

July 6, 2021.

Gina Armstrong,  
Director of Public Health,  
Pittsfield Health Department,  
70 Allen Street,  
Pittsfield, MZ 01201, U.S.A.  
[garmstrong@cityofpittsfield.org](mailto:garmstrong@cityofpittsfield.org)

## Re: Cell Phone Radiation in Pittsfield & Health Complaints

Dear Gina Armstrong.

Thank you for giving me the opportunity to respond to the monitoring conducted by V-COMM Telecommunications Engineers, dated June 15, 2021.

As I presented to the Health Department on June 2, 2021, radio frequency guidelines differ by more than 4 orders of magnitude globally. Such a wide range of guidelines is unheard of when it comes to air quality or water quality guidelines, which are relatively similar in countries around the world. The primary reason for this large discrepancy in radio frequency guidelines is that guidelines in some jurisdictions are based on science and those in others are based on politics and a strong telecommunications lobby. The least protective radio frequency guidelines are based on a heating effect of the body and are generally short-term in duration (i.e. averaged over a period of 6 to 30 minutes). The most protective guidelines are based on either *biological effects* (other than heating) and on the *precautionary principle*.

The FCC provides a short-term guideline that monitors *average* levels during a 30-minute period for exposure of the public (uncontrolled environment) and during a 6-minute period for occupational exposure (controlled environment).

As a person with expertise in public health, you should be aware that organisms respond to *extremes* rather than *averages*. If you place your hand in scalding water and then pore cold water on the hand, the average water temperature will be much lower but the damage from scalding will still be apparent.

The two levels of guidelines that the FCC recognizes is occupational and public exposure. What they fail to recognize is exposure of sensitive populations, despite the fact that they have been aware of microwave illness among radar workers since the 1950s (Glaser 1971; [https://www.magdahavas.com/wp-content/uploads/2010/06/Navy\\_Radiowave\\_Brief.pdf](https://www.magdahavas.com/wp-content/uploads/2010/06/Navy_Radiowave_Brief.pdf)). Radar, like cell phone antennas, uses microwave radiation as a carrier wave.

Dr. Paul Héroux provided a technical response to the monitoring report you received and I agree with his assessment. I'm providing the biological response of sensitive populations.

In 2004, the World Health Organization held an International Seminar and Working group meeting on EMF Hypersensitivity in Prague. At that meeting this is the definition they used for *electrohypersensitivity*: <https://www.who.int/publications/i/item/9789241594127>

*“ . . . a phenomenon where individuals experience adverse health effects while using or being in the vicinity of devices emanating electric, magnetic, or electromagnetic fields (EMFs). ”*

*“ . . . EHS is a real and sometimes a disabling problem for the affected persons . . . **Their exposures are generally several orders of magnitude under the limits in internationally accepted standards.** ”*

It is this last statement that I wish to comment on.

I have been working with people who have been harmed by exposure to electromagnetic radiation at levels well below federal guidelines. In a double-blind, placebo-controlled study, we monitored the reaction of the heart to microwave radiation and found that levels at 0.3% of federal guidelines causes a rapid and/or irregular heart rate among those who are sensitive (Havas et al. 2010; <https://bemri.org/publications/dect/341-provocation-study-using-heart-rate-variability-shows-microwave-radiation-from-2-4ghz-cordless-phone/file.html> ).

Further assessment indicates that this response is a “fight or flight” stress response with upregulation of the sympathetic nervous system and down regulation of the parasympathetic nervous system. This reaction occurs even when a person is unaware that s/he is exposed. It is a *physiological* rather than a *psychological* response. This, in combination with effects on the blood (rouleaux formation), provides a perfect storm for cardiovascular problems to arise including the potential for heart attacks and strokes (Havas 2013; <https://pubmed.ncbi.nlm.nih.gov/24192494/> ).

The function of the parasympathetic nervous system is to enable the body to rest, digest and heal. It repairs the work of the sympathetic nervous system after a stressful situation. Since the radiation from cell towers occurs 24/7, people are exposed during the day and night. Night-time exposure is particularly damaging since this is the time for the body to heal and regenerate and if the parasympathetic nervous system is down regulated healing does not take place. The more prolonged the exposure the greater the potential damage to health. Consequently, more people in your community are likely to become ill should the exposures not be reduced.

If we use the values and assess the results provided by V-Comm, they state that the “measured maximum % of FCC standard for public-uncontrolled environment in vicinity of site Pittsfield SE was **1.66%**” (page 1). This level is **5 times higher** than what our experiments document as being harmful (i.e. **0.3%**).

Indeed, if we examine the field measurements (provided in Table 2, page 7), five of the 17 values exceed 0.3% of the guidelines. In other words, 29% of the locations monitored would be harmful to those who have EHS and who have a cardiovascular response.

In most cases of environmental pollutants, science precedes policy by 3 to 5 decades. This is the case for tobacco, asbestos, DDT, PCBs, lead, mercury etc. The research on the biological and

health effects of radio frequency and microwave radiation is now in its 5<sup>th</sup> decade and yet we still don't have adequate standards provided by the FCC that protects the most vulnerable in our population.

Since this topic is outside your area of expertise, you must rely on outside experts. Which experts do you believe? Do you rely on the FCC and dismiss the health complaints from your community or do you recognize that this radiation can be harmful and respond to the concerns in your community and the vast amount of scientific data documenting harm at levels well below FCC guidelines. Do you request a higher standard of safety as the Director of Public Health in your community? It takes courage and integrity to do the later.

You are probably aware that the FCC is being challenged legally for failing to update its radio frequency guidelines and ignoring scientific research (<https://childrenshealthdefense.org/news/robert-kennedy-jr-assembles-legal-team-to-sue-fcc-over-wireless-health-guidelines/> ).

The FCC is a captured agency with the Directors coming from the telecom industry. Dr. Norm Alster, Ethics Professor at Harvard, wrote about this in his book, *Captured Agency: How the Federal Communications Commission Is Dominated by the Industries It Presumably Regulates* ([https://ethics.harvard.edu/files/center-for-ethics/files/capturedagency\\_alster.pdf](https://ethics.harvard.edu/files/center-for-ethics/files/capturedagency_alster.pdf)). The FCC is protecting the health of the telecommunication industry rather than the health of the public. They are acting like bullies by denying community involvement regarding the placement of towers and denying the ability of local governing bodies to raise issues about health. There is no public health risk for erring on the side of caution particularly when children are involved.

Your duty is to protect the community you represent. Since members in your community became ill after the tower was operational, the right thing to do is to support your community and insist on lower levels of exposure even though this may go against the FCC mandate. They have their mandate and you have yours. Please act accordingly.

Respectfully,



Magda Havas, B.Sc., Ph.D.  
Professor Emerita