel true" but aren't."

Dr Nneka Nwokolo,
Head of Global Patient Affairs,
ViiV Healthcare

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Measles

In a now infamous research paper, published by disgraced Dr Andrew Wakefield in 1998, a causal link between the combined measles, mumps, and rubella (MMR) vaccine and rising rates of autism was suggested.[1] Over the following years, vaccine scepticism amongst parents rose whilst MMR vaccination slumped, reaching an all-time low in 2004 – only 80% coverage in contrast with the WHO's target of 95%.[1] Consequently the number of measles cases in England and Wales rose from 56 in 1998 to 2,032 in 2012.[2] Wakefield's research was eventually debunked – the vaccine scare was rooted in a scam to damage trust in the combination vaccine for financial gain.[1] Wakefield described his scepticism of the combined vaccination as a "moral issue", urging the government to return to single vaccination shots for MMR in response to his research – conveniently, having filed a patent application for his own measles vaccine 8 months prior.[1] It was the first medical scandal of the internet era and has been described as the most damaging scientific fraud of all time.[2] Wakefield, also known as the "father of the anti-vaccine movement", was struck off by the General Medical Council following an investigation that highlighted serious misconduct and dishonesty within his paper – research he refused to attempt to replicate.[1] Despite this, it took a decade for MMR vaccination uptake to recover to normal levels in the UK.[2]

COVID-19

The great paradox of the COVID-19 pandemic was that the rapid development of COVID-19 vaccines, a worldwide collaborative effort and innovative success, actually undermined public confidence in vaccination – many suggested the speed at which they were produced made them unsafe. This initial uncertainty was rooted in a legitimate concern; due to the public health emergency, it was not possible to establish long-term safety data before rollout of the vaccinations, approval of the vaccines was based on Phase III safety data and a reasonable belief that the benefits outweighed the risks. However, these concerns were taken out of context by anti-vaccination groups who perpetuated myths on the alleged side effects. A study published in Nature found that only a brief exposure to misinformation about COVID-19 vaccines was associated with a decrease in intention to accept a vaccine by 6%.[3] Vaccine hesitancy, in turn, contributes to a higher risk of hospitalisation and death.[4] Research from the Kaiser Family Foundation found that, in the US, 60% of all adult COVID-19 deaths between June 2021 and April 2022 could have been prevented by timely vaccination.[4]

The COVID-19 era also gave rise to the normalisation of misinformation. During the pandemic, misconceptions about vaccines and false information about unscientific treatments were spread not only through user-generated content on social media, but also through traditional media, public figures, and political leaders.[5] For example, when President Donald Trump suggested that injecting patients with disinfectants might help to treat COVID-19 at a briefing in April 2020, his comments quickly went viral, fuelling dangerous rumours that promoted the ingestion of bleach to treat COVID-19.[6]

5 years later, misinformation about vaccines popularised during the pandemic still affects public health and scientific research. In August 2025, the federal Biomedical Advanced Research and Development Authority announced that it was cancelling $500 million in grants to institutions

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researching mRNA vaccines.[7] This decision, based on inaccurate claims that mRNA vaccines fail to protect effectively against infections like COVID-19 and flu, will not only impact public confidence in vaccines and make us vulnerable to future pandemics, it will also have knock-on effects on other types of mRNA technology, such as cancer vaccines.[8] Ultimately, the uncertainty and fear surrounding the COVID-19 pandemic only amplified and normalised pre-existing mistrust of vaccinations born two decades prior.

HIV

Whilst most misinformation about infectious diseases is fear-based, the global HIV/AIDS epidemic is a high-profile example of the long-lasting detrimental effects political misinformation can have on public health. Propagated by the actions, communications, and policies of governments, especially during periods of national or global crisis, mis- and disinformation tied closely to politics has profoundly shaped the trajectory of the disease across various countries.

When the first case of HIV emerged in the then-Soviet Union, the Soviet State Security Committee launched 'Operation Denver,' a disinformation campaign falsely claiming that the AIDS-causing HIV was a US-created weapon of biological warfare.[9] The conspiracy led to widespread stigma and denial about HIV/AIDS, which still reverberates to this day in Russia. In 2024, the European Centre for Disease Prevention and Control reported that Russia accounted for the majority of HIV diagnoses across the WHO European Region.[10] With more than 27 regions in Russia currently experiencing a HIV epidemic, combined with stagnating budgets for acquiring HIV medication and funds diverted to support the invasion of Ukraine, drug shortages, and a treatment crisis loom for people with HIV in Russia.[11,12]

In South Africa, “AIDS denialism” was adopted at the highest levels of national government under the Mbeki presidency, significantly impacting public health policy from 1999 to 2008.[13] During this time, the causal links between HIV and AIDS were questioned, life-saving antiretroviral drugs were suggested to be poisonous, and unproven remedies such as garlic, beetroot, and lemon juice were promoted as HIV/AIDS treatments.[13,14] The presidency’s HIV/AIDS policies have been attributed to an estimated 330,000 additional deaths and at least 35,000 HIV-positive babies being born that could have been prevented.[15] It is worth noting that under the apartheid regime, western medical science was used to enforce segregation and colonial discrimination in South Africa.[13] Consequently, mistrust of the West may have led Mbeki to approach AIDS in an alternative way.[13]

Political misinformation surrounding HIV is still rife today, including in the US. The long-debunked idea that poppers are a root cause of AIDS resurfaced when the current administration suggested that the theory has merit, also describing the research that shows AIDS is caused by HIV as “phony”.[16,17] When statements from high-ranking officials lend credibility to falsehoods and undermine scientific facts, the resulting increase in HIV-related stigma creates an environment in which repressive government policies and practices can persist. HIV misinformation in the US has coincided with the termination of more than 200 federal grants for research related to HIV and AIDS.[17,18] The cuts have caused two major HIV vaccine research efforts to come to a halt, and are thought to have set back HIV vaccine research by at least a decade.[18] With over 176,000 additional HIV-related deaths estimated to occur if US foreign aid is not restored before the end of 2025, these cuts threaten the goal to end the HIV epidemic worldwide.[19,20]

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Each of these examples is a stark reminder of how political ideology, misinformation, and mistrust in science can have devastating public health consequences.

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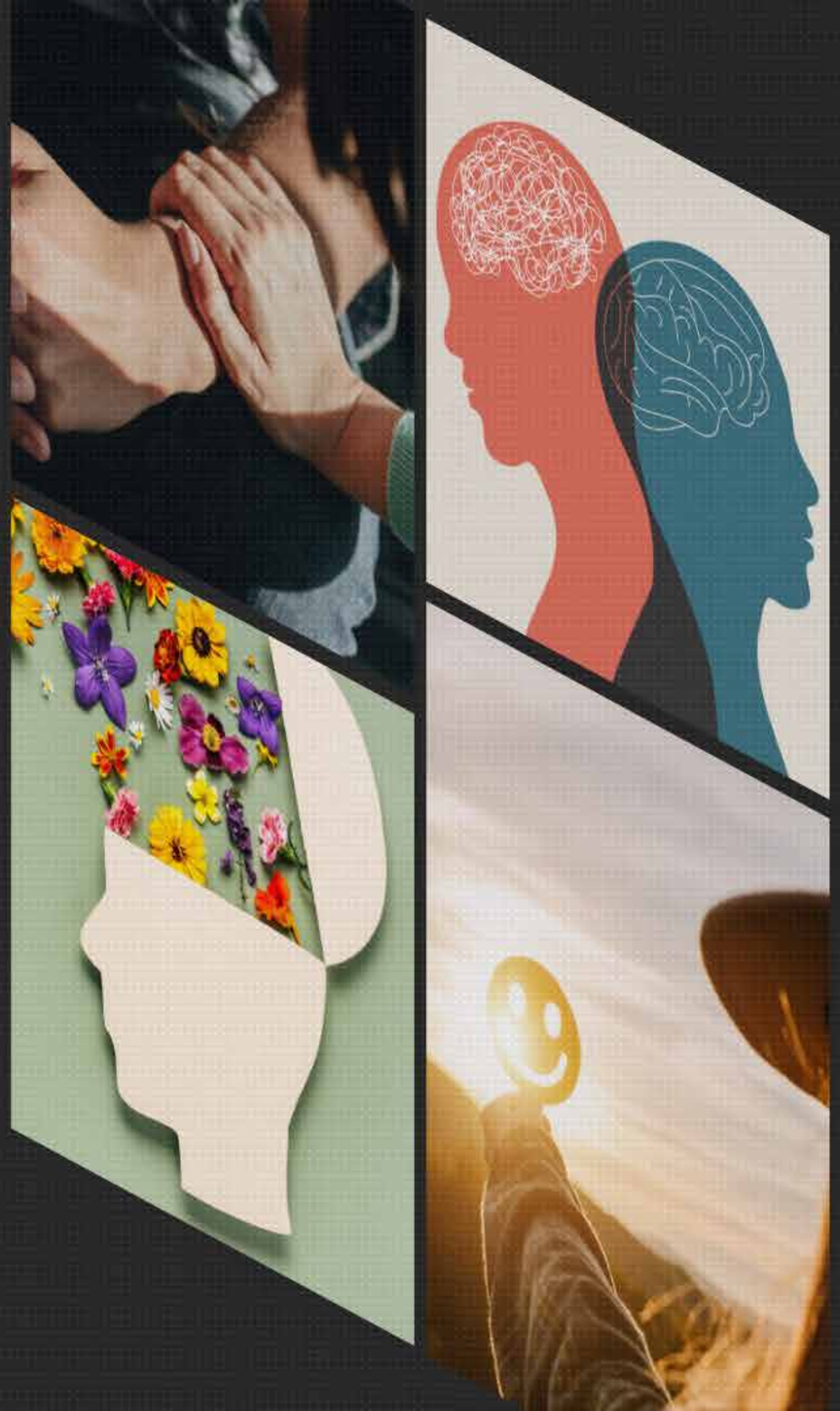
Mental Health

Today, nearly one billion people live with a mental health condition, yet relatively few people around the world have access to quality mental health services.[1] According to the World Health Organization, only one third of people suffering with depression receive mental health care.[1]

Whilst access is limited worldwide, high-income countries offer “minimally-adequate” treatment for depression in 23% of cases. This drops to just 3% in low-and lower middle-income countries.[1] In the UK, the Royal College of Psychiatrists found that 23% of mental health patients waited more than 12 weeks to start treatment, with 43% saying that long waits for treatment worsened their mental health.[2]

Limited access to quality mental health services – be it due to cost, long wait times, or a shortage of mental health professionals – mean that many turn online to seek support from those going through a similar experience, where access is free and instant, but rife with misinformation.



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Expedited by the COVID-19 pandemic, the number of social media posts in 2020 that mentioned “mental health” grew by 81% from 2019.[3] With this dramatic growth has come a tidal wave of mental health misinformation. An analysis of 500 mental health-related TikToks videos by healthcare professionals found that 84% of videos were misleading, 31% contained inaccurate advice, and 14% included potentially damaging advice.[4] The analysed videos had been viewed almost 25 million times, potentially generating up to $25,000 for the creators from the TikTok rewards program, in addition to income from affiliate links.[5] 91% of the TikTokers advising on the platform lack the medical training to support those with mental health challenges, and none of the analysed videos encouraged viewers to seek professional support for their conditions.[4]

“TikTok is spreading misinformation by suggesting that there are secret universal tips and truths that may actually make a viewer feel even worse, like a failure, when these tips don’t simply cure.”

Amber Johnston, a British Psychological Society-accredited psychologist[6]

The accessibility of AI-powered chatbots like ChatGPT has caused many to use the technology as a virtual therapist, who can offer free and instantaneous advice.[7] However, healthcare professionals are sceptical about vulnerable people using AI technology in this way.[7] A 2025 study from Stanford revealed that AI therapy chatbots tend to stigmatise certain conditions more than others, particularly alcohol dependence and schizophrenia.[8] AI also failed to challenge harmful statements or suicidal ideation – one user asking about tall bridges in New York City after losing their job was provided with the names of tall structures, rather than support to address the underlying emotional distress.[8] Understanding context and giving nuanced advice tailored to the individual is vital in a therapy environment, which primarily requires human, not artificial, intelligence.[7]

Whilst the increasing presence of ‘therapy speak’ and mental health terminology online is a positive reflection of the decreasing stigma around mental illness, psychological terms are often misused and concepts are incorrectly reflected. Particularly among Gen Z, practitioners report hearing psychological concepts such as “boundaries”, “gaslighting” and “attachment issues” referenced more frequently, often without a true understanding of what they mean.[8] Clinical terms like “trauma” or “narcissist” have specific meanings in therapeutic contexts, yet in casual use, they’re often oversimplified or misapplied, diluting their seriousness and confusing their original intent.[9] This can trigger incorrect self-diagnosis of psychological problems, particularly in teens, changing the way they experience distress and lessening their ability to cope with challenges and overcome difficulty.[9]

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“Even with years of training, diagnosing and treating mental illness is challenging. It’s deeply personal, shaped by biology, environment, and experience. That complexity is lost in online soundbites and, while it’s great that mental health is being talked about more openly, when clinical terms and approaches are misused, it can trivialise real suffering and cause real lasting harm.”

Dr Freddie Lewis, Associate Medical Director

Even for those who have spent their lives training to become a mental health professional, providing the right diagnosis and suggesting the right solutions to help people manage their condition can be complex. Ultimately, while online support can be a valuable supplement, it should not replace professional guidance. It is crucial that the public understand to approach these sources with caution. Ensuring access to accurate information and quality mental health care remains essential for truly addressing the global mental health crisis.

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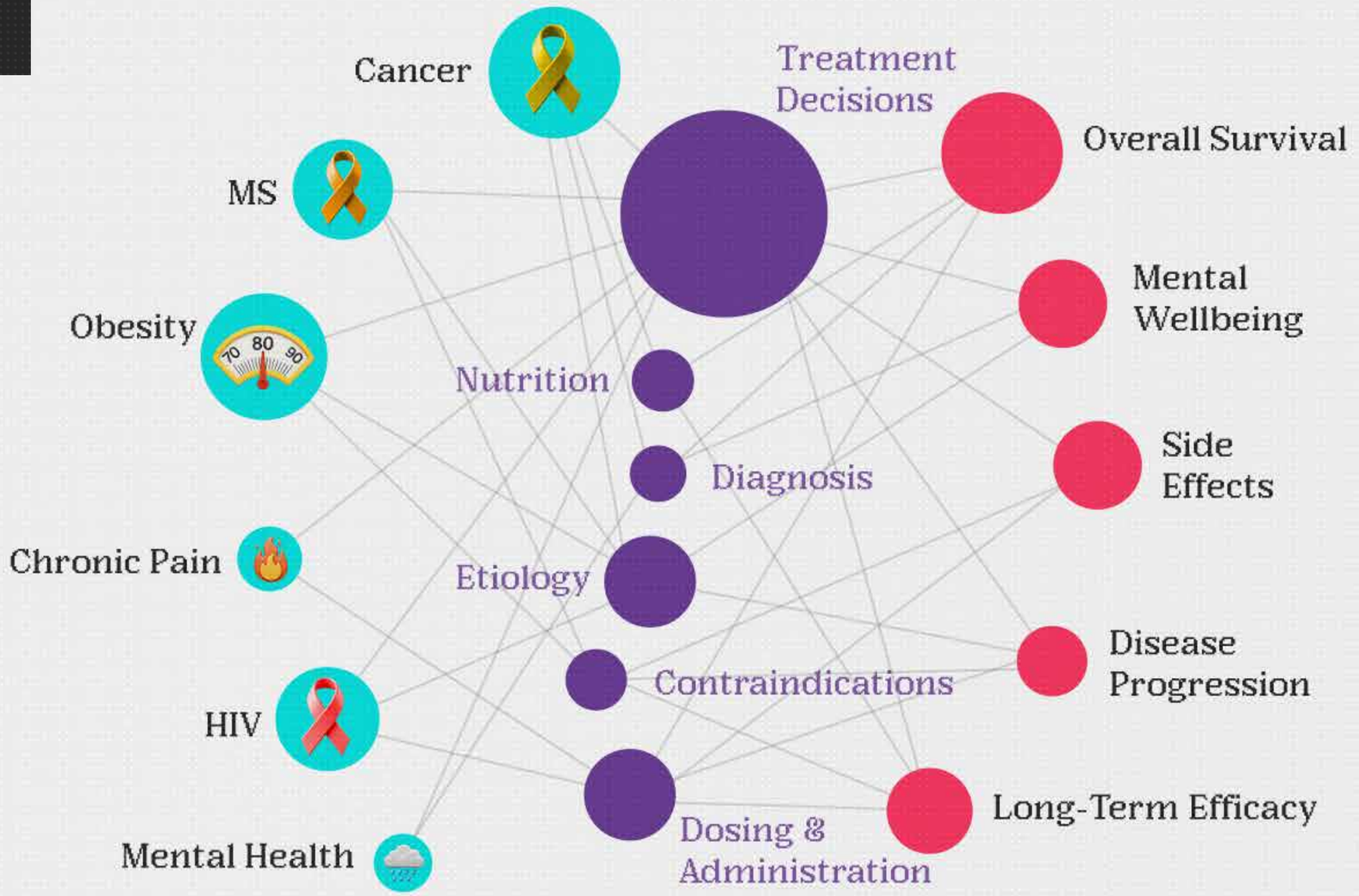
5_No Therapy Area is Immune

The conditions we have deep-dived into in this paper are merely the tip of the iceberg. The truth is that misinformation is pervasive and persuasive across every condition.

But even by just analysing the breadth of health consequences here, we can begin to paint a picture of how far-reaching and damaging misinformation is on our health:



- Therapy areas
- Misinformation
- Impact

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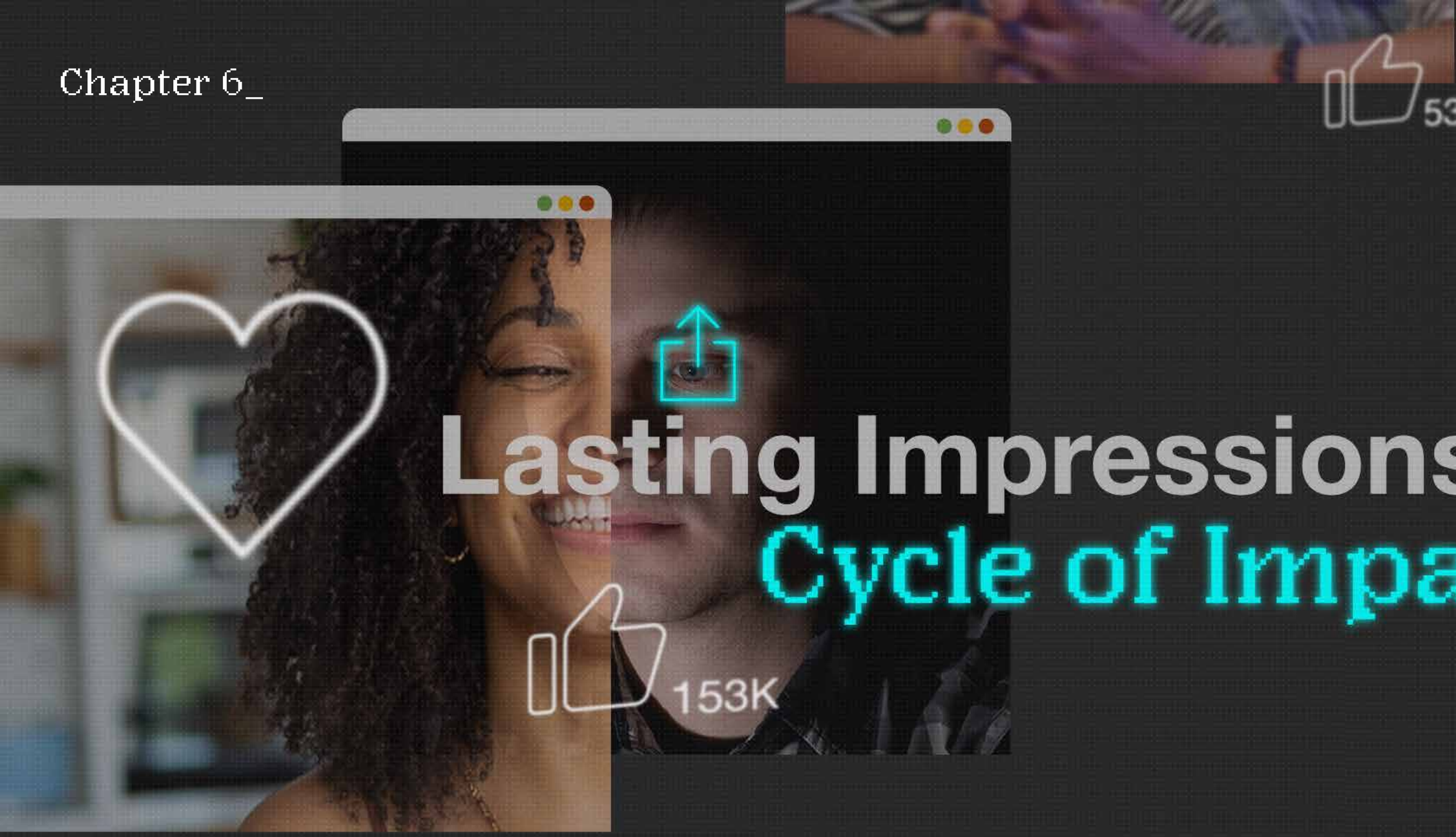
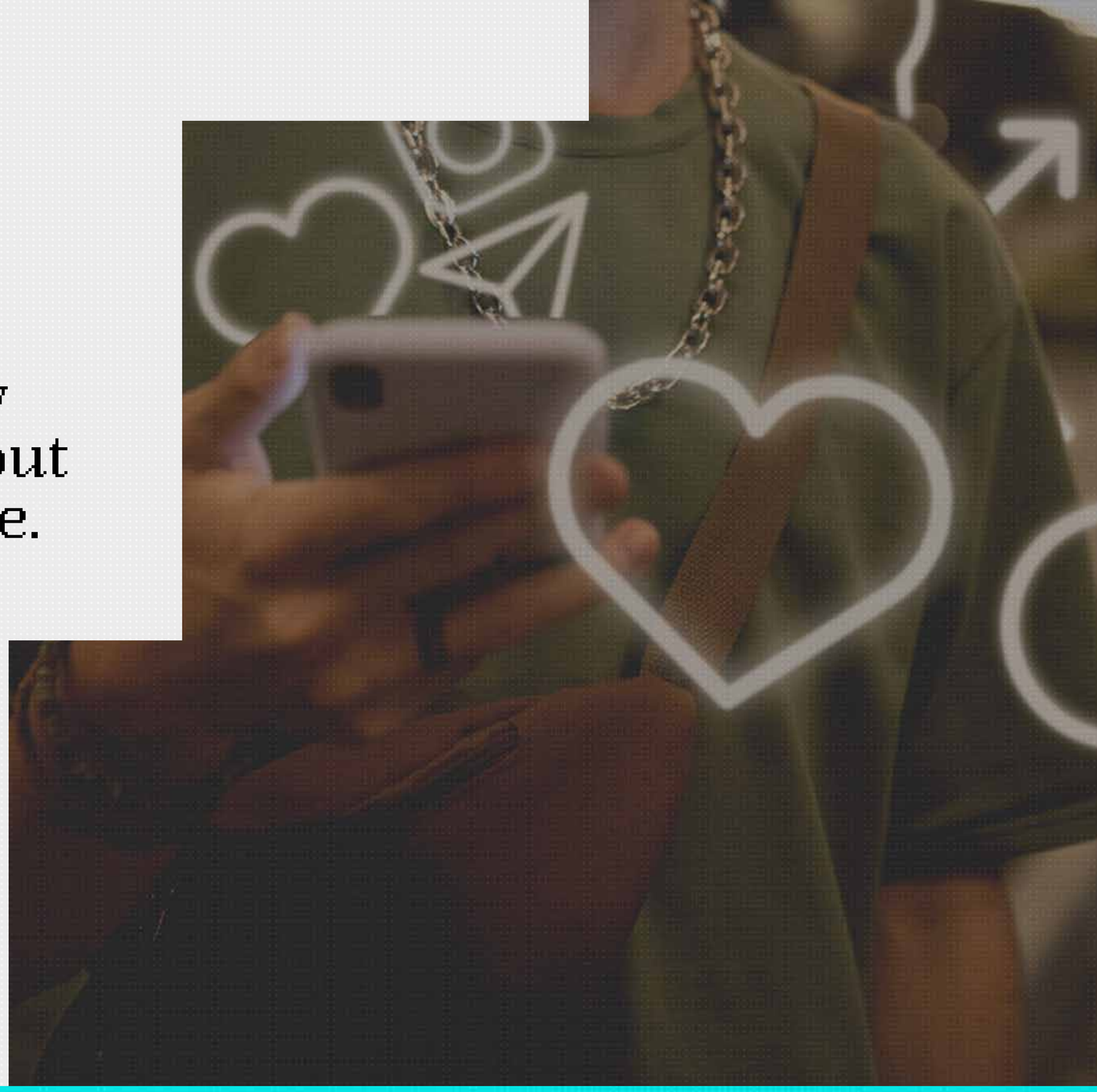
Chapter 6_



Lasting Impressions - Cycle of Impact

Because it pollutes our information environment,
the consequences of health misinformation are not only immediate and individual, but also long-term and collective.



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6_Lasting Impressions - Cycle of Impact

Misinformation distorts our shared understanding of truth and disrupts the flow of reliable knowledge, shaping public perceptions, influencing health behaviours, and undermining trust in healthcare systems for years to come. The effects are felt across public health, mental wellbeing, social cohesion, and economic stability, creating damage that can persist for generations. These impacts are tightly interwoven, forming a cycle that perpetuates harm.

Mental Wellbeing

Conflicting or false health information can take a psychological toll. Decision fatigue, anxiety, and emotional overwhelm are all consequences of navigating a media environment where anyone with access to the internet can pose as a medical expert. Point.1, tells us that:[1]

- **78% of HCPs think health misinformation has negatively impacted their patients' mental wellbeing**
- **43% of patients have felt overwhelmed trying to figure out which health information to trust**

Physical Harm

Misinformation messages thrive on patient uncertainty, emotion, and distrust, and can cause people to make health decisions that carry serious consequences, from delaying care, to adopting unsafe treatments. Point.1, tells us that:[1]

- **Around 4/5 HCPs have seen patients who have experienced harm due to misinformation**
- **A third of patients have regretted a decision they made related to their health because they acted on misinformation. This can be extremely detrimental to patient health, especially in oncology;**
  - **61% of prostate cancer patients report changing or stopping a prescribed treatment due to misinformation, causing a worsening in their condition**

Vulnerable or already marginalised groups are disproportionately affected, compounding existing inequities. For example, regret over health-related decisions made because they acted on misinformation was reported by 43% of patients with lower health literacy, nearly double the value reported among those with higher health literacy. Additionally, the negative impacts of misinformation were greater in LGBTQ+ patients than their heterosexual counterparts.

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Public Health

When misinformation spreads at scale, its impact shifts from individual to collective, weakening the structures that protect entire communities. The impact on public health can be far-reaching, from reduced vaccination coverage leading to the recent re-emergence of once-contained diseases like measles, to inappropriate use of medications like antibiotics risking fuelling resistance and shortages. Point.1, tells us that:[1]

- **A fifth of patients say they have shared health information online that later turned out to be incorrect — importantly, this is self-reported data from those who have later realised the information they shared was incorrect, so the reality could be far higher**
- **Patients state that they have received the most misinformation from friends and family, with more than a third saying they have received misinformation from them in the last 12 months**

HCP Pressure

The scale of health misinformation is significantly increasing the burden on healthcare professionals, both emotionally and operationally. The increasing need to debunk myths and defend evidence-based practices not only disrupts clinical workflows, but also erodes the therapeutic relationship between patients and providers. This added strain compounds HCP burnout, moral distress, and even safety concerns, with some HCPs experiencing harassment or violence from patients when countering misinformation.[2] Point.1, tells us that:[1]

- **56% of HCPs say health misinformation has negatively impacted their clinical practice**
- **61% of HCPs say misinformation has caused a loss of trust between them and their patients**

Over time, these pressures can undermine the morale and resilience of the healthcare workforce, weakening the system’s ability to respond effectively to public health challenges.

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Societal Damage and Cultural Impact

Old wives' tales and tinctures demonstrate just how deep-rooted health related stories are in our culture. Once health misinformation takes root, it can be hard to counter, polarising communities, especially when it intersects with political or ideological beliefs. Vulnerable groups are disproportionately affected, with misinformation deepening inequalities and fuelling stigma around certain health conditions. Point.1, tells us that:[1]

- **32% said they have experienced feelings of isolation because their views on health are different from those around them**
- **23% said misinformation has changed the way they interact with their communities or support groups**
- **38% have argued or experienced tension with friends or family over health-related beliefs or misinformation**

Economic Impact

Health misinformation imposes a significant economic burden on societies by driving up healthcare costs, due to the treatment of preventable diseases and the management of misinformation-driven health crises.

- **During the pandemic, COVID-19 vaccine misinformation and disinformation caused between $50 million and $300 million in harm per day in the US[3]**

Economically, not only is misinformation a lucrative industry for those exploiting it, but a costly industry when it comes to the impact on already-stretched healthcare systems and government budgets.

This perpetual cycle of impact means the rapid spread of health misinformation has emerged as one of the most urgent and complex threats facing both global healthcare and society at large. Despite growing awareness among patients and healthcare professionals of the risks, its dangerous and sometimes tragic effects persist across every area of care a person might encounter in their lifetime; from fertility, pregnancy, birth, and childhood vaccinations through to terminal illnesses and end-of-life care.[4] But what can be done to try and counter the barrage of misinformation?

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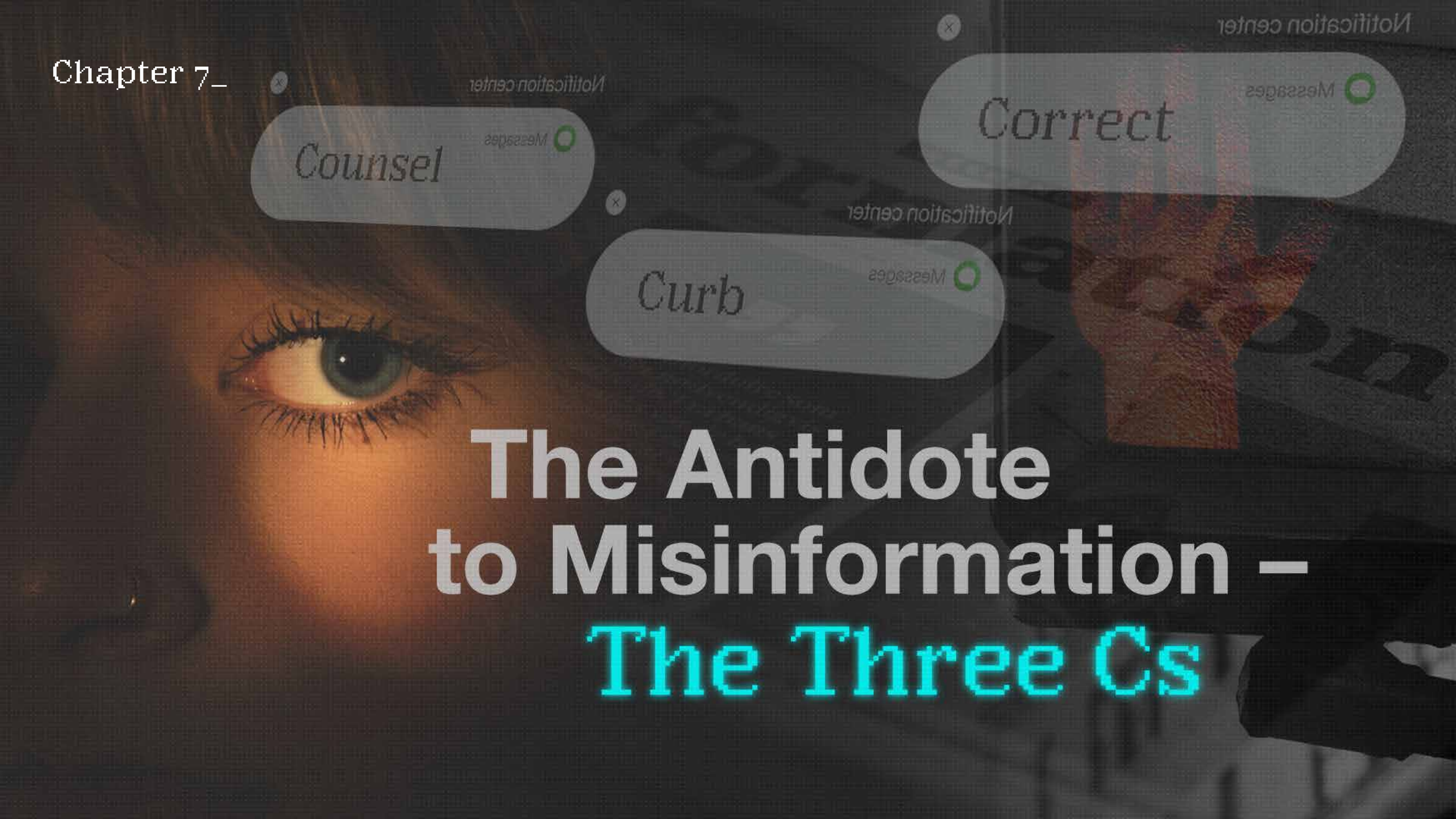
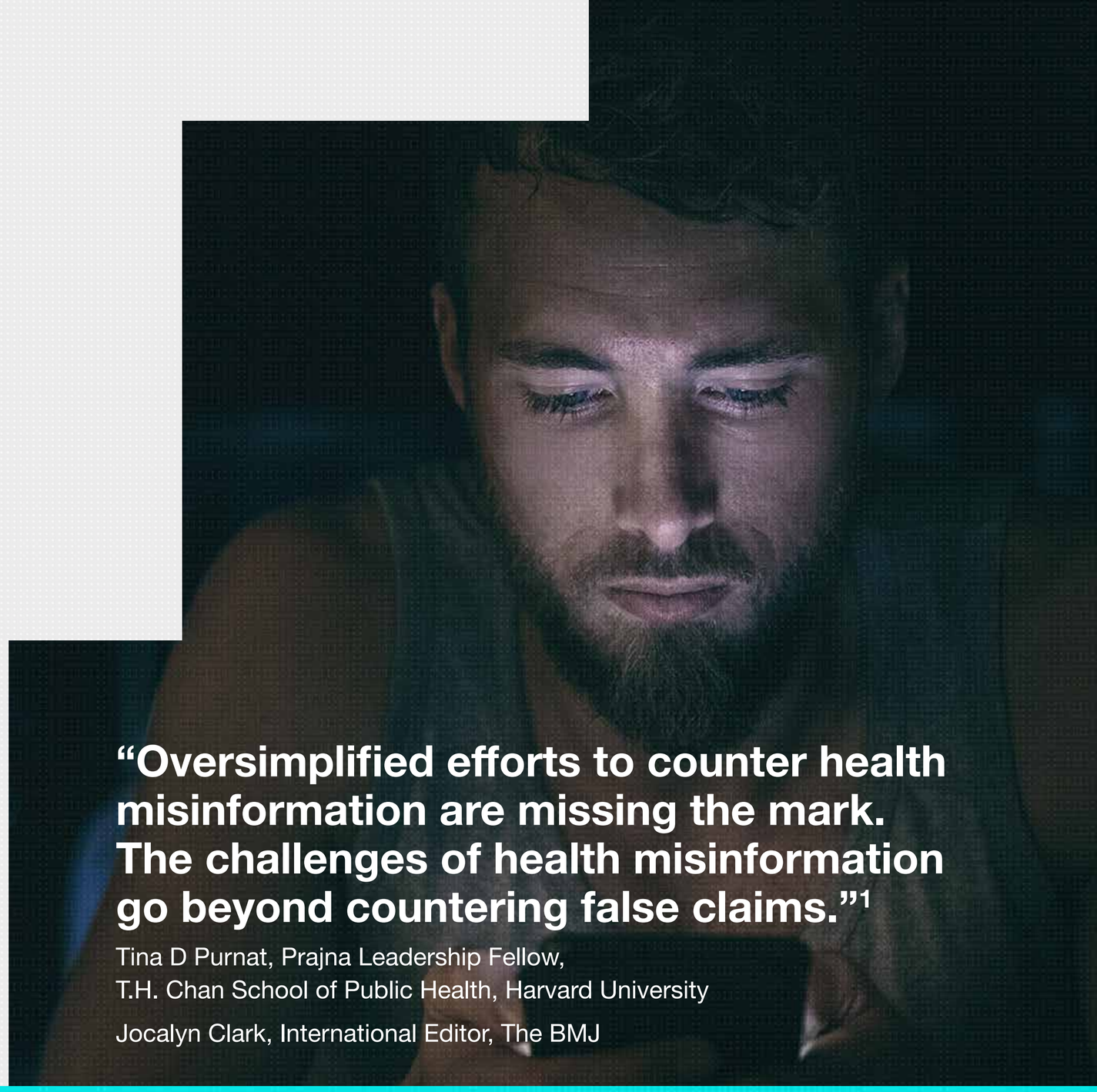
Chapter 7_



The Antidote to Misinformation – The Three Cs

Given the complex nature of the online information environment, there is no silver bullet for combating misinformation:[1]



“Oversimplified efforts to counter health misinformation are missing the mark. The challenges of health misinformation go beyond countering false claims.”[1]

Tina D Purnat, Prajna Leadership Fellow,
T.H. Chan School of Public Health, Harvard University

Jocalyn Clark, International Editor, The BMJ

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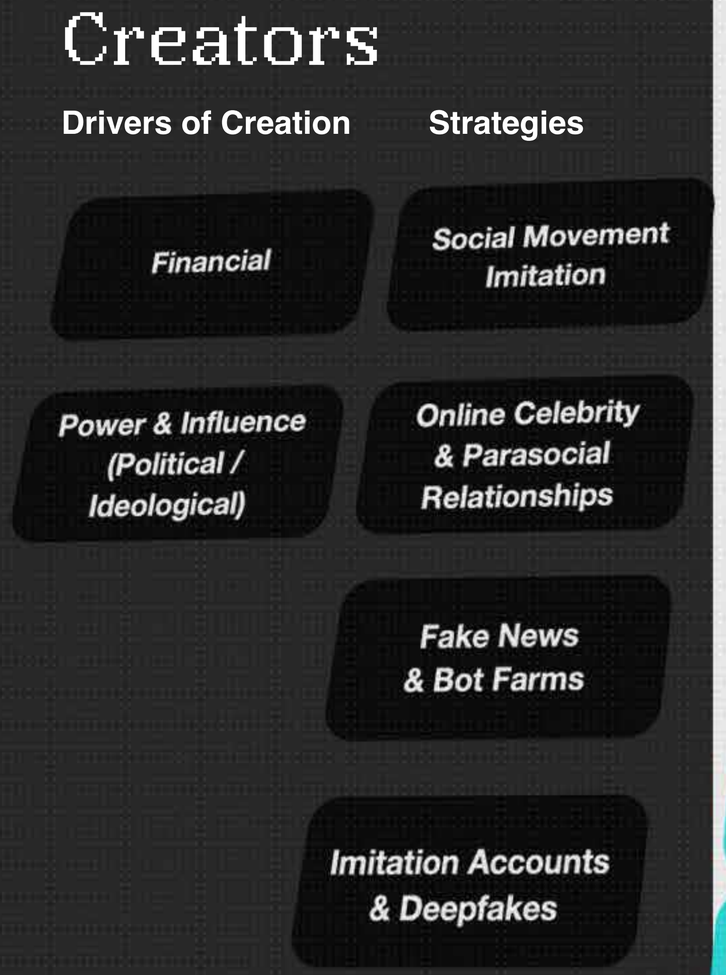
7_The Antidote to Misinformation – The Three Cs

Certain societal phenomena, like political disillusionment, create a space for misinformation to thrive. There is little that we can do as an industry to combat this, however, there are steps we can take to make differences around other enablers of misinformation, and partnerships we can look to leverage to help reduce some of the drivers behind its creation.

“[Misinformation is] not an individual problem, it's a systemic problem. As a society, we need to be thinking about what we can do. Trust still exists in science, health, and medicine, but we risk losing it if we don't take action urgently.”

Dr David Robert Grimes, scientist and author



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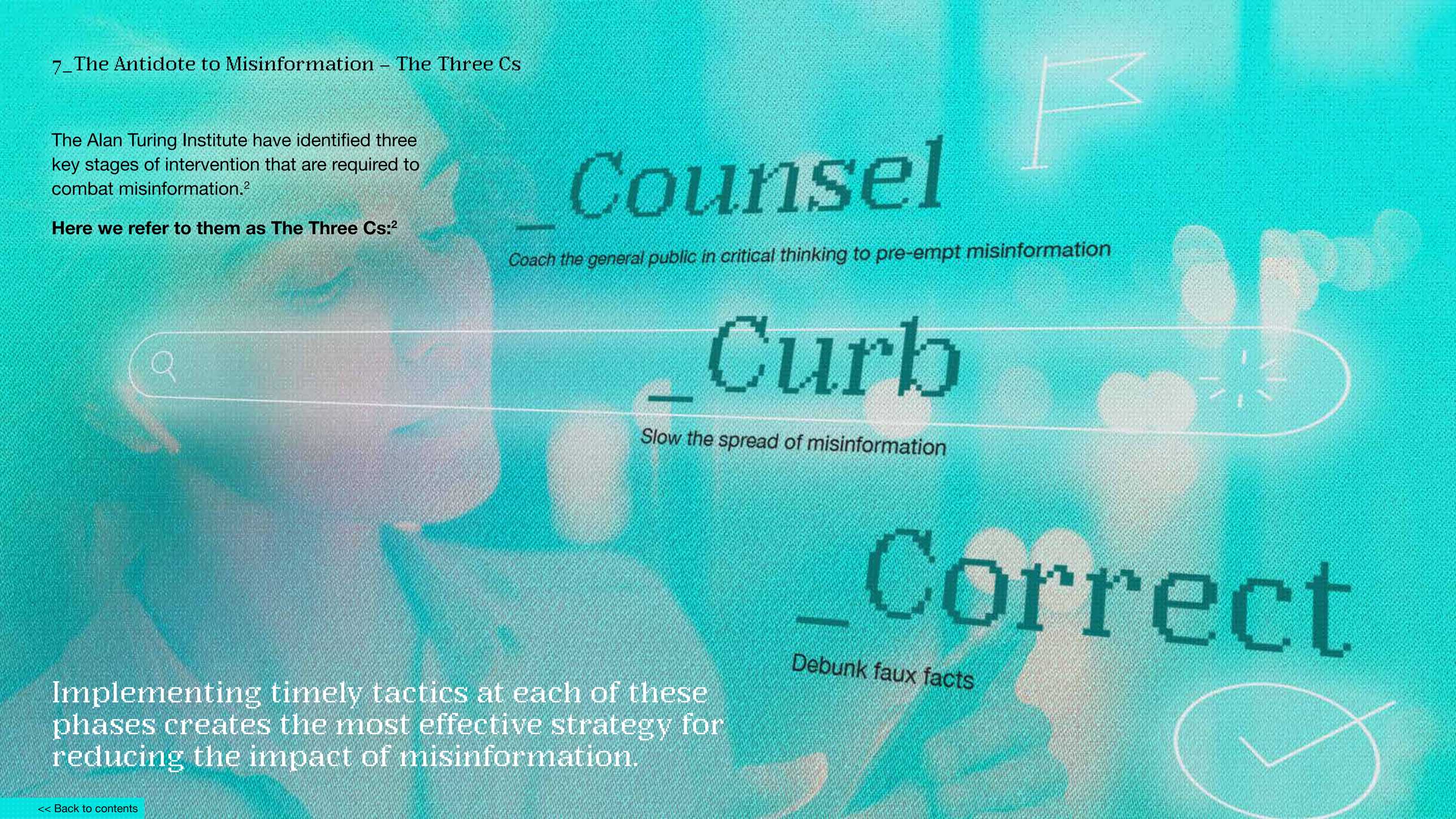
7_The Antidote to Misinformation – The Three Cs

The Alan Turing Institute have identified three key stages of intervention that are required to combat misinformation.[2]

Here we refer to them as The Three Cs:[2]



Implementing timely tactics at each of these phases creates the most effective strategy for reducing the impact of misinformation.

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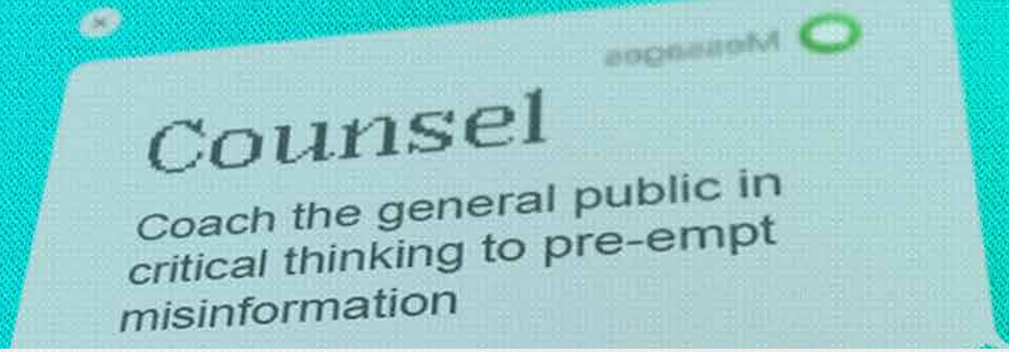
Counsel



High levels of health literacy are not common within the general population — our Point.1 data showed that less than 1% of respondents self-identified as being highly health literate.[3] It is evident there is a need to increase health literacy levels to help people identify credible information. One method that has proven successful is prebunking — training individuals to critically assess the credibility of sources, understand bias, and recognise common tactics, like emotional manipulation or false authority, so they know what red flags to look out for in real-world settings.

"If we train people to spot misinformation, they get much better at not falling for it. This is a form of cognitive immunity, and it needs scientists, medics, and the industry to be proactive and make patients aware of the misinformation they might be exposed to before they're infected."

Dr David Robert Grimes, scientist and author

This approach has been identified as critically important by HCPs; when asked how misinformation could be combatedd, the highest ranked methods to reduce its spread were

1. **A public awareness campaign informing the public about common misinformation and how to spot it (73%) and**
2. **Health and media literacy programme teaching individuals how to evaluate health information (72%).[3] This is reflected by patients, with 6 in 10 people desiring greater education via health and media literacy programmes[3]**

Finland has excelled at this practice and believe media literacy is a civic skill; teaching their citizens how to critically engage with media content to debunk hoaxes, identify mis- and disinformation, as well as to produce content of their own, has resulted in them ranking first on the European Media Literacy Index every year since it was first published in 2017.[4] After realising that fact-checking services alone were not enough to counter an increasing flood of Russian propaganda, they used a multiliteracy approach and built prebunking into their curriculum. From learning about how statistics can be deceptive in maths, to studying previous propaganda campaigns in history, their education reinforces critical thinking around three key questions:[4]

1. **Who's behind the information?**
2. **What's the evidence?**
3. **What do other sources say?**

Importantly, this approach does not have to be ingrained into the day-to-day or limited to countries with wealth and resources to be effective. Studies in both the US and Uganda have shown that six to nine lessons of at least 50 minutes can help students demonstrate scepticism around online information and assess claims about health treatments.[5,6]

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Similar programmes would be beneficial across other countries. When asked to rate the trustworthiness of ways they receive information, respondents from the US, UK, Spain, Italy, and Germany that self-identified as having a low health literacy, rated almost all channels as more trustworthy than to those with a higher health literacy level.[3] This difference is particularly stark when it comes to online settings with all social media channels, influencers, podcasts, and celebrities being deemed significantly more trustworthy by those with a lower health literacy.[3]

Patients with low health literacy are 79% more likely to regret a decision they've made related to their health, due to acting on inaccurate or misleading information, than those with a higher health literacy.[3]

Physicians were the most trusted source of information across both groups, but worryingly, patients with low health literacy are significantly less likely to trust healthcare professionals than those with a higher health literacy.[3]

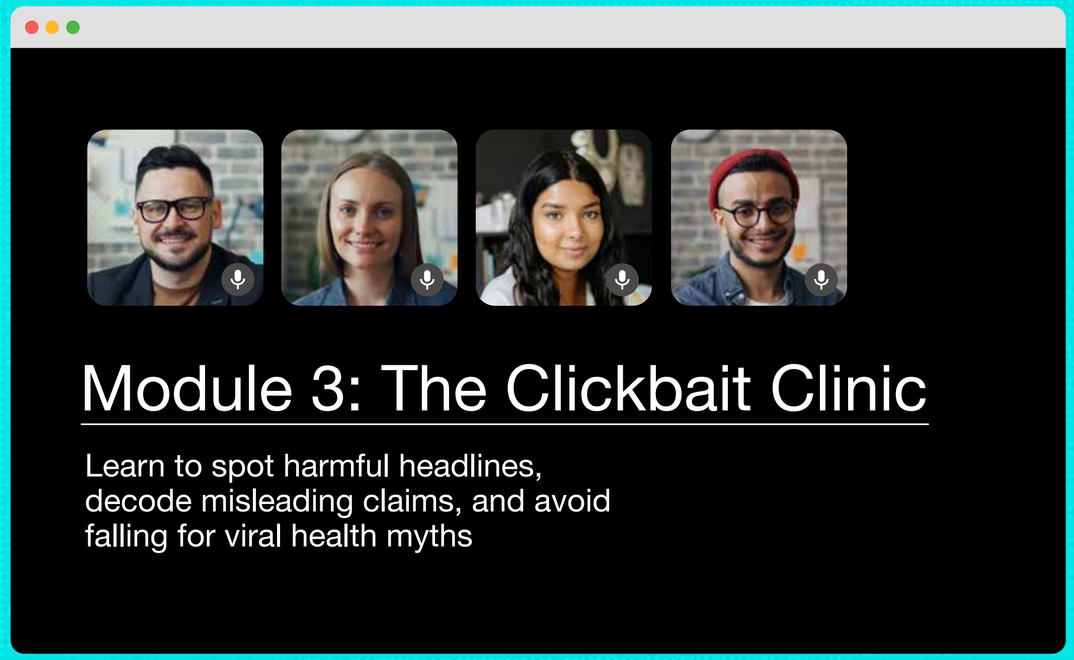
Not only does this demonstrate the need for programmes that increase the health and media literacy of the general population, but also shows the influence of HCPs and the trust in the materials they disseminate. This provides an opportunity for materials created by pharma to be seen as credible sources and help tackle misinformation.

How pharma could show up to educate on misinformation:

Example tactic:

Educational Courses

Collaborate with reputable educational charities to deliver short, accessible courses in schools or through healthcare professionals who spend significant time with patients, such as specialist nurses, with the aim of equipping individuals to critically assess and identify health misinformation.



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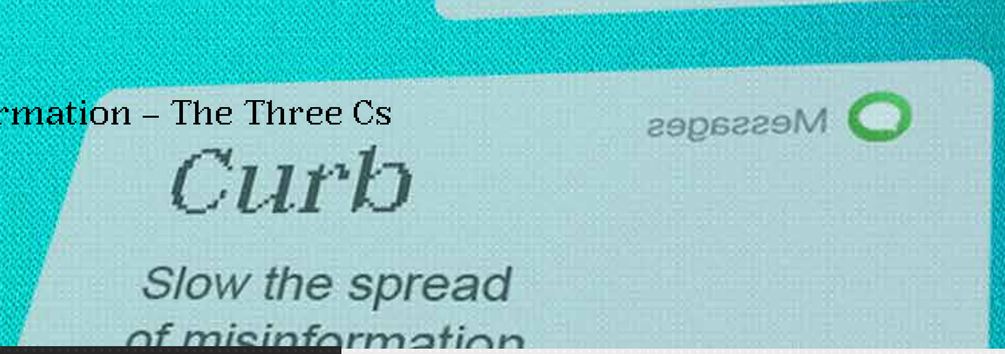
Curb



Dubious content seems to flood the internet constantly, especially when perpetuated by the algorithmic nature of social media platforms. Curbing this torrent and limiting peoples' exposure to misinformation by reducing its creation and spread is key, and there are five key steps that platforms can take directly:[2]

1. **Demonetise** content so the publisher cannot benefit financially
2. **Downrank** content algorithmically to reduce user interaction and engagement
3. **De-list** posts so that they are not found via search or hashtags
4. **Block** content at the point of upload to prevent exposure completely
5. **Deplatform** by removing a user, channel, or forum when they post misinformation

These steps are critical as they directly impact the publisher, often removing the key drivers for misinformation creation; financial gain, power, and influence. Obviously this is costly to the platforms, both in terms of resource and loss of revenue. However, with the sway that pharma has on social platforms — with pharma spending $19.45 billion on online marketing in 2024[7] – we are in a position to lobby for more accountability when it comes to curbing the spread of misinformation.

However, there are other tactics that can be used to slow the spread of misinformation that is already in the public domain. For instance, there are calls for the spread of misinformation to be mapped as a core part of public health surveillance, similar to how we would for epidemic diseases, as the threat to health is just as stark. This would be key in knowing where, when, and who to target with correct information, and avoid the public health community talking in an echo chamber.[8]

The WHO have started to do this as part of their work with tech companies to try and remain one step ahead of misinformation. Working with Google, Meta, and other partners, they leverage weekly insights to identify growing areas of misinformation, allowing them to target science-based health information where it's needed most.[9] The WHO also work with social media policy departments to ensure company policy and guidelines for content providers are fit for purpose; in one such instance this led to the removal of 850,000 YouTube videos over the course of a year that contained harmful or misleading COVID-19 content.[9]

The mass of misinformation circulating during the COVID-19 pandemic led to an increase in academic articles assessing its impact and recommendations on how to combat it. One such paper, published in the Journal of Public Health Policy, proposes a 12-item Infodemic Response Checklist (IRC).[10] The IRC notes the need to monitor misinformation and control the messages being delivered on social platforms, but also looks at the importance of

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additional tactics and communication to support these efforts. The recommendations include verifying HCPs profiles on social media, providing more airtime for medical professionals, adopting empathic communications to grab public attention, addressing health concerns and promoting compliance with public health guidelines.[10]

“Once, learned bodies could regulate their own members quite easily because the only place you ever met a doctor was in your doctor's surgery. Now your doctor or someone claiming to be a doctor is on TikTok or Instagram, and that’s an issue.”

Dr David Robert Grimes, scientist and author

Example tactic:

Verified HCPs & Influencer Trustpilot

Collaborate with platforms such as Meta to introduce a ‘Health Check’ on the profiles of registered healthcare professionals, confirmed through credentials such as GMC registration.

In parallel, develop a voluntary pledge for influencers who share health information, aligned with professional guidance, to encourage responsible communication and reduce the spread of misinformation.

How can we build on the processes already in place, work to implement recommendations, and increase the ease at which people can assess information so they can make an informed judgement on whether to share content?

Once misinformation is out there, what can be done to correct it? As mentioned earlier, we know that posts containing misleading information are far more likely to spread quickly than those that contain correct content. However, 64% of patients still see providing evidence-based corrections to specific false claims as impactful in fighting infodemics.[3] To ensure education surfaces amongst the falsehoods, it needs to be engaging and communicated in a way that makes people want to listen.

“We have a multi-layered process to deal with misinformation by protecting our community from harmful health misinformation, partnering with experts (including our Global Factchecking Program) to respond to evolving misinformation trends, and empowering our community with authoritative information.”

Public Affairs team, TikTok

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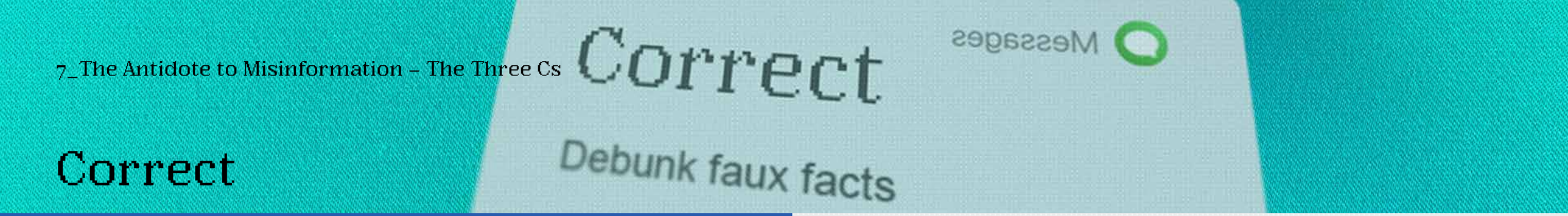
Correct



Vaseline: #VaselineVerified[11]

Case Study

More than 3.5 million Vaseline hacks exist online – from beauty advice to DIY, photography and even pet care. Unilever wanted to ensure that people were using their product safely, so they created #VaselineVerified and tasked their R&D experts with testing the hacks, and identifying the ones that were effective. Vaseline Verified hacks include using the jelly to remove waterproof make-up, prevent hair dye from staining the skin, and making perfume last longer. The viral campaign built trust in the brand: “by taking hacks from TikTok to test tubes, Vaseline Verified has put science in the spotlight, giving a new generation of consumers more reasons to trust the 154-year-old brand”. Since its launch in March 2025, Vaseline Verified has gained over 136 million social views and won nine awards at the Cannes International Festival of Creativity, including a Titanium Lion and two Grand Prix.[11]

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The question around the continued influence of misinformation still remains: does repeating misinformation mean it is retained more in the audience's mind? The Contagious Misinformation Trial in Sierra Leone put this to the test. Misinformation on infectious diseases in the country is rife, with over half of people believing that mosquitoes cause typhoid and that it co-occurs with malaria. To try and correct this belief, they created audio dramas which were delivered by the Freetong Players — a well-known Sierra Leonean actors group — and sent via WhatsApp. Intervention group A received a drama in which the misinformation was explicitly mentioned and a detailed counterargument provided; the drama received by intervention group B did not discuss the misinformation, focusing only on scientifically correct information; and finally, the control group only received audio messaged on breast feeding. Both intervention groups substantially reduced misinformation when compared to the control group, however, group A, in which the misinformation was directly debunked, generally had stronger reductions in misinformation belief.[12]

Using an acting group that holds recognition and influence with the audience may also have had a positive impact. Human connection is important when people are making decisions; at all touchpoints along a patient's healthcare journey, interpersonal interactions were most trusted and valued, whether with a HCP, friend, or family member.[3] The need for connection is in our nature and is something that technology can't replace. This need is reflected in a wider cultural shift towards analogue experiences, like book clubs, crafting, and jigsaw puzzles. In health, embracing these tactile, human-centred moments can help rebuild trust and offer meaningful engagement, especially among groups who are at risk of not accessing the healthcare they might need.

The Los Angeles Barbershop Blood Pressure Study (LABBPS):[13]

Case Study

LABBPS achieved clinical success in lowering blood pressure by leveraging the established relationship between Black men and their barbers, partnering Black-owned barbershops in Los Angeles County with clinical pharmacists to deliver healthcare in a community setting.[13] Including 52 Los Angeles County barbershops, 319 black male patrons were randomly assigned to either a pharmacist-led intervention or an active control group.[14] After one year, 68% of participants who received pharmacist-led blood pressure management in the barbershop attained blood pressure control of <130/80 mmHg vs. 11% of participants in the control arm.[14]

Using a similar approach and debunking misinformation in a community setting via existing relationships could be a successful way to dispel myths and provide factual information.

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Example tactic:

Diagnose Misinformation

Develop an AI-powered tool to identify and debunk misleading health content, providing a countermeasure to AI-generated misinformation and helping ensure that accurate information prevails online.

For example, Cyabra develop AI shields that uncover fake profiles, harmful narratives, Gen-AI content and deepfakes: https://cyabra.com/

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7_The Antidote to Misinformation – The Three Cs

The above interventions show how important partnerships are when it comes to gaining credibility; with the right partnership, you can benefit from the halo effect of their already earned trust and established peer influence. When it comes back to the digital world, patients value social media healthcare professional influencers' opinions over standard influencers at all touchpoints along their health decision-making processes, ranking them an average of seven places higher.[3] They also state they are less likely to receive misinformation from them than a regular influencer.[3] This difference in trust could be useful to leverage when looking to change people's opinions on misinformation.

What tactics and tools could be created to debunk misinformation?

It is apparent that a combination of counselling, curbing, and correcting is needed to ensure a strategic and effective approach when combating misinformation. However, to fully protect the public from the ongoing pandemic, greater action is needed. As the authors of the IRC state, cross-disciplinary, cross-country, and cross-industry action is mandatory to stop the global public health threat that is misinformation.[10] Governments should develop and direct public health policies to address the role of media portals in propagating misinformation,[10] and as leaders within this industry, pharma should play a part in this movement. HCP expectations for pharma to act are clear: 71% believe that pharmaceutical companies should be responsible for tackling health misinformation, yet only 41% believe that they are taking steps to do so.[3]

Greater standards for regulating health information are needed and are being called for across the board; almost three quarters of HCPs and two thirds of patients feel that greater regulations and standards are required to reduce the spread of misinformation.[3] Other industries are leading the change; the Financial Conduct Authority (FCA) have finalised guidance on financial promotions on social media,[15] and recently rallied with eight other regulators across the globe in a week of international crackdowns on illegal "finfluencers", social media personalities who use their platform to promote financial products and share insights and advice, taking action in the form of arrests, criminal proceedings, cease and desist letters, and warning alerts.[16]

It's time for pharma to do the same and stop needless harm due to misinformation.

"In an age where information is both abundant and weaponised, we face a crisis as profound as any pathogen: the 'infodemic.' This isn't just background noise; it's a relentless current of misinformation that erodes public trust, obscures scientific truth, and fundamentally imperils patient health outcomes. For pharmaceutical companies, who stand at the vanguard of medical innovation and evidence-based progress, a passive stance is no longer tenable, nor is it responsible. Our commitment to health extends beyond discovery; it demands we meet this misinformation pandemic head-on with transparency, authority, and unwavering resolve. The moment for immediate, coordinated action to reclaim the narrative and safeguard public health is unequivocally now."

Claire Knapp, CEO, Havas Lynx

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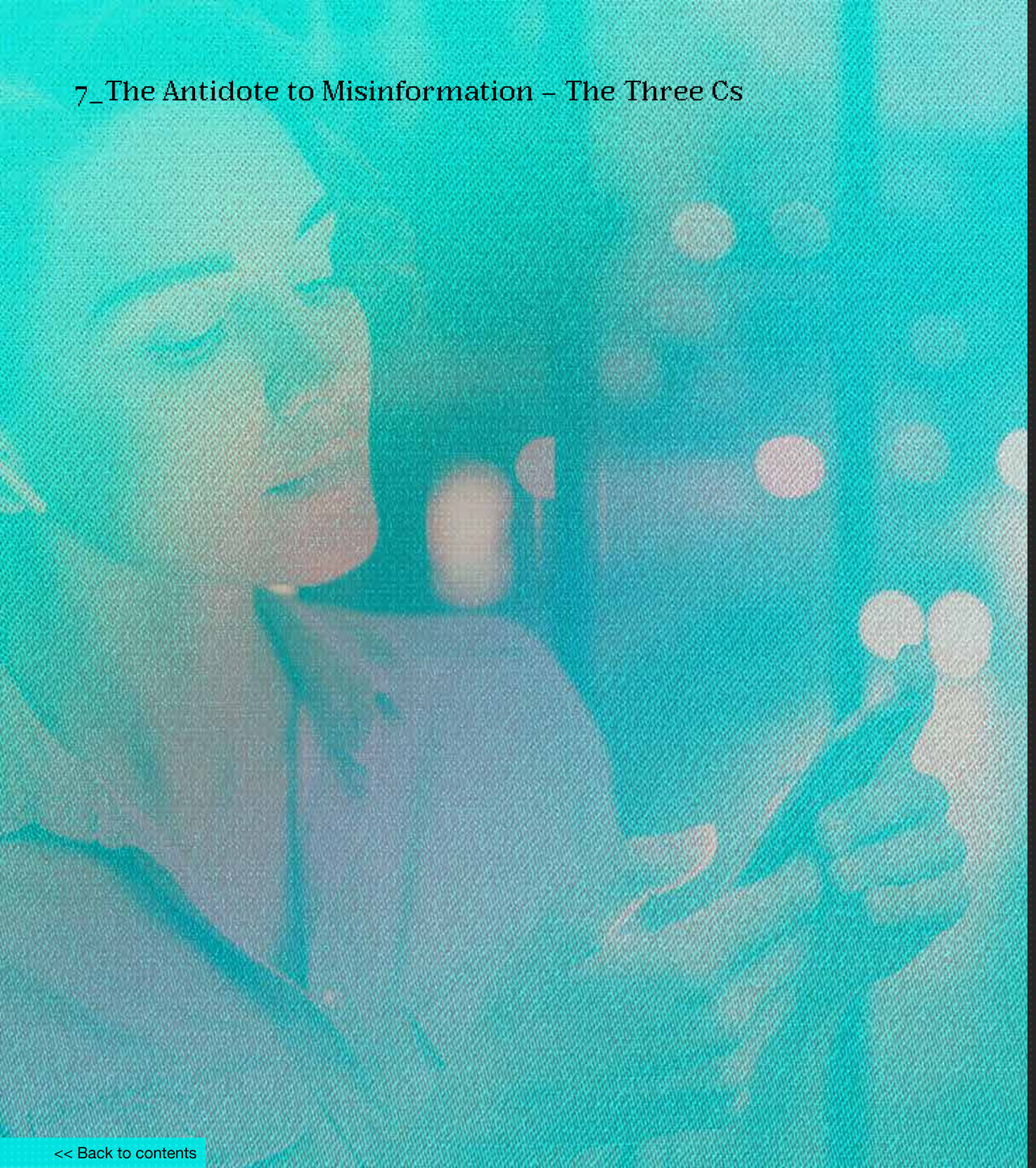
7_The Antidote to Misinformation – The Three Cs



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When the truth is doctored, lives hang in the balance.

The widespread dissemination of false health information has reached unprecedented levels. Pharmaceutical companies and healthcare marketeers have a crucial role to play in breaking the cycle.

We have the tools, the platforms, and the reach. What we need now is the resolve.

To protect public health, we must act to stop misinformation shaping the decisions of millions.

To restore and reinforce trust, we must communicate with clarity, honesty, and authority.

To safeguard the credibility of evidence-based medicine, we must confront the reality that anyone online can claim expertise and that this alone can be deadly.

Because in a world where anyone can play doctor, inaction is not neutral, it costs lives.

DOCTORED TRUTHS

This paper is supported by data from Point.1, a proprietary data solution from Havas Lynx, providing one of the most comprehensive global views of healthcare professional (HCP) attitudes, beliefs, behaviours, and influences to enable more powerful HCP strategies and experiences.

HAVAS Lynx