I am submitting this comment in response to HHS's Request for Information on Electromagnetic Fields (EMFs), Radio frequency (RF) Radiation, and Wireless Radiation Exposure.

2. I am responding from the perspective of a family member and caregiver who takes care of a family member that suffers from EMF radiation.

3,a Exposure to Wireless telecommunication facilities

b. Exposure to 3G and 4G towers 24/7.

c. Immediate loss of sleep, muscle tensions, headaches, extreme nervousness, loss of balance, loss of sense of being herself, chronic stress and high level of anxiety

d. My family member started showing the symptoms above immediately after the activation of a 4G tower 2.5 miles away.

f. we initially found a place near a river with no phone reception or Wifi and my family member could finally discharge from the EMF load she was subjected to, to the point that after 2 to 3 hours she could say she felt herself again. Secondly we found an airbnb in an area without cell phone receptions and no wifi reaching the airbnb, my family member had to leave our existing rental in urgency and find refuge in this airbnb where she has stayed forever since as it has been increasingly difficult to find accommodations without mobile phone reception and without neighbor's wifi reaching it. Finally, a friend of ours has a wine cellar which is underground, my family member falls asleep automatically after 15 min there whereas it never happens above ground.

g. Doctors have established that my family member is a canary in the goldmine showing in advance what most of humanity will suffer in the future due to the permanent exposure to artificial EMFs from wireless telecommunication facilities with symptoms ranging from chronic stress, central nervous system disorders, depression and anxiety due to the prolonged exposure to 3G and or 4G as well as Wifi, fortunately she has not been exposed yet to 5G radiations.

Using a Trifield TF2 on RF mode, we found that my family member can find relaxation and sleep when ambiant EMF radiations is below 0.015 milliwatts per square meter (mW/m2)

Here are some studies
Radiofrequency electromagnetic felds can induce changes in the central nervous system - Possible Effects of Radiofrequency Electromagnetic Field Exposure on Central Nerve System. Jaekyung Kim,Je-Hyun Lee,Kyung-Mi Kim,H J Kim : http://www.ncbi.nlm.nih.gov/pubmed/30481957

Chronic exposure to MP-RF-EMF radiation emitted from mobile phones may induce oxidative stress, inflammatory response, and HPA axis deregulation.
Effect of mobile phone radiation on oxidative stress, inflammatory response, and contextual fear memory in Wistar rat.
http://www.ncbi.nlm.nih.gov/pubmed/32212071

Studies reporting associations between mobile-phone base stations and sleep disturbance
- Santini et al. (2002) — Investigation on the health of people living near mobile telephone relay stations: I/Incidence according to distance and sex.
  URL: https://pubmed.ncbi.nlm.nih.gov/12168254/ PubMed
- Navarro et al. (2003) — The Microwave Syndrome: A Preliminary Study in Spain.
  URL: https://doi.org/10.1081/JBC-120024625 PubMed Central (PMC)
- Abdel-Rassoul et al. (2007) — Neurobehavioral effects among inhabitants around mobile phone base stations.z
  URL: https://pubmed.ncbi.nlm.nih.gov/16962663/ PubMed
- Alazawi (2011) — Mobile Phone Base Stations Health Effects.
  URL: https://djm.uodiyala.edu.iq/index.php/djm/article/view/483 Diyala Journal of Medicine
- Gómez-Perretta et al. (2013) — Subjective symptoms related to GSM radiation from mobile phone base stations: a cross-sectional study.
  URL: https://pmc.ncbi.nlm.nih.gov/articles/PMC3885815/
- Shinjyo and Shinjyo (2014) — Significant Decrease of Clinical Symptoms after Mobile Phone Base Station Removal—An Intervention Study.
  URL: https://www.emfanalysis.com/wp-content/uploads/2015/10/Japanese-Study-2014-Significant-Decrease-of-Clinical-Symptoms-after-Mobile-Phone-Base-Station-Removal.pdf
- Amraee et al. (2021) — Correlation between Base Transceiver Station and the Quality of Sleep and Life of Nearby Residents.
  URL: https://ijmp.mums.ac.ir/article_14561.html

- López et al. (2021) — What is the radiation before 5G? A correlation study between measurements in situ and in real time and epidemiological indicators in Vallecas, Madrid.
URL: https://pubmed.ncbi.nlm.nih.gov/33434609/
- Ali et al. (2021) — Evaluation Study of Radio Frequency Radiation Effects from Cell Phone Towers on Human Health.
URL: https://link.springer.com/article/10.3103/S0735272721030055 Springer
- Pachuau et al. (2015) — Comparisons of Non specific Health Symptoms Faced by Inhabitants Exposed to High and Low Power Density from Mobile Phone Tower Radiation.
URL: https://www.researchgate.net/publication/325154227_Comparisons_of_Non_specific_Health_Symptoms_Faced_by_Inhabitants_Exposed_to_High_and_Low_Power_Density_from_Mobile_Phone_Tower_Radiation ResearchGate
- Pachuau and Pachuau (2016) — Health Effects of Mobile Tower Radiation on Human—Case Study.
URL: https://www.ijapm.org/vol6/352-ST3001.pdf

3.a Smart meters

b. Exposure when at home to smart meters – calling every 2 min the base station

c. seizures and nervousness and lack of sleep

d. my family member experiences seizures from exposure to smart meters in one of the accommodation that we had.

f. we live in Washington state and were able to ask the power company to install a non telecommunication meter, as a result the seizure subsided and stopped completely after a few days after the removal of the smart meter.

g. Using a trifield meter, we could see the smart meter generating a signal every 2 minutes, this signal was removed after the non telecommunication meter was installed. The smart meter was generating more than 11 milliwatts per square meter (mW/m2)

Lamech, F. (2014) — Self-reporting of symptom development from exposure to radiofrequency fields of wireless smart meters in Victoria, Australia: a case series.

Finding: Among 92 people who had submitted reports of symptoms attributed to smart meters, 44 people—48%—reported insomnia, sleep disturbance, or sleep disruption. Other commonly reported symptoms included headaches, tinnitus, fatigue, and cognitive difficulties.
PubMed
URL: https://pubmed.ncbi.nlm.nih.gov/25478801/

Conrad, R., and Friedman, E. (2013) — Smart Meter Health Effects Survey: Results, Analysis and Report.
Finding: This survey of 210 respondents documented reports of new or worsened insomnia, tinnitus, headaches, fatigue, concentration difficulties, and other symptoms after smart-meter installation.
URL: https://smartgridawareness.org/wp-content/uploads/2014/03/exhibit-d-smart-meter-health-effects-survey-and-report.pdf

3.a Wi-Fi

b. Expsoure to Wi-Fi when the Wi-Fi router is on by accident at home

c. we always turn off the wifi all the time, in rare occasion we sue the wifi to use our cell phones to make phone calls, if by accident we forget to turn of the wifi at night, my wife develops insomnia whereas I experience nightmares even though I am not as allergic as my wife.

In the last 4 months, we had a new neighboor that inhabitated a land that was vacant next to our land. This new neighboor started using WiFi that reached inside of our house. This led to sleep disorders and muscle tensions for my wife.

d. My family member and myself experience immediate nervousness and anxiety when exposed to Wi-fi, sleep disorders and nighmares.

f. those symptoms disappear when we turn off wi-fi. In the case of our neighbor, I discussed with him and he agreed to turned on his wifi using the the RX power setting on this router that we set to the minimum of 20%. He could still experience perfect signal in his house and his wifi router was no longer reaching our house.

g. Using a trifield meter, before the wi-fi is turned off – it reads up to 0.021 milliwatts per square meter (mW/m2) in our bedroom if we occasionally forget to

turn off the Wi-Fi.

In terms of our neighbor's wi-fi – on an iphone it was showing 2 bars of reception and none after we turned on the power of his router.

Bijlsma, N., Conduit, R., Kennedy, G., and Cohen, M. (2024) — Does radiofrequency radiation impact sleep? A double-blind, randomised, placebo-controlled, crossover pilot study.
Finding: In a randomized, double-blind crossover study involving 12 adults, participants reported significantly poorer sleep during a week of exposure to an active 2.45 GHz digital baby monitor than during sham exposure. Some sleeping EEG frequency bands also changed. Movement-based sleep measurements and heart-rate variability did not show significant differences.
URL: https://www.frontiersin.org/journals/public-health/articles/10.3389/fpubh.2024.1481537/full

Liu, L., et al. (2021) — Specific electromagnetic radiation in the wireless signal range increases wakefulness in mice.
Finding: Mice exposed repeatedly to 2.4 GHz radiation modulated by 100 Hz square pulses showed increased wakefulness and changes in sleep duration under the higher-power pulsed exposure regimen. Continuous radiation at the same time-averaged output did not produce the same effect.
ResearchGate
URL: https://doi.org/10.1073/pnas.2105838118

Çelik, Ö., Kahya, M. C., and Nazıroğlu, M. (2016) — Oxidative stress of brain and liver is increased by Wi-Fi (2.45 GHz) exposure of rats during pregnancy and the development of newborns.
Finding: The researchers reported increased oxidative stress and reduced antioxidant defenses in brain and liver tissue in their developing-rat exposure model.

PubMed
URL: https://pubmed.ncbi.nlm.nih.gov/26520617/

5.

I recommend that federal health agencies evaluate both existing U.S. exposure

limits and international approaches that incorporate additional precautionary protections. Switzerland is particularly relevant because it supplements general exposure limits with stricter installation limits at locations with sensitive uses, and assigns enforcement responsibilities to cantons and municipalities. This provides an example of national standards operating alongside meaningful local oversight.

Local counties and municipalities should be allowed to consider credible evidence of potential health effects when approving, conditioning, relocating, or denying telecommunications facilities. I request that HHS recommend amendments to 47 U.S.C. § 332(c)(7)(B)(iv) so that compliance with federal RF limits does not categorically prevent reasonable, evidence-based local public-health protections. The existing statute restricts such decisions for compliant facilities.

o.
Yes. Additional research is needed, and a central concern is the potential for the term “non-ionizing” to be interpreted as an assurance of safety rather than a description of a physical property. Non-ionizing radiation lacks the energy needed to directly ionize atoms, but that does not mean it cannot interact with biological tissue or cause harm under particular exposure conditions. Federal agencies already recognize some non-ionizing radiation hazards. Public communications should explain this distinction clearly rather than relying on the absence of ionization as a complete answer to health concerns. US EPA
I request research that evaluates whether existing RF exposure limits adequately protect against potential long-term adverse effects, including effects that might occur without a harmful increase in tissue temperature. Priorities should include prolonged residential exposure, repeated nighttime exposure, simultaneous exposure to multiple sources, and exposure during childhood and pregnancy. Research should separately examine sleep disturbance, neurological outcomes, reproductive and developmental outcomes, and cancer, without assuming in advance either that harm exists or that it is impossible.
Findings from existing research should not be dismissed solely because RF radiation is non-ionizing. For example, the National Toxicology Program reported clear evidence of an association between its experimental RF exposures and malignant heart schwannomas in male rats. These findings warrant investigation of their mechanisms and relevance to human exposure. However, the high, whole-body animal exposures should not be directly equated with ordinary exposure from telecommunications facilities or consumer devices. National Toxicology

Program Research should combine long-term prospective studies, independently replicated laboratory experiments, and blinded exposure studies where feasible. Exposure should be measured rather than inferred solely from distance or device ownership. Studies should distinguish biological changes from clinically meaningful harm, evaluate both positive and negative findings, and publish protocols, funding sources, and measurement uncertainties.
Exposure-reduction measures also need independent testing. Wired alternatives, reduced unnecessary transmissions, equipment placement, antenna configurations, and voluntary low-exposure housing should be evaluated through before-and-after measurements and, where appropriate, health and quality-of-life outcomes. Investigators should determine whether an intervention reduces total personal exposure—not simply emissions from one source—and whether it preserves reliable communications and emergency access.
Finally, HHS should explain which health endpoints each exposure limit is designed to protect against, what evidence supports that protection, what uncertainties remain, and what findings would trigger reconsideration. Counties, schools, healthcare providers, and residents need access to this information in a form that supports informed public-health decisions.

Not all electro sensitive people can afford a 5 acres property and so they should have a recourse to be able to ask their neighbors to reduce their Wi-fi to the minimal power transmission – I am not asking them to stop their wi-fi altogether but reduce it so that the signal does not reach other neighbor's property.

Best regards