Expert Advisory Board (EAB) – Bulgaria, Ministry of Health

International EMF Project

REPORT

23rd International Advisory Committee Meeting
WHO, Geneva, 20th – 22nd June 2018
Portorož, Slovenia,
(for the period June 2017 – June 2018)

I. General research activities in Bulgaria related to EMF health

Ongoing projects

Project BG 07: Programme *"Public Health Initiatives"*, Reference: BG 07-PAF – NFM&FM EEA: ***"Improving control and information systems in risk prevention and healthcare"***.

Funds: the Norwegian Financial Mechanism and the Financial Mechanism of the European Economic Area 2009-2014

Research team: National Centre of Public Health and Analyses (NCPHA)

Finished: April 2017

Overall objective: ***Improving public health through the development of healthcare information systems.*** After April 2017 the work consists of collecting data for completion and maintenance of the electronic register of sources of EMF radiation (base stations for mobile communication and TV stations), and providing sustainability of the results of the project.

Project: ***"Study of the public concern with EMF exposure to the general population. Risk communication and risk management"***

Funds: National budget: National Centre of Public Health and Analyses (NCPHA)

Research team: V. Zaryabova – Ph.D. Theses. Supervisor: Prof. M. Israel, Ph.D.

Finished: 2020

Overall objective: Analyze the reasons for public concern by using different methods as communication with the people, retrospective analysis of the complaints, questionnaire, epidemiology compared to EMF exposure.

Scientific forums and publications:

Israel M., M. Ivanova, V. Zaryabova, T. Shalamanova, P. Ivanova – *Occupational exposure to electromagnetic fields – transposition of the European policy*, International Conference on Public Health "PubHlth Sofia 2017".

Shalamanova T., V. Topalova, V. Zaryabova, M. Israel, P. Ivanova – *Evaluation of of EMF field levels in urban areas*, Fifth International Conference on radiation and applications in various field of research RAD 2017, 12–16 June 2017, Budva, Montenegro.

Zaryabova V., M. Israel, T. Shalamanova, H. Petkova – *Electronic register of sources of electromagnetic radiation in residential areas*, Fifth International Conference on radiation and applications in various field of research RAD 2017, 12 – 16 June 2017, Budva, Montenegro.

II. New Policies and Legislation regarding EMF exposure

1. The annualy national meeting of the Bulgarian Expert Advisory Board was held in December 2017. The main topic of the meeting was *"Improving the control of electromagnetic fields exposure in the working and living environment. Legislation and policy in Bulgaria".*

The main discussed areas were the followings:

- transposition of the European legislation in Bulgaria
- state of the competence of the specialists performing measurements and exposure assessment of electromagnetic fields in different occupations and in urban areas. Enhancing competence of the specialists working for control bodies
- state of the measuring equipment used for control of electromagnetic fields in the country and its compliance with the European requirements
- electronic register of sources of electromagnetic radiation in the residential areas. Methods for collecting data
- problems of control of the electromagnetic exposure in the working and living environment.

More than 60 people attended the meeting: the Deputy Minister of Health (the Main Governmental Health Inspector of Bulgaria), representatives of the Regional Health Inspectorates, of municipalities, of telecommunication and construction companies, specialists in the field of control of EMR, EMF equipment providers, members of the Bulgarian Expert Advisory Board.

Some of the decisions taken after the discussion were the followings:

- to update the Expert Advisory Board's composition
- to set up working groups into the EAB in different areas of interest – measurement, biological effects, exposure assessment, risk assessment, risk communication and management, dosimetry, standards, protection
- both methods – *"for measurement and exposure assessment of EMF from base stations for mobile communication in dwellings"*, and *"exposure assessment of electric and magnetic fields in dwellings with in-built transformers"*, to be formalized and standardized for use by the control bodies
- a need of actualization of the *"Guide for collecting data of sources of EMF radiation in the electronic register"*.

2. Measurement of EMF exposure performed by the Regional Health Inspectorates

The 28 Regional Health Inspectorates (RHI) are involved in the process of measurement and exposure assessment of EMF exposure in residential areas. Special instruction was widespread from the Ministry of Health amongst RHI to perform monitoring of 10% (annualy) of the registered base station in the region, in "sensitive" areas around schools and kindergarten, and in response to complaints of citizens.

All measurements are made following a *Method for measurement and exposure assessment of EMF emitted by communication sources (at the request of citizens),* developed by the team at the National Centre of Public Health and Analyses (NCPHA).

RHI is obligated to send to the NCPHA, and to the Ministry of Health summary annual report.

3. Collecting data for the electronic register of communication sources of EMF radiation in residential areas.

One of the obligations of NCPHA is to measure and collect data of EMF radiation in residential areas.

The measurement sites are selected applying the *"Controlled method for selection of measurement points in an area with higher density of EMF sources"* developed for this purpose. According to the above mentioned method, the available information about the emitters in a selected region is processed. Detailed information on the location and technical characteristics of EMF transmitters in the certain area is obtained from the electronic register of telecommunication sources stored at the NCPHA.

The measurement points are selected to be within the calculated safety zones of the known source of EMF, and after on-site field inspection. They are selected to meet the "worst case" criterion regarding the exposure of the population.

For each monitored area, ***non-selective and selective measurement methods***, as well as ***24-hour monitoring*** of EMF values for estimating real-time exposure to EMF, are applied. For an integral exposure assessment, a non-selective (broadband) method is used at all points defined by the cited methodology. This method is suitable for carrying out a cumulative assessment of EMF levels, i.e. pooling the contributions of all radio frequency sources in the spot to be measured. Broadband measurement has been used to indicate whether it is necessary to make a detailed (frequency and 24-hour exposure monitoring) study of the field at a given point. At the points where the highest EMF value was measured, a selective (frequency analysis) method for detailed exposure estimation and information on the contribution of each transmitter in the total measured EMF at the metering point was applied. They also provide 24-hour monitoring by setting monitoring stations to collect real-time exposure data for the selected location.

All measurements are made in far field zone of the emitters at 1,5 ÷ 1,8 m from ground level, at places where higher electromagnetic exposure values are expected. For the on-site survey, geographic coordinates of the measurement points were taken in order to put them on an electronic register of EMF sources to be accessible for the general public.

4. The EU Directive 2013/35/EC for protection of workers against EMF radiation has been transposed in Ordinance RD 07-5, Official State Gazette 95, 2016**.** The Practical Guides are published on the webpage of the Ministry of Labour and Social Affairs and on the NCPHA website.

The training of specialists in the industry, in occupational health services, in control bodies continues and more than 50 specialists have been trained in the period.

5. The Council Recommendations 1999/519/EC on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz) formally is not in use in Bulgaria yet. Nevertheless, the transposition of the EU Directive 2013/35/EC gives the possibility of the control bodies to apply the Council Recommendations in cases when general population have an access to working places with EMF exposure. It can be used also for exposure assessment of workers at specific risk. This is a start for its implementation.

III. Areas of public concern and national responses

The developed electronic register both for sources of EMF radiation and for complaints is in use since May 2017.

The analysis of the complaints shows that there is a reduction of the public concern – less people, the same complaining people for long period. New complaints appear in political campaigns, new “scientific” publications, local elections or discussions in the Parliament, also in construction of new base stations in urban areas.

The main communication network in Bulgaria is built, and no many new stations are in construction. Mobile operators are preparing for the 5G technology and there is not enough

information for the population.

IV. New public information activities:

During the reporting period the main activity was the annual meeting of the Expert Advisory Board where most of the problems concerning health and safety in EMF exposure of humans were discussed.

Several publications in media, and interviews for daily news, radiobroadcasting and TV were conducted at this period.

The main information activity during this period is the electronic register with data for the sources and EMF exposures available for the general public.

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