



GIBRALTAR REGULATORY
AUTHORITY

5G & Health Misinformation Amid Covid-19

Report

12th June 2020

FOREWORD

This report aims to counteract the fake news stories surrounding the dangers of 5G technology and its links to the coronavirus, spreading online on social media platforms, despite the lack of any scientific evidence.

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1. 5G AND CORONAVIRUS:

Public Health England have said “there should be no consequences for public health” with the addition of 5G networks, and independent fact-checking charity Full Fact concluded “there is no evidence that 5G WiFi networks are linked to the new coronavirus.”¹

Earlier this year, Covid-19, the disease caused by the coronavirus, began spreading from China to the rest of the world. As Covid-19 spread, so did a misinformation campaign linking the virus to 5G technology. The claims are likely to have gained momentum following comments made by a Doctor in Belgium, saying he believed 5G was ‘life-threatening’ and connected to the coronavirus, while also stating he had ‘not done a fact-check.’²

In the UK, for example, the conspiracy theories around 5G began in 2019, before the spread of Covid-19. People believed that the recent roll out of 5G masts around the UK caused harm to people living in those areas. In 2018, there were also claims that a 5G test in the Netherlands resulted in the death of 297 birds. The fact was there were no 5G tests in the Hague in October 2018 and it had nothing to do with 5G. According to Full Fact, ‘mass starling death is not unheard of’.³

Conspiracy theories in relation to 5G and Covid-19 continued to gain popularity in social media with celebrities sharing misinformation to their millions of followers online on Twitter and Instagram. Researchers in the BBC began tracking the misinformation campaign in the UK and realised there were over 200 public groups on social media interested in 5G conspiracy theories with 1.6 million posts shared. The misinformation was tracked outside the UK and had been translated and shared in over 150 different countries.

The real problem began in early April 2020 when the sharing of misinformation on 5G had real world consequences. During the Covid-19 lockdown, arson attacks on masts were becoming a regular occurrence within Europe, with 90 masts targeted in the UK and 30 masts in Holland. The motivating factors contributing to these attacks were the false stories circulating online linking 5G to Covid-19 and others suggesting the pandemic is a hoax devised to give the government greater control of the population using mobile phone technology.

¹ <https://www.bbc.co.uk/bitesize/articles/zbw492p>

² <https://www.wired.co.uk/article/5g-coronavirus-conspiracy-theory>

³ <https://fullfact.org/online/5g-and-coronavirus-conspiracy-theories-came/>

2. WHY ARE FAKE STORIES ONLINE STILL SPREADING ABOUT 5G, AND WHAT IS IT ABOUT THESE STORIES THAT'S FAKE?

We live in an era where misinformation can spread faster than ever before. A simple instant text message on your mobile device can be forwarded and shared amongst hundreds of users in a few minutes. Without the correct factual checks many people can spread fake news at a viral level instantaneously and accidentally. All informative sources you share should be backed by scientific evidence and reliable sources. Failure to do so could result in more harm than good.

Social media companies have started to take some action to prevent these claims from spreading. YouTube is removing videos that promote false stories linking 5G to the spread of the coronavirus, while WhatsApp are limiting how many times a popular message can be forwarded.

There are many online videos created by professional conspiracy theorists and self-proclaimed science experts which produce very concise theories backed with maps and graphs to help push their agenda. This creates a space for conspiracy theorists to misinform the public with their opinions which are not based on fact. Celebrity involvement on social media proves to be another issue as their influence and exposure can surpass even that of scientific informative pages. This particularly targets the younger generation which make up a large portion of the demographic involved in spreading misinformation.

The British Broadcasting Corporation (BBC) and the Office of Communications (OFCOM- the communications regulator in the UK) have also been attempting to counteract the harmful information online by publishing factually correct and scientifically based information to counteract the false claims linking 5G to Covid-19.

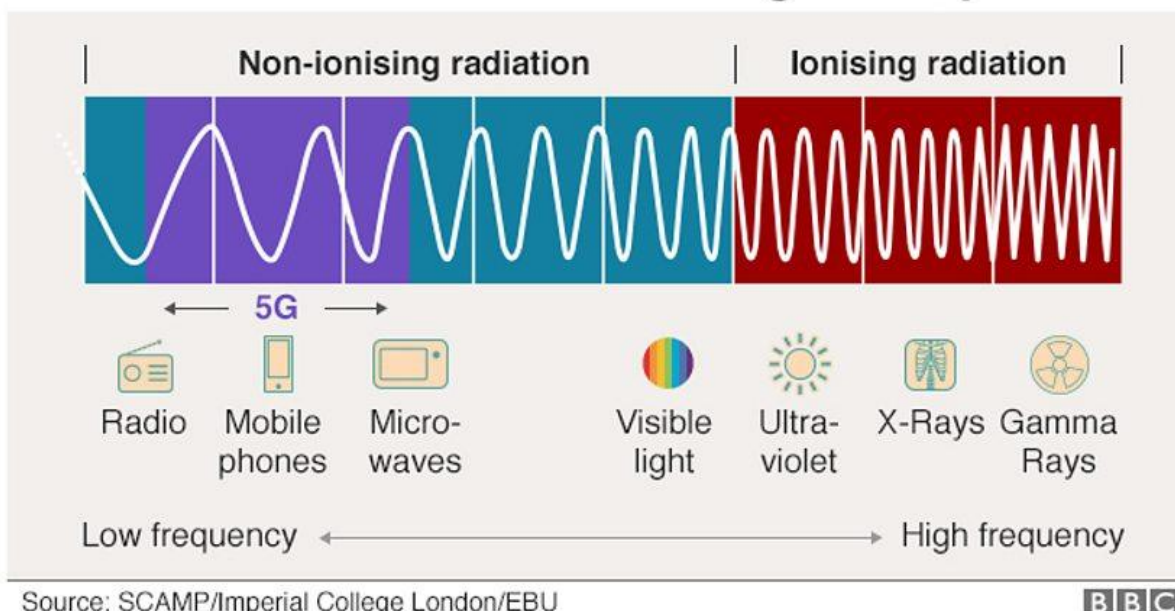
However, even with these measures, the misinformation out there is still strong and is therefore having real world consequences. Reports of fires at masts (that carry 5G signals) across the UK and other acts of vandalism show the problems of believing false stories. These attacks have affected people's ability to call emergency services and contact friends and family.

3. WHY IS IT FAKE NEWS?

The facts are as follows; 5G utilizes radio waves to transmit its mobile data from a base station to the user's device in the same manner that 3G & 4G technologies do. 5G operates at the lower end of the non-ionizing electromagnetic spectrum, meaning it does not have the power to ionize atoms or molecules and can therefore do no damage.

Frequencies at the higher end of the spectrum can be harmful to humans, such as x-rays or ultra-violet light. However, 5G is well below this level, with measurements showing it is 66 times below the safety limit for harmful radiation set by international guidelines.

Where 5G fits in the electromagnetic spectrum



ICNIRP (International Commission on Non-Ionizing Radiation Protection) is the international body which sets the standards and guidelines for the use of electromagnetic fields and radiation.

ICNIRP is a Not-For-Profit, Non-Government Organisation with official relations to the World Health Organisation (WHO) and the International Labour Organisation which aims to combat false information with scientific based evidence on limiting exposure to non-ionizing radiation which includes electromagnetic fields relevant to 5G.

5G Safety can be ensured by following the ICNIRP Guidelines for limiting exposure to electromagnetic fields specifically between the frequencies of 100kHz to 300GHz, provided exposure from 5G devices complies with the guidelines.

Restriction values are determined by the lowest power which could cause harm. No matter what type of effect is caused, if any is caused, it is harm. If an effect is caused it requires restrictions. For e.g. 4W/kg can cause an increase of 1°C to the body's core temperature, therefore if we apply reduction factors to the exposure threshold and reduce 4W/kg by a factor of 50 and set the public exposure restriction to 0.08W/kg we can ensure that it is too low to cause any detectable changes on body temperature. 4W is used as a maximum for full body exposure, the general public will only be allowed 0.08W/kg maximum. OFCOM act with the Public Health Authority in the United Kingdom and they follow the rules and guidelines set by ICNIRP and comply with Electromagnetic Field Measurements (EMF). Audits are also conducted, and factual information is published in the same manner as we do here in Gibraltar. All measurements which have been taken are well below the safe marker guidelines.

False theories linking 5G to Covid-19 usually come in two varieties. The theories claim that 5G weakens the immune system, making us more vulnerable to catching the virus and that the virus can be transmitted through 5G networks.

In relation to the first misinformation statement, it is already clear why scientists believe 5G is not strong enough to harm our cells or have a negative impact on our immune system. There is no reliable pattern of results which would indicate that 5G has any influence on the immune system whatsoever. The second theory can be explained easily as Covid-19 is a virus that is able to spread by passing from those infected with it to the rest of the population, through coughing, sneezing and close contact. The electromagnetic waves that help carry 5G are completely different to viruses, and there is no way they could spread a virus as it is physically impossible.

In addition, Wuhan, where Covid-19 first appeared in China, was one of the first places in the country to test 5G technology, and some have erroneously linked the two separate events. However, countries without 5G, such as Iran, have reported huge numbers of coronavirus cases. There are also several areas in the UK without 5G coverage that have cases of coronavirus, so this theory has no substance as some have mistakenly thought.

4. RELIABLE SOURCES.

Coronavirus can spread easily but we can all do our bit to protect ourselves as well as others. For trusted information, go to a reliable source such as:

- **The World Health Organization - WHO** - <https://www.who.int/>
- **Public Health England** - <https://www.gov.uk/government/organisations/public-health-england>
- **NHS** - <https://www.nhs.uk/>
- **BBC Reality Check** - https://www.bbc.com/news/reality_check
- **INTERNATIONAL COMMISSION ON NON-IONIZING RADIATION PROTECTION - ICNIRP** - <https://www.icnirp.org/>
- **Public Health Gibraltar** - <https://healthygibraltar.org/>
- **Gibraltar Broadcasting Corporation - GBC** - <https://www.gbc.gi/>
- **HM Government of Gibraltar** - <https://www.gibraltar.gov.gi/>

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