Congress of the United States
Washington, DC 20515

June 1, 2011

Mr. Gene Dodaro
The Comptroller General of the United States
U.S. Government Accountability Office
441 G Street, N.W.
Washington, D.C. 20548

Dear Mr. Dodaro:

Mobile phone usage among all sectors of American society continues its upward trajectory, only recently beginning to slow due to market saturation. According to a study by CTIA – The Wireless Association, more than 303 million Americans were mobile phone subscribers in 2010, accounting for more than 91% of the total population. This is an increase from 110 million users in 2000 and 208 million users in 2005. Those callers used an average of 6.1 billion minutes per day, or about 21 minutes per person per day.[1]

Mobile phone use among teenagers and younger children has followed a similar pattern. More than 75% of teens aged 12-17 now own mobile phones, up from 45% in 2004.[2] And 20% of preteens aged 6-11 have mobile phones, an increase of 8% over five years.

Despite the prevalence of mobile phone usage, significant uncertainty remains throughout the scientific community regarding the human impact of long-term exposure to the low levels of radiofrequency energy (RF) emitted by mobile phones. While high level RF can cause adverse health impacts by heating tissue, mobile phones emit low levels of RF that have not been conclusively linked to health problems. However, the largest and most comprehensive studies have been unable to rule out adverse impacts of low level, non-ionizing RF on the body, and biological effects noted in various studies raise additional safety questions.

A 2001 GAO study entitled *Research and Regulatory Efforts on Mobile Phone Issues* [GAO-01-545] requested by Representative Edward Markey and Senator Joseph Lieberman reported that the consensus among FDA, the World Health Organization, and other major health agencies at the time was that "the research to date does not show radiofrequency energy emitted from mobile phones to have adverse health effects but there is not yet enough information to conclude that they pose no risk."

Last year, the International Journal of Epidemiology published the results of a multinational consortium of case-control studies in a report entitled *Interphone*, constituting the largest and longest study of whether extensive mobile phone usage increases the risk of brain tumors. Researchers

[1] http://www.ctia.org/advocacy/research/index.cfm/AID/10323
[2] http://pewinternet.org/~/media//Files/Reports/2010/PIP-Teens-and-Cell-2010-with-topline.pdf

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examined whether exposure to mobile phone RF energy is associated with an increased risk of benign or malignant brain tumors or other head and neck tumors.

The overall findings of the report echoed the conclusion of the GAO's 2001 analysis, finding that:

> An increased risk of brain cancer is not established from the data from Interphone. However, observations at the highest level of cumulative call time and the changing patterns of mobile phone use since the period studied by Interphone, particularly in young people, mean that *further investigation of mobile phone use and brain cancer risk is merited* (emphasis added).

Among study participants who reported spending the most minutes on mobile phone calls, researchers noted an increased risk of glioma, though they considered the finding inconclusive because of potential reporting biases.

Just yesterday, the World Health Organization/International Agency for Research on Cancer announced that a team of international scientists has concluded that mobile phone use is "possibly carcinogenic" to humans.[3]

While data on mobile phone safety among adults has been largely inconclusive, data on usage during childhood and adolescence is virtually non-existent. Children are using mobile phones at an increasing rate and at earlier ages, and they are likely to accumulate decades of RF exposure. Experts have raised the possibility that children are at a greater risk because their nervous systems are still developing and their skulls are thinner at the time of exposure.

The wireless industry emphasizes that the most prominent research studies to date conclude that products meeting RF guidelines pose no health risk[4]. Nevertheless, user manuals for at least two of the largest mobile phone makers include safety instructions that suggest users keep the phone away from the body during voice calls. The iPhone manual, for example, instructs users to keep the phone at least 5/8 of an inch away from the body.[5]

In light of concerns about the long-term impact of RF frequency on children, adolescents, and adults, we request that GAO review the status of existing scientific research with respect to the risks of exposure, the adequacy of oversight regarding FCC's RF safety guidelines, and the key actions taken to inform the public of potential risks. Specifically,

- **What is the general status of scientific research on mobile phone radiofrequency energy as it relates to human health, including current activities of federal agencies in sponsoring, conducting, or overseeing ongoing and planned research?[6]**

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[3] http://www.iarc.fr/en/media-centre/pr/2011/pdfs/pr208_E.pdf
[4] http://ctia.org/media/press/body.cfm/prid/2083
[5] http://manuals.info.apple.com/en_US/iPhone_3GS_Important_Product_Information_Guide.pdf
[6] Relevant federal agencies should include Air Force, Army, EPA, the Federal Communications Commission (FCC), Food and Drug Administration (FDA), National Cancer Institute, National Institute of Environmental Health Sciences, National Institute for Occupational Safety and Health, National Institute of Standards and Technology, National Science Foundation, Navy, and Occupational Safety and Health Administration

- **What is the general status of scientific research to assess the long-term impact of mobile phone RF emissions on children and teenagers?**

- **How many mobile phone manufacturers and providers include warnings in their user manuals regarding the need to hold the mobile phone away from the body? On what basis are these recommendations made?**

- The 2001 GAO report identified a number of concerns regarding FCC's procedures for certifying that mobile devices are in compliance with the agency's limits for human exposures to RF energy. GAO recommended that the Chairman of the FCC take the following corrective actions:

    - Direct the Office of Engineering and Technology to issue revised guidance on SAR testing procedures to reduce variations in test results caused by a lack of standardized procedures. This guidance should be kept current as industry standards evolve.
    - Direct the Office of Engineering and Technology to consult with FDA on the advisability of adopting FDA's method of incorporating measurement uncertainty in determining compliance with radiofrequency safety limits, and make the results of this communication publicly available.
    - Direct the Consumer Information Bureau and the Office of Engineering and Technology to work together to develop clear, consistent, and easily accessible consumer materials on mobile phone radiofrequency exposure issues. In particular, these offices should modify the product authorization database Web site so that it links consumers to clear, concise information on radiofrequency exposure issues and the meaning of SAR data.
    - Direct the Office of Managing Director, as part of human capital planning, to develop a strategy for meeting the need for additional expertise in radiofrequency exposure and testing issues.

  What progress has the FCC made on each of these recommendations since the report was released in 2001? Has the FCC taken additional steps to improve its review of mobile phone testing?

- The 2001 GAO report found that the FDA's consumer information on mobile phone safety had not been revised in the past two years and "did not reflect more recent studies and research developments. GAO recommended that the Commissioner of the FDA direct the Center for Devices and Radiological Health (CDRH) to take the following actions:

    - Publicly report on the extent to which CTIA is following FDA's recommendations in choosing and funding the specific research proposals conducted under the cooperative research and development agreement between FDA and CTIA.
    - Develop a new consumer update document that provides a current overview of the status of health issues and research related to mobile phones. Because the industry trade association requires manufacturers to include the text of this document in the packaging of mobile phones that it certifies, the document should be written with a broad consumer audience in mind. Given the fast pace of developments on these issues, FDA should revise this document as significant research and policy events occur.

What progress has the FDA and CDRH made on each of these recommendations since the report was released in 2001? What additional key actions have been undertaken by federal agencies to promote public awareness regarding the risk of exposure to RF energy emitted by mobile phones?

Thank you for your assistance and cooperation in this matter. Should you have any questions about this request, please contact Sara Schaumburg with Rep. Markey (202-225-2836), Erin Katzelnick-Wise with Rep. Eshoo (202-225-8104), and Stephen Cha with the Committee on Energy and Commerce (202-225-2927).

Sincerely,

Edward J. Markey
Member
Energy and Commerce Committee

Henry A. Waxman
Ranking Member
Energy and Commerce Committee

Anna G. Eshoo
Ranking Member
Subcommittee on
Communications and Technology