



AMTA

Australian Mobile
Telecommunications
Association

EME Update

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Foreword

Welcome to the July edition of AMTA’s EME Update.

This issue covers a wide area of EME topics including the outcome of long-awaited research studies from the WHO on the health effects of EME, the work underway to develop technical safety standards for 6G, and updates on public information and education in relation to EME.



Louise Hyland, AMTA CEO

The WHO is nearing the completion of its review of the latest research on the health effects of EME. The review seeks to combine the research from hundreds of studies from around the world to arrive at the best possible conclusions on the current state of the science in this important area of public interest. The outcomes of the review will inform governments, regulators and standards bodies to ensure safety standards and their implementation remain up to date with the latest technologies. This will allow the public to retain confidence in the safety of mobile phones and their networks which have become so crucial to our lives. This EME Update reports on the latest findings of the WHO review and commentary from authorities around the world so far.

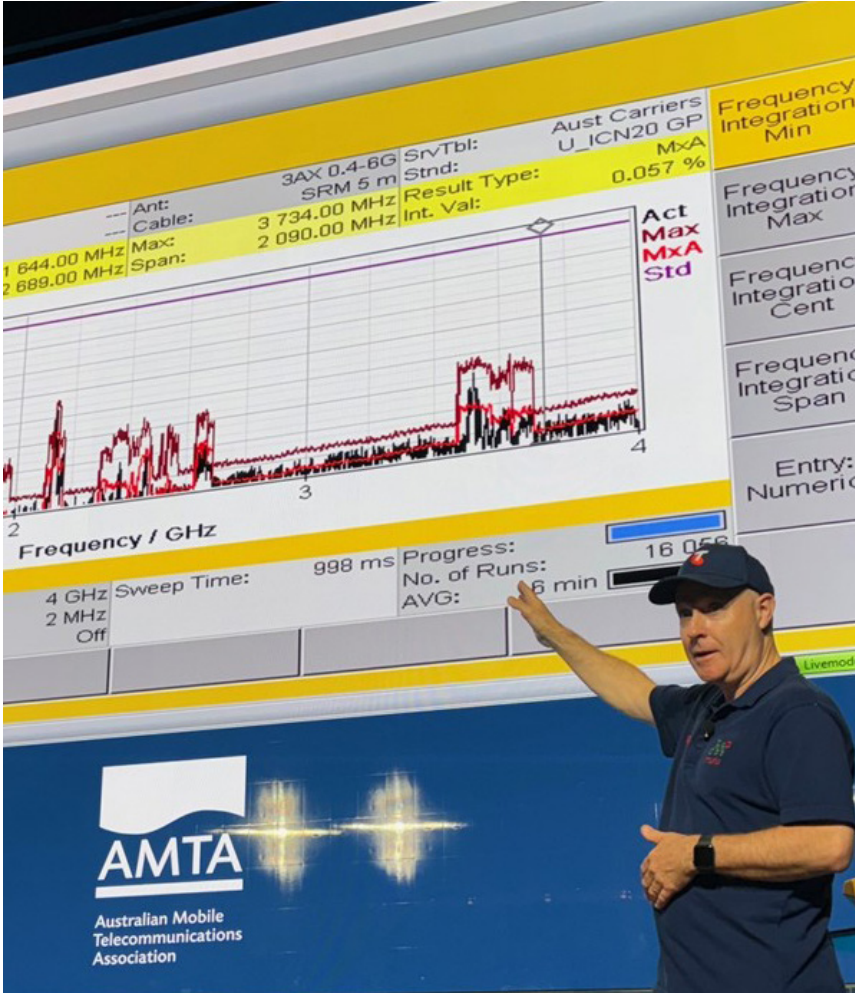
As mobile technologies evolve faster than ever, we see 6G emerging on the technology roadmap as an evolution building on the existing 5G and 4G technologies. 6G plans to use new midband radio frequencies from 4-15GHz. Combined with the existing mobile frequencies, so for consumers this will make coverage better and be able to integrate satellite networks. It will also enable more secure and reliable networks with higher capacity.

6G will also be important to industry in the form of facilitating IoT and AI applications, bringing efficiency in operations, security and sustainability. It is important that technical standards, governing the safety of these new technologies, also evolve to ensure EME exposure from new devices is understood, is properly measured and assessed, and safety limits are implemented in a robust and effective manner. Australian researchers and technical specialists have been at the forefront of undertaking this important role, testing new applications of assessment methods against the latest technologies, and exploring new ways of understanding the potential impacts of EME on the safety of the public. The importance of applying the appropriate methods using expert knowledge and specialist equipment is emphasised by ARPANSA and other authorities. This casts doubt on the use of cheap EME meters from the internet by inexperienced operators prone to producing erroneous results. Those results conflict with government audits and those produced by the industry using accredited RF assessors as stipulated by the industry code and safety regulators.

While experts work tirelessly on the technical aspects of EME safety, it is important that clear and transparent information is accessible to the public, particularly when new technology infrastructure is deployed in their local area. The government and regulators have been meeting this need with the launch of updated information portals and the ACMA's EME checker tool. The ACMA's tool continues to expand the number, location and technology types included in the database of mobile sites which have been independently measured and compared to EME safety standards. In addition, the industry has worked with local government, consumer groups and the ACMA, to produce an updated industry code for mobile base station deployment. The updated code now has substantially clearer, simpler and more accessible information about mobile base station deployment in local areas.

This edition of AMTA's EME Update explores all these issues, along with a roundup of ongoing reviews from around the world which continue to provide confidence in the safety of mobile technology.

We hope you enjoy this latest edition of the Update, and we welcome your comments and feedback.



Mike Wood (Telstra), Chair of the AMTA Health and Safety Committee, 2024 EME Symposium.

WHO nears the conclusion of its long running review of possible EME health effects



WHO review of possible health effects from EME

In a program running over many years, the World Health Organization (WHO) has been conducting a wide-ranging review of all the published scientific research on the potential health effects of exposure to electromagnetic energy (EME) from mobile phone technology and other radiofrequency (RF) devices and infrastructure. These findings, taken together with other evidence, are expected to be published in a formal document known as an Environmental Health Criteria Monograph (EHC).

One input to the work of the WHO Task Group on radio wave EME and health is a series of WHO commissioned systematic reviews addressing priority health outcomes.

Systematic reviews provide transparency

Systematic reviews provide a structured approach to assessing scientific evidence. The detailed methods are published in a protocol before the studies are collected and analysed. This provides transparency and limits opportunities for cherry-picking data – selecting only studies that support a particular point of view. An additional strength of systematic reviews is the potential to combine the results of individual studies to form a larger and more statistically significant body of data (known as meta-analysis). This is not always possible as it depends on the quality and uniformity of the studies being reviewed.

The WHO commissioned systematic reviews considered research on a wide range of potential health effects utilising studies undertaken in laboratories on cells, animals and humans, and studies on human populations in the real-world environment (epidemiology studies). The health effects considered included cancer, reproduction and fertility, cognitive effects, subjective symptoms (hypersensitivity or EHS), and direct impacts on cellular functions such as oxidative stress.

The protocols and the resulting systematic reviews for the WHO EME Task Group are published in the journal [Environment International](#).

Australian experts

Each of the review groups were selected by the WHO after an open call for proposals commencing in 2019. Australian experts led or contributed to the systematic reviews for cancer (epidemiology and animal) and cognition (epidemiology).

In addition, **ARPANSA** research scientist Associate Professor Sarah Loughran is a member of the 20-person WHO Task Group on Radiofrequency Fields and Health Risks.

The systematic review outcomes and a WHO Scoping Report on other health outcomes will contribute to finalisation of the WHO Task Group work which is expected by the end of 2025 leading to the EHC publication in 2026. The WHO provided an update at the GSMA EMF Forum 2024, and a recording is [available](#).

Systematic reviews of EME and cancer

Two eagerly awaited WHO commissioned systematic reviews addressed the topic of EME exposure and potential cancer outcomes in both human and animal studies.

Epidemiological evidence

The review of epidemiological (human observational) studies of radio wave EME and cancer was published in two parts due to the large volume of data to be evaluated. The larger body of evidence related to studies of mobile phone use and cancers of the head, plus studies of base stations and certain childhood cancers. Utilising this larger research base, the researchers concluded that mobile phone use *'likely does not increase the risk of brain cancer'* and that base station exposure *'likely does not increase the risk of childhood cancer.'* This systematic review included a meta-analysis that provided more statistically certain conclusions.



For some cancers and worker exposures there were fewer quality studies which reduced the certainty of the conclusions. Meta-analyses were again conducted but heterogeneity (differences) between studies made these less useful. Nonetheless, ARPANSA scientist Associate Professor Ken Karipidis, who lead the review, **said** that the outcome means that *'we can be more confident that exposure to radio waves from wireless technology is not a human health hazard.'* The second review focussed on less studied outcomes and came to a similar **conclusion**.

Animal evidence

Conversely, the review of animal studies of cancer and EME exposures conducted by different researchers unexpectedly found evidence for increases in tumours of the heart and brain, but mainly in only two of 52 studies that satisfied inclusion criteria. Some of the EME levels in the included studies were also above those allowed by standards and would not be experienced in real world environments.

An assessment by **ARPANSA** concludes that *'no new results are presented by the review and therefore no reasons for policy revisions.'*

'This systematic review on laboratory animals does not change the assessment of ARPANSA that there is no substantiated evidence of health effects from RF-EMF exposure below the ARPANSA safety limits.'

This is because ARPANSA was critical of the reliance on two studies (NTP and Ramazzini institute) with many 'methodological failures [that] were not adequately considered,' such as longer lifespans of EME exposed animals; unexplained differences between male and female animals; the possibility of chance statistical associations; and large differences in exposure levels.

ARPANSA also comment that by the selective emphasis on only two studies the authors were *'...ultimately defeating the purpose of conducting a review...'*

Additionally, the systematic review authors did not conduct a meta-analysis, and ARPANSA notes that *'... in another recent systematic review on cancer in laboratory animals conducted by Pinto et al. (2023), a meta-analysis was performed. The Pinto et al systematic review found that there was low or inadequate evidence for an association between RF-EMF exposure and the onset of tumours of any type.'*

ARPANSA points to the absence of evidence for a cancer risk in their own WHO commissioned epidemiological reviews because such studies *'are higher in the evidence hierarchy compared to animal studies as they provide more direct and relevant information about human health and disease.'*

The German **Federal Office for Radiation Protection** also reviewed the new findings and described the animal evidence review approach as *'problematic'* because it was sufficient for the reviewers if a cancer risk was shown in one study even if other studies of equal quality showed no effect. This meant that *'the totality of the results contributing to the evidence is not taken into account, but only selected results.'*

The German authorities concluded that results of the review *'do not provide a sufficient basis to justify moderate or strong evidence for a relationship between the occurrence of cancer and high-frequency electromagnetic fields, when quality, consistency, coherence and plausibility criteria are taken into account.'*

Systematic reviews of EME and other health effects



Over the course of the past 12 months additional WHO commissioned systematic reviews of other possible health effects from exposure to EME were released and are summarised below. All the systematic reviews will contribute to the WHO EME Task Group's final report.

Reproduction

The possibility of EME effects on male and female reproduction were investigated in four systematic reviews covering human, animal and cell studies. The reviews identified evidence of adverse effects at high EME levels that were likely to have caused by heating, a known reproductive risk factor. The studies indicated no impacts of phone use (or carrying in trouser pocket) on parameters linked to male fertility. Overall, the quality of studies limited the certainty of conclusions, and more research was recommended.

Cognitive function

Examination of the evidence for EME impacts on cognitive (thinking and memory) function was split between human observational and controlled laboratory studies. There were few of the former studies that satisfied inclusion criteria making the conclusions uncertain. However, 76 laboratory studies with 3,846 participants provided '*mostly moderate to high certainty of evidence*' that EME exposures below limits do not negatively impact cognition.

Subjective symptoms

Some people report a variety of symptoms that they attribute to EME and may report themselves as suffering from electrohypersensitivity (EHS).

Research on EME and symptoms (such as headaches and tinnitus) were reviewed separately for observational and laboratory studies. The observational studies included one European cohort with over 485,000 people and overall showed no link between EME levels below limits and symptoms. However, the conclusion was very uncertain due to limitations such as studies often relying on participant self-reporting of symptoms and exposure.

The human experimental studies with a total of 2,874 participants were clearer and suggested that acute EME exposures below limits *'does not cause symptoms and corresponding claims in the everyday life are related to perceived and not to real EMF exposure status.'* The authors add that EHS claims are *'better explained with the placebo or the attribution hypothesis'* (that sufferers' experience symptoms because they believe they have been exposed to EME, and they believe such exposure is harmful (when in fact neither may be the case)).

Oxidative stress

Oxidative stress refers to an imbalance between the production and elimination of certain molecules that are products of cell metabolism. It naturally occurs during activities such as exercise, but excessive levels are associated with disease. Scientists debate whether oxidative stress is a cause or an indicator of disease. In recent years, some researchers have suggested oxidative stress as a possible mechanism for effects of low-level EME exposure.

The WHO commissioned systematic review found that *'the evidence for or against a relation between RF-EMF and biomarkers of oxidative stress is overall of very low certainty.'* The reviewers noted inconsistent study results and that many of the studies did not use valid biomarkers. They called for *'drastic improvements'* in study quality to improve the confidence of future reviews.

The oxidative stress review was led by the German Federal Office for Radiation Protection, and President Inge Paulini **commented** that the result showed that there is *'no reliable evidence from the scientific literature for the widely discussed influence of mobile phone radiation on oxidative stress.'*

Government and industry improve information for communities



The revised deployment code delivers better information and improved consultation about mobile phone base station proposals.

Mobile Phone Base Station Deployment Code

The mandatory industry Mobile Phone Base Station Deployment Code sets out the requirements for mobile network providers to engage with local communities and councils on the site selection, design and operation of mobile phone base stations. The code, regulated by the ACMA, fits within a wider regulatory regime of Commonwealth, State, Territory and Local Government laws and regulations.

The Code has been in place and operating successfully since 2002, and the **2025 update** aligns the provision of information with changes in technology to better reflect how Council's and community members access information. It also reflects the adoption by **ARPANSA** of updated EME limits which are set, as a precaution, well within the levels at which scientific research has shown no harmful effects occur.

A Communications Alliance working group including representatives from industry, consumers (ACCAN) and local government (ALGA) updated the Code. The Code was given legal effect through registration by the Australian Communications and Media Authority (ACMA) on 19 March 2025. Past **ACMA** audits have found high levels of carrier compliance with Code provisions.

Maximum predicted EME

The Code retains the requirement for network operators to provide the maximum predicted levels of EME around new or upgraded mobile sites in the format of an Environmental EME Report.

In consultation with government, consumers and the mobile industry the Australian Radiation Protection and Nuclear Safety Agency (**ARPANSA**) simplified the template for producing the EME reports in 2024 *'to focus on the information most relevant to consumers, such as the maximum possible exposure as a percentage of allowable safety limits.'*

The EME report provides the predicted maximum EME level from mobile network technologies within 500 m of the site and at specific areas of interest (if any exist). The calculation assumes that all planned transmitters are installed and operating at maximum power. It is intended to provide an estimate of the maximum EME levels. **ACMA** checks in 2021 at 129 sites show that the predicted levels were always higher than the measured values. The **ACMA** has now made more than 600 measurements in Victoria, New South Wales, Queensland, Western Australia and South Australia, and more than 120 sites have been measured more than once. All of the ACMA audit results are available on **EME Checker**.

The Environmental EME Report explains that *'EME levels below 100% comply with the Australian Safety Standard and are safe for the public.'*

Federal department information on EME safety

The Federal government Department of Infrastructure, Transport, Regional Development, Communications and the Arts produces a range of resources providing information on the research, regulation and safety of EME from telecommunications.

These resources include easy to understand factsheets, posters, stakeholder toolkits, videos and articles in English as well as translated resources in the ten most spoken languages in Australia. Among the resources is a video suite featuring Dr Karl explaining the safety of EME.

In 2024 the Department expanded the resource library to include information on the need for wireless connectivity in local communities to help address awareness gaps on why telecommunications infrastructure needs to be close to the area it's intended to service.

Enhanced EME stakeholder communications toolkit

The enhanced EME stakeholder toolkit is provided by the Department to help the community to reinforce that modern technologies are a safe, and an essential part of everyday life in an increasingly digital world. It includes resources that can be used when speaking to residents, customers and others.

All the resources are available from www.eme.gov.au

Low cost EME meters deliver poor results

Accurate measurements depend on the quality and calibration of the meter, plus the technical knowledge of the person undertaking the measurements.

Cheap EME meters

There are many low cost EME meters available on the Internet that claim to measure exposure from single frequency sources (for example, microwave ovens) or a range of frequencies. The latter are often broadband (operate over a wide range of frequencies) and can't separate the contribution from different transmitters.

In 2023, experts from the Polish Institute of Communications - National Research Institute investigated the performance of a low-cost EME meter and found that it overestimated levels, lacked repeatability and was susceptible to interference from other sources, such as the piezoelectric igniter of a gas cooker.

Specialised EME equipment

The EME levels from base stations, broadcast transmitters and Wi-Fi access points in publicly accessible areas are generally a very small fraction of public exposure limits. **ARPANSA** explains that measurements are typically undertaken with sensitive meters called spectrum analysers that can quantify the contributions from different transmitters. These instruments are expensive, usually operated by technical experts and require regular calibration to ensure accuracy.

Accredited EME assessors

The National Association of Testing Authorities (NATA) accredits organizations that undertake measurements or modelling of environmental or occupational EME exposure. **NATA** accreditation independently ensures the technical competence and capability of organizations providing EME assessments. For this reason, the Mobile Phone Base Station Deployment Code requires that EME site compliance certificates are prepared by an independent NATA accredited assessor.

Smartphone apps

Greek scientists investigated the potential for smartphone apps to collect information on EME levels. They found that smartphone-based approaches can provide general indications of the EME levels from 4G mobile networks. However, there are significant accuracy limitations including that only the connected network is measured and there is no information on other transmitters, such as broadcast TV and radio.



5G evolution covered by safety standards



Continued 5G evolution

5G-Advanced is the next stage of the 5G technology journey and provides for enhanced coverage, more efficient network operation and advanced applications such as extended reality (XR) and non-smartphone devices. 5G-Advanced is also a bridge to 6G, which is expected to launch in the 2030's following completion of standardization activities.

The World Radio Congress in 2023 reserved spectrum in the 6 GHz band for use by mobile services. It also identified potential future spectrum at 7-8 GHz and 14 GHz to continue to meet the data demands of mobile subscribers. Telstra recently undertook EME measurements at a test site operating at 6 GHz and found similar levels to 5G when tested under high load. All the proposed 5G and 6G frequencies are covered by the ARPANSA EME standard that provides limits to protect workers and the public.

Higher frequencies allow the use of advanced antennas that direct EME more efficiently delivering higher data rates and reductions in average levels as shown by modelling studies. Technical standards for EME assessments are keeping pace with mobile technology evolution.

4G/5G waveform differences 'unlikely' to be biologically significant

The method of radio frequency energy transmission in 5G is 'essentially a refinement of 4G' and 'it seems unlikely that modulation-dependent differences ... would be biologically significant,' according to an analysis by EME experts from the UK and the USA published in [Health Physics](#). 5G achieves higher data rates through greater bandwidths and more efficient coding of information. The authors point out that many of the frequencies used by 5G are similar to those of 4G, except for millimetre wave (mmWave) frequencies, which can be used in specific high-capacity locations such as sporting stadiums.

EME low with 60,000 at the MCG

Typical EME levels remain low even in high data traffic locations. The maximum EME level measured by [ACMA](#) at the Melbourne Cricket Ground during a game with over 63,000 spectators was 50 times below the Australian safety limit. [ACMA](#) also undertook measurements of 90 publicly accessible 5G mmWave sites and reported beamformed EME levels to be at least 10-times lower than the main 5G frequency band. These and other measurements are available via the [ACMA EME Checker](#).

Safety standards meet the challenge of the evolution to 6G

6G is the next generation of mobile technologies which is currently under development within the international standards organization [3GPP](#), which has just commenced the process of defining the initial 6G technical requirements, including feasibility studies. 6G plans to use new midband radio frequencies from 4-15GHz. Combined with the existing mobile frequencies, 6G will improve coverage and performance, and be able to integrate satellite networks. 6G will offer key benefits in security, reliability and will facilitate AI and the Internet of Things (IoT). Other benefits include more precise location and sensor positioning (1-10cm) as well as greater energy efficiency and sustainability.

An important consideration for the public is that EME safety standards remain adequate for this new evolution of mobile technology. Recent work in Australia and overseas in association with the international standards body, the IEC ([What is 6G and are we ready for it?](#)) and Australia's own [Standards Australia](#) technical committees, has successfully trialled new testing methods for 6G in the updated EME assessment standard [IEC 62232:2025](#), in which Australian experts have taken a lead role to ensure standards remain robust, relevant and effective for emerging technologies.

Australia leads in EME research

Poor quality studies more likely to report EME effects

The question of whether environmental EME could negatively impact flora (plants) or fauna (animals) was the subject of an analysis by scientists from **ARPANSA**. A key finding was that good quality studies are unlikely to show EME effects. ARPANSA Health Impact Exposure Assessment Assistant Director Associate Professor Ken Karipidis commented *‘the findings indicate that there is no substantiated evidence that radio wave exposure below safety limits adversely affect plants and animals.’*

Smart home EME tool uses Aussie data

Australian measurements of EME levels from commonly used domestic wireless devices was used to develop a web-tool that estimates EME levels in smart-connected-homes. The **RF Estimator** tool was produced by the Mobile & Wireless Forum (MWF), an international industry association, based on published **data** for measurements conducted under laboratory conditions in Melbourne and in a sample of homes in Queensland, New South Wales and Victoria. In total 55 devices across 12 categories were measured. The tool demonstrates that in a smart home the actual EME levels from multiple operating wireless devices remain a small fraction of limits for the public.

Improved understanding of EME exposure

The only established health relevant effect of EME exposure at levels well above the safety limits is **increased body temperature**. A research group lead by the University of Wollongong is investigating temperature effects in animal studies to improve understanding of EME exposure.

Reverberation chamber used in University of Wollongong studies

Using a Melbourne **designed** and built reverberation chamber (a closed metal box with remotely operated transmitters) mice were exposed at different EME levels. The highest level was more than 10-times the worker whole-body limit in the Australia standard. An implanted capsule tracked the temperature of each mouse during the experiments.

The study showed that just moving the mice from their home cage to the inactive chamber resulted in a temperature increase of about 3°C that returned to baseline over an hour. By comparison, radio wave exposure caused at most a 0.4°C temperature increase. The mice were mostly able to compensate for the extra radio wave heating except at the highest exposure level. The results will inform the design of follow-up studies.

In addition to the University of Wollongong the research group included experts from Swinburne University and Telstra.

EME levy renewed

ACMA renewed the EME component of the spectrum licence tax payable in 2024-2025 with the expectation that this will raise about \$2 million. ACMA says that this money is to cover costs related to the Australian Government’s EME program. The mobile carriers contribute the bulk of the levy funds.



Experts confirm continued EME safety

Expert groups from Belgium, France, Spain and Sweden find no new evidence of health risks due to low-level EME exposures but continue to emphasise the need for quality research.



Belgium: Brussels expert committee

The Brussels Committee of Experts recognises the ‘*unprecedented opportunities*’ offered by 5G and notes that the scientific consensus generally supports the ‘*safety of 5G according to existing guidelines*.’ As 5G evolves they call for ‘*continued research, transparent communication, and adaptive regulatory frameworks*.’ The 2024 [report](#) also includes clarifications on the implementation of the increased EME limits in the Brussels region, see the EME Roundup section of this issue.

France: Cancer risk ‘uncertain’

A draft expert report from [ANSES](#), the French Agency for Food, Environmental and Occupational Health & Safety, on EME exposure and cancer concluded that ‘*the available data do not allow a conclusion to be drawn as to the existence or absence of carcinogenic effects*.’ A public consultation closed on 25 November and the final report is now awaited.

Italy: EME does not damage DNA

The Italian Workers’ Compensation Authority (INAIL) commissioned scientists from the Italian National Research Council and the National Institute of Health to conduct a systematic review of mammalian cell studies investigating whether EME can cause genetic damage. Based on [analysis](#) of 159 eligible papers describing 1,111 experiments the authors concluded that EME does not increase genetic damage.

Spain: No proven ‘significant health risks’

The Scientific Advisory Committee on Radiofrequencies and Health ([CCARS](#) in Spanish) report covers 2020 to 2022 and concludes that there is no proven link between EME exposure and significant health risks ‘*provided that the regulations and recommendations of the institutions with competence in the matter (WHO, EU, ICNIRP...) are respected*.’ CCARS warns that ‘*when issuing preventive or precautionary recommendations, it is important to consider that these may increase the perception of risk*.’ An associated article in [The Conversation](#) highlights five points about 5G safety.

Sweden: No reason to change EME limits

The Swedish Radiation Safety Authority’s Scientific Council on Electromagnetic Fields published its 19th report in April 2025. The report covers scientific publications from 2023 and concludes that ‘*the results of the research review do not provide any reason to change any reference levels or recommendations in this area*.’ The Scientific Council recommends continued research and the use of a handsfree kit when making calls even though brain cancer trends ‘*do not support an increased risk caused by exposure to mobile phone radio waves*.’

IARC defers EME review

The final report of the International Agency for Research on Cancer (IARC) Advisory Group to Recommend Priorities for evaluation reveals that while there is new evidence to support a re-evaluation of radio wave EME, the possibility of a change is *'uncertain.'*

According to the **Advisory Group**, while there is new evidence linking EME to increased cancer risk from animal studies (see the earlier commentary on the WHO systematic reviews), the evidence from epidemiology is *'mixed'* and the available mechanistic evidence *'may be inconclusive.'*

Similar to the previous period, the Advisory Group recommends delaying any re-evaluation until the second half of the 2025–2029 period to await the results of ongoing studies.

The IARC Advisory Group met from 19–22 March 2024 and considered 216 agents.

Cancer risk 'less likely'

The 2011 INTERPHONE study was important to the present IARC classification of radio wave EME as category 2B – possible human carcinogen. INTERPHONE showed reduced risk for glioma (a type of brain cancer) among moderate phone use and an increased risk in only the highest user group. **IARC researchers** used simulations to investigate this risk profile and found that it could be explained by errors in reported phone use in the brain tumour cases. Validation studies for both INTERPHONE and **MOBI-Kids** that compared reported phone use to billing records provide support for this explanation.

The IARC authors say that *'some uncertainty remains but the evidence from the present simulation study shifts the overall assessment to making it less likely that heavy mobile phone use is causally related to an increased glioma risk.'*

5G risk assessment

In October 2025, IARC will lead a risk assessment of 5G EME, with a particular focus on millimetre waves, under the umbrella of the European Commission supported **SEAWave** project.



EME roundup

Europe: Time to update limits

The European Commission Scientific Committee on Health, Environmental and Emerging Risks (**SCHEER**) ‘*could not identify any moderate or strong level of evidence for adverse health effects resulting from chronic or acute RF EMF exposure from existing technology*’ for EME below the current public exposure limits. However, SCHEER recommends that ‘*technical revision*’ should occur to update the European recommendation for public EME limits following publication of the ICNIRP (2020) guidelines.

In the European Union (EU) public EME limits are in the legal remit of members states, and some have already adopted



EME limits increase in India and Italy

The *Economic Times* reports that India increased EME limits to 50% of the international guidelines effective from 1 February 2025. The revised limits will allow operators to provide services to a wider area with fewer sites. The previous limits were 10% of the international guidelines.

In Italy, EME limits increased from 0.1 to 0.6 W/m² (the international limit is up to 10 W/m²) with effect from 29 April 2024. Business Minister Adolfo Urso said that the change ‘*will improve mobile connectivity, guaranteeing a higher quality of services for citizens*.’ However, the continued restriction means that operators will have to share the new limit to avoid ‘*saturation*’ of the EME capacity at sites. Operator shares are linked to their spectrum holdings.

Supreme courts reject challenges to 5G

The Supreme Court in Israel and the Council of State (highest administrative court) in Greece ruled against petitions seeking to block 5G deployment for ‘*precautionary*’ reasons. Both courts found that the petitions failed to establish harm from 5G EME. The Constitutional Court of Belgium delivered a similar ruling against an attempt to block increased EME limits in Brussels designed to facilitate 5G deployment.

Switzerland: Zurich ends antenna moratorium

The Zurich City Council ended restrictions on siting of antennas on or near schools, hospitals and nursing homes because current EME limits ‘*provide sufficient protection*.’ The City Council press release notes that 96% of personal EME exposure is due to a person’s own mobile phone, so providing good mobile coverage is the best way to minimise exposure.

No 5G interference

Italian researchers concluded that 5G can be considered ‘*safe*’ for users of pacemakers and implantable cardiac devices after tests at levels higher than those allowable by EME safety standards showed no interference effects from **devices** or **base stations**. The **Royal Australian College of General Practitioners** warns that smartphones should be kept 15 cm away from implanted medical devices as the magnets in some phones may affect device functioning.

‘Telecoms for Everyone’

Councils in the city of **Dublin** (Ireland) jointly launched the *Telecoms for Everyone* campaign to ‘*empower residents with clear, factual information about the benefits and safety of telecoms infrastructure that supports digital connectivity in their local areas*.’ The campaign is supported by a video series and is part of the Smart Dublin initiative to enhance digital connectivity infrastructure to benefit residents.



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