

Staying healthy in an era of health fallacies and fake news

Misleading claims about health issues can cause real harm, especially when they spread rapidly over social media.

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In a recent speech, Robert F. Kennedy Jr claimed that fluoridation in water causes numerous health problems, from lowering IQ to increasing the risk of cancer.

Such claims have been debunked before, but the remarks by Mr Kennedy – nominated by President Donald Trump to be the next US health and human services secretary – provided fresh ammunition to the camp that lobbies against fluoride.

Shortly after Mr Kennedy's remarks, several traditional and social media platforms reported on a study published in *Jama Pediatrics* – one of America's leading medical journals – with headlines suggesting a link between fluoride exposure and childhood IQ loss.

The study's flawed methodology and inconclusive findings had come in for widespread criticism by experts. Nevertheless, the damage was done as misinformation spread.

Social media platforms amplified the misleading headlines, while anti-fluoride activists, emboldened by Mr Kennedy's comments, seized the opportunity to fuel distrust in public health measures that have been in place for decades.

Fluoride has been a cornerstone of public health strategies to combat tooth decay since the mid-20th century, with countless studies validating its safety and efficacy.

Yet, in today's hyperconnected world, misinformation from leading figures – often lacking scientific backing – can spawn health myths and spread them with unprecedented speed.

Caveats and qualifications on research findings are lost in the clamour of alarming headlines and sound bites. Misinformation about health issues can cause harm and even claim lives.

WORRYING TRENDS IN HEALTH MISINFORMATION

The fluoride debate is not an isolated incident but part of a broader trend where health misinformation flourishes online, allowing unproven and often dangerous health claims to thrive and propagate.

This trend is alarming, especially as we witness the rise of false narratives in numerous health domains.

Take e-cigarettes for example.



In today's hyperconnected world, misinformation from leading figures – often lacking scientific backing – can spawn health myths and spread them with unprecedented speed. When encountering health claims, people should exercise caution before sharing, forwarding or reposting, the writer says. PHOTO: ISTOCKPHOTO

Initially marketed as a harm-reduction tool for smokers, e-cigarettes were embraced by some public health officials as a safer alternative to traditional cigarettes.

However, not only are the same public health officials now grappling to restrict or even ban access to e-cigarettes, the World Health Organisation (WHO) has also come forward to declare there is no evidence to support the narrative that e-cigarettes are any less harmful than tobacco.

Despite growing evidence of the harm they cause, such myths persist and continue to mislead many into believing e-cigarettes are a safe option.

Nutrition and fad diets are also hotbeds of misinformation. From the keto diet to intermittent fasting, each new trend promises miraculous health benefits, often supported by anecdotal evidence rather than scientific research.

Celebrity endorsements and social media influencers further fuel these trends, leading many to adopt potentially harmful dietary practices without understanding the risks involved, especially for those with underlying health conditions.

Historically, misinformation often targeted specific groups, preying on those desperate for alternatives to conventional medicine.

Today, however, social media has democratised the spread of misinformation, exposing the general population to a constant stream of dubious health claims, which can gain a veneer of credibility through sheer repetition.

Even well-educated individuals can struggle to discern credible information from pseudo-science, particularly when it is presented in a persuasive and authoritative manner.

HOW DID WE GET TO THIS STAGE?

The rise of social media and digital platforms like Meta (formerly Facebook) and TikTok has transformed how information is disseminated and consumed, creating an environment where misinformation can thrive.

Meta recently announced its intention to remove fact-checking from its platform, underscoring that it prioritised engagement over accuracy.

These platforms wield immense power, reaching billions of users globally. Their algorithms often amplify sensationalist content, spreading health myths and conspiracy theories.

This unchecked influence allows Big Tech companies to shape narratives and present their version of reality, often without adequate oversight or accountability.

Matters are made worse as trust

in traditional authorities, such as governments, scientific institutions and mainstream media, gets eroded.

Misleading statements from leaders and political figures contribute to rising distrust. Remember how, during the Covid-19 pandemic, President Trump suggested injecting disinfectants as a cure?

Academics and clinical experts can also contribute to the torrent of misinformation. The infamous case of Andrew Wakefield, whose fraudulent study linked the measles, mumps and rubella vaccine to autism, sparked a global anti-vaccine movement that persists despite being thoroughly discredited.

There are still parents today who hesitate to vaccinate their children because of the erroneous claim, leading to a resurgence of measles and mumps. As a result, a number of these deliberately

unvaccinated children died or suffered serious and permanent health complications.

Adding to the problem is the rise of influencers and pseudo-experts who generally do not have any formal credentials or qualifications to broadcast health-related content on social media platforms.

These individuals rely on charisma and relatability to build large followings, which they use to promote unverified or outrightly false health claims.

Their influence can sometimes overshadow that of experts with credentials, as audiences gravitate towards easily digestible and emotionally appealing messages, rather than complex scientific explanations.

MISUNDERSTANDING SCIENTIFIC EVIDENCE

Misinformation often stems from misunderstanding scientific evidence.

One common error is to mistake association for causation. Research studies regularly identify correlations between variables, but these relationships do not imply that one causes the other.

For example, early studies suggested a link between coffee consumption and increased heart disease risk. Later research clarified that this was on account of related factors such as smoking, as smoking was more common among coffee drinkers at the time. And yet the myth about coffee raising the risk of heart disease continues to persist.

People also fail to grasp the concept of real-world dosage when it comes to exposure to harmful substances.

Many health scares arise from studies showing harm at extremely high doses in laboratory settings. In real life, we are typically not exposed to such high dosages.

For instance, concerns over artificial sweeteners like aspartame causing cancer arose from studies involving doses far exceeding what an average person would consume. Even vitamin A when consumed at excessive levels can lead to toxicity causing liver damage and birth defects during pregnancy.

Similarly, research studies reporting the toxicity of fluoride were conducted mostly on mice. Fluoridation levels were set extremely high – far beyond anything one finds in normal drinking water.

We can be assured, for example, that the fluoride level in Singapore's water supply is safely within WHO's recommended range for fluoridation.

The failure to contextualise these findings within realistic exposure levels often leads to unnecessary fear.

The evolving nature of health information also means that what is considered accurate today may be debunked tomorrow as new evidence emerges. This "time dimension" of health information can fuel the spread of misinformation when outdated

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Avoid relying solely on social media for health advice

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beliefs persist despite newer, more reliable data.

People often cling to initial findings because they may not be aware of the updates, or they may have deeply ingrained the original information, making it difficult to accept change.

HOW DO WE PROTECT OURSELVES

So how can we navigate this minefield of health information?

The first step is to avoid relying solely on social media for health advice.

When confronted with dubious claims, speak to your doctor, scrutinise the credentials of the source, or even consult reputable health organisations to determine if the claims are valid.

While this might seem troublesome, it's worth the extra effort, especially if you are considering changing your behaviour on the basis of such claims.

Sharing health information also comes with a responsibility.

When encountering health claims, we should exercise caution before sharing, forwarding or reposting. Mindless

sharing can perpetuate the spread of misinformation, especially since people often trust information more when it comes from friends or familiar contacts.

This trust can lead to inaccurate or misleading health advice getting rapidly disseminated, causing unnecessary panic or harmful behaviours.

By being discerning about what we propagate, we can help prevent misinformation being spread in our social networks.

We should also be especially vigilant when the health claims touch on an issue we are

particularly sensitive to or concerned about.

In such cases, there is a heightened risk of falling for sensationalised or exaggerated claims that align with our fears or beliefs.

This emotional response can cloud judgment, making it easier to accept misinformation without evaluating it critically.

To counter this, individuals should pause, take a step back, and assess the information objectively, seeking out credible sources and expert opinions. By recognising this susceptibility, we can avoid being swayed by

emotionally charged claims and make more informed decisions that affect our health.

NEW REALITY OF INFORMATION OVERLOAD

In today's digital age, we are inundated with an overwhelming amount of information where misinformation and facts often intermingle, creating a confusing landscape.

As a result of this information overload, people are becoming less discerning, easily swayed by misleading claims and, paradoxically, more sceptical of

legitimate information.

When the constant barrage of sensationalised health claims desensitises the public to genuine health crises, much like the parable of the boy who cried wolf, we must be concerned how deeply misinformation has permeated every part of society.

Let's be clear, fake information on health issues can harm and kill.

It is time that we, as individuals and as a society, act to combat the spread of health misinformation to protect public well-being and ensure informed decision-making for all.

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