

# RISK MANAGEMENT. RISK COMMUNICATION

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## STRATEGY AND TACTICS FOR BUILDING UP EFFICIENT RISK-COMMUNICATIONS IN THE SPHERE OF FOOD PRODUCTS SAFETY

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*The authors highlight that contemporary social and economic processes require development of a new paradigm for discussing human health risks caused by food products distribution (risk-communications). Today such a model is replaced with a "prototype" of risk-communication, or simple informing. And as there is no "feedback" from risk recipients, it is impossible to adequately adjust information flows or assess their efficiency. Consequently, risks tend to be underestimated or aggravated by consumers. Working our decisions on managing risks and plans how to implement them are to be solved jointly by experts, authorities, and population.*

*It is shown that there are some basic ways to build up an efficient risk-communications system in the sphere of food products safety; to do that, we need to achieve greater information activity and interest of population in issues related to products quality and safety; to form a stable attitude towards self-preserving behavior among people; to improve a state system for interaction between all the concerned parties on issues related to population health and food products safety. It is extremely important to fully use channels for information dissemination that are in demand by a target audience (for example, active application of social media) and to create conditions for public discussions about risks. Tactical tasks are methodical guidance on forms and means of providing information about health risks as they are to be relevant for a target audience. Expert community involvement into a constructive risk dialogue is a significant tool for increasing risk-communications efficiency. As population tends to trust scientists, experts, and doctors more than public persons, representatives from these expert groups are to play a significant social role in a system of efficient risk-communications.*

**Key words:** food products, safety, risk-communications, consumer decisions, risk management, information activity.

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Provision of population with safe food products is a strategic task for our state and it is fixed in the RF Food Security Doctrine<sup>1</sup>. Special attention is paid to threats to food security that are related to a drastic growth in food products variety, wider ranges of applied technologies and raw materials, trade barriers removal, liberalization of state control and surveillance functions, and intense influence exerted on consumers by mass me-

dia. Uncertainty in food products sphere is growing fast and the process is determined, among other things, by application of nanotechnologies [1] and genetically modified organisms [2] in food industry. Given that, the UN Food and Agricultural Organization (FAO) states that development of efficient risk communications is an effective way to decrease risks related to food products safety [3].

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<sup>1</sup>On Approval of the RF Food Security Doctrine: The RF President Order issued on January 10, 2010 No. 120 [Web-source] // Garant. – URL: <http://base.garant.ru/12172719/> (date of visit September 22, 2018).

Experts from the US National Institute for General Medical Sciences determine risk communications as "a process of information exchange on a risk (its nature, level, factors, and ways to manage it) between all the concerned parties or "stakeholders" that can be individuals, groups, or social institutions" [4]. The same concept is accepted by Russian researchers as well [5–7]. Efficient and full-fledged risk communication is always a dialogue when risk manufacturers and risk consumers as well as mediators such as authorities, mass media, or public organizations openly express their own opinions on a risk in order to resolve an existing social conflict. Consequently, consumers are involved into risk-related decision making. Overall, we can spot out three levels in information exchange that goes on during a risk communication process in the food products sphere. The first one is "information" when manufacturers, authorities, or any other institutions or organizations spread information about a risk for consumers' health without taking into account any possible feedback; a "dialogue" when information about a risk spreads via two-direction communication channels and is discussed; "engagement" when all the concerned parties can influence risk-related decisions [3].

Risk communications in the food products sphere can concentrate on the following topics or risks caused by a) chemical, microbiological, and physical contamination of food products [8], b) technological processes applied in food manufacturing [9], c) consequences of a food crisis [10], d) everyday practices related to food products handling [11]. Besides, new scientific data on risks related to food products safety can also be a specific topic for a discussion [12].

Frever et al. (2007) state that a key target of risk communication is to provide population with information that helps them to make "a well justified consumer decision" [10]. Ac-

ording to data presented by J.L. Lusk and B. Briggeman, food products "safety" together with them "being natural", their price, taste and nutritional properties are significant criteria that influence food-related decision making [13]. And as per data provided by Martinez-Ruiz M.P. (2006) certain consumer groups (families with children, people with high incomes) rank food safety among the key criteria for decision making, and trends related to Americans' consumer behavior indicate that health-related attributes of consumer products, for example, use for health, absence of harm to health, conformity with healthy nutrition principles are becoming even more significant than price or a convenience related to buying itself [14].

As per data that can be found in domestic research, food products safety is also important for Russians. Thus, according to a questioning performed by the Russian Public Opinion Research Center in November 2018, 83% respondents read information on a product shelf life on a label when they choose food products, 51% are interested in a product structure and an its ingredients, 37% want to know who manufactured a product<sup>2</sup>.

Risk communication in the sphere of food products safety can also be performed in order to influence consumers' behavioral attitudes to minimize their risky behavior since having information that a product is unsafe doesn't guarantee this product is not consumed [15]. Results of sociological questionings performed in the RF confirm these statements. Thus, for example, as per data obtained by the "Public Opinion" Fund in 2014, Russians were well aware that fast food and street food was unsafe as people were asked "Are fast food outlets more useful or more harmful? Or they are approximately fifty-fifty?" and more than 40% respondents chose "more harmful" answer<sup>3</sup>. Respondents mentioned the following harmful things about fast food outlets: "this food is

<sup>2</sup> Consumer behavior: a choice made by Russians [Web-source] // RPORC official web-site. – URL: <https://wciom.ru/index.php?id=236&uid=9413> (date of visit September 22, 2018).

<sup>3</sup> Russians about fast food. What use and what harm Russians see about fast food restaurants [Web-source] // POF official web-site. –URL: <https://fom.ru/ekonomika/11723> (date of visit September 22, 2018).

dangerous as it causes stomach diseases" (34% respondents), "low quality products" (18%), "products structure is unknown, a lot of chemical additives" (12%). But still, 45% men and 36% women visit such places from time to time (40% respondents in the overall sampling, 53% and 49% respectively in Moscow and cities with a population greater than a million). 59% respondents aged from 18 to 30 periodically buy fast food.

A decrease in social tension can be an ultimate goal of risk communication (for example, when results of experts judgment on a risk state it is quite permissible but consumers are still rather concerned) [16]. A necessity to discuss risks openly is in this case determined by a discrepancy between "images of a risk" that exist in experts' minds and ordinary people's ones; there can also be a discrepancy in how a risk is perceived by consumers, manufacturers, scientific community, and public authorities. Thus, Macgregor (1994) and Wu (2013) give evidence that public perception of food-related risks is to a great extent linked with impacts exerted by "psychometric factors" [17], or a degree to which a risk is "known" and "understood" by broad masses of population, how well it can be controlled, whether there are any benefits that can be derived from its realization, a number of people prone to it, etc., perceptible attributes of a products, and effects produced by mass media [18]. Food-related risks are perceived by people as something opposite to "quality" and "controllability", and here "quality" is associated with food being "fresh" and "manufactured locally", and "controllability" means that there are formal signs proving it has been "checked" by official institutions (tags, labels, any notifications a product conforms to quality standards) [20]. Consequently, various social (social-demographic, social-occupational, and territorial) groups give different charac-

teristics of a risk, and situations perceived as safe ones can actually be rather risky [21]. A perception of genetically modified food products by population and experts is a very good example. Information placed on the WHO official web-site in "Food Safety" section explains that genetically modified products "currently available on the international market have passed safety assessments and are not likely to present risks for human health"<sup>4</sup>. But still, according to the results of a representative questioning performed by RPORC among Russians in 2014, 82% respondents thought (they chose "rather agree" answer) that "GM foods are harmful for health", 67% respondents believed such foods caused cancer, 60% thought they could lead to infertility, and 59%, to mutations<sup>5</sup>. As a result, most Russians were in favor of a complete ban on GM foods on the RF territory (Figure 1).



Figure 1. Russians' opinion on prohibition of GM foods on the RF territory (RPORC questioning results, 2014, in % of the overall number of respondents)

Public opinion on the matter has actually remained static over several years; thus, in 2007 72% Russians were sure that genetically modified additives in food products could exert adverse influence on people's health<sup>6</sup>. Data obtained via a questioning performed in China in 2016 reveal that 41% respondents had negative attitudes to GM foods, and only 11% of the overall number of respondents in that sam-

<sup>4</sup> Food Safety [web-source] // the WHO official web-site. – URL: [http://www.who.int/foodsafety/areas\\_work/food-technology/faq-genetically-modified-food/ru/](http://www.who.int/foodsafety/areas_work/food-technology/faq-genetically-modified-food/ru/) (date of visit September 22, 2018).

<sup>5</sup> GM foods: pro and contra [Web-source] // RPORC official web-site. – URL: <https://wciom.ru/index.php?id=236&uid=691> (date of visit September 18, 2018).

<sup>6</sup> Genetically modified food additives: awareness and opinion. November 29, 2007. [Web-source]// POF official web-site. – URL: [http://bd.fom.ru/report/cat/business/ec\\_goods/d074823](http://bd.fom.ru/report/cat/business/ec_goods/d074823) (date of visit September 18, 2018).

pling stated they understood basic principles of genetic engineering [22]; that is, reasons for people's disbelief in GM foods safety could be based, among other things, on very poor awareness of population on the matter.

An opposite case is when a risk is overestimated by experts in comparison with population and it is also quite possible. For example, as per results of a questioning performed among 90 British medical experts, most of them overestimated risks of lethal reactions caused by anaphylaxis among children with food allergies, and it caused increased anxiety and stress in children and their parents [23].

The Federal Service for Surveillance over Consumer Rights Protection and Human Well-being have implemented broad consulting of consumers. But at the same time, a number of covered consumers is very insignificant. People also tend to have very low level of trust in food products manufacturers, and it makes the situation even worse. Thus, for example, in 2017 Rospotrebnadzor offered to introduce obligatory marking of food products as per a specific "signal color" system that was meant to help to distinguish between products with low, average, and high contents of sugar, salt, and saturated fats. But when the RPORC conducted a questioning among Russians asking what consequences it could have, 76% respondents stated it could lead to some unfair manufacturers "giving false information on package thus misleading consumers"<sup>7</sup>. Overall, awareness about this system was quite low at the moment when the questioning was performed as only 10% respondents had good knowledge on the initiative of Rospotrebnadzor, and there were only 2% of those who knew about it among respondents aged 18–24 (see Figure 2).

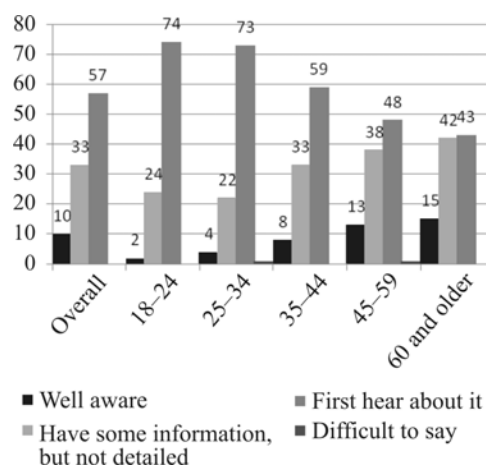


Figure 2. Awareness among Russians about Rospotrebnadzor initiative to mark food products as per "signal color" system (questioning by the RPORC in 2017, in % from overall number of respondents)

In a situation when institutional trust is low, mass media and experts become very significant subjects in risk communication and they should promote broader discussions about risks. However, at present mass media play a rather negative role in the process as they strive to cover bigger audience, attract more visitors to their web-sites and to increase their ratings. Trying to achieve these goals, mass media either "aggravate" risks or underestimate them especially if an information message is "ordered" by manufacturers, distributors, or sellers of a product. As a results, in April 2018 almost half Russian (41%) believed that information given in mass media was mostly biased<sup>8</sup>; more than half of respondents (57%) thought domestic mass media didn't communicate all the information available to them to their audience<sup>9</sup>.

Results of another RPORC questioning revealed that 66% Russians trusted Russian scientists<sup>10</sup>, and 82% respondents were proud

<sup>7</sup> Food "signal color" system: pro and contra. An initiative all-Russian questioning performed by "RPORC-Sputnik" on December 22-24, 2017 г. [web-source] // RPORC official web-site. – URL: <https://wciom.ru/index.php?id=236&uid=8995> (date of visit October 10, 2018).

<sup>8</sup> Mass media: relevance and performance assessment [Web-source] // POF Official site. – URL: <https://fom.ru/SMI-i-internet/14028> (date of visit September 18, 2018).

<sup>9</sup> Confidence in Russian mass media. Are mass media objective when covering events? Should they have more criticizing attitude towards public authorities? [Web-source] // POF Official site. URL: <https://fom.ru/SMI-i-internet/12140> (date of visit September 18, 2018).

<sup>10</sup> "Express" monthly all-Russian questioning accomplished on August 23, 2015. [Web-source] // RPORC official web-site. – URL: [https://wciom.ru/zh/print\\_q.php?s\\_id=1037&q\\_id=71653&date=23.08.2015](https://wciom.ru/zh/print_q.php?s_id=1037&q_id=71653&date=23.08.2015) (date of visit October 10, 2018).

of Russian science and scientists<sup>11</sup>. Nevertheless, experts are poorly involved into communication with consumers. They mostly provide information to public authorities and don't adapt these data to peculiarities of their perception by population. Experts don't often think about consumers as equal participants in discussions. Besides, experts and public authorities still widely use traditional channels such as brochures, official sites, posters, TV, etc. Specific features of a target audience are rarely given any attention and, as a result, information channels efficiency is rather low. For example, official web-sites of regional authorities dedicated to healthy lifestyle are rather rarely visited. Several dozens of such sites were analyzed in various RF subjects and less than 100 unique visits per a week were detected.

At present there are quite a lot of TV programs about healthy nutrition on Russian TV. They are "To live healthily!" ("The First channel", the program rating is equal to 1.8%<sup>12</sup>), "The most important things" ("Russia" channel, the program rating is 1.75%), and "The most useful program" ("REN TV" channel, the program rating is 1%). However, these programs are primarily watched by retired people and housewives. TV audience is "ageing" fast. As per data provided by the Federal Agency on Press and Mass Communications of the Russian Federation, TV watchers were averagely aged 48 in 2015 (it was about 44 in 2008)<sup>13</sup>. Data provided by the "Public Opinion" Fund (POF) in spring 2018 revealed that 61% respondents aged 18–30 got latest news and information on news web-sites in the Internet, and 42% used forums, blogs, and social networks. Only 45% re-

spondents in this age groups mentioned TV as a source of information. But as for people aged 46–60, TV is a basic source of information for 84% of them<sup>14</sup>.

Social networks, blogs, micro-blogs, and forums are the most promising communication channels; they require competent involvement of experts on health risks [24]. Videos can be a very interesting form of risk communication including virus videos, photos, creation of "publics", subject web-pages etc., but such activities require competent authors that have not only subject knowledge but also knowledge on communicative technologies basics.

Nowadays experts are not present within the social media system and their place is taken by manufacturers and consumers who are fast and efficient in filling a communicative field up. It is them who become key "informers" and opinion leaders. Thus, a virus video "Chipotle: The Scarecrow" was watched 6.5 million times and downloaded 500,000 times over just two weeks. This short commercial shows awesome food manufacturing processes that incorporate chemical substances. A leading hero is implementing an alternative process of manufacturing and is producing healthy food; he describes it to his audience. Within Chipotle advertising campaign users who have seen the video are offered to download an application into their smartphones and to join a game with its basic target being a search for healthy food. The company explains the Chipotle mission on its official web-site stating that its main goal is to change people's concept of fast food and make them consume "...conventionally cooked high-quality food similar to that offered in our restaurants".

<sup>11</sup> "Express" monthly all-Russian questioning accomplished on June 19, 2016 r. [Web-source] // RPORC official web-site. – URL: [https://wciom.ru/zh/print\\_q.php?s\\_id=1082&q\\_id=75198&date=19.06.2016](https://wciom.ru/zh/print_q.php?s_id=1082&q_id=75198&date=19.06.2016) (date of visit October 10, 2018).

<sup>12</sup> Data provided by Mediascope as per the second week of November 2018 for Russian cities with population not less than 100 thousand people [Web-source]. – URL: [http://mediascope.net/services/media/media-audience/tv/national-and-regional/audience/?arrFilter\\_pf%5BCITY%5D=5096&arrFilter\\_pf%5BPERIOD%5D=12%2F11%2F2018+-+18%2F11%2F2018&arrFilter\\_pf%5BTYPE%5D=21&arrFilter\\_pf%5BGENRE%5D=42465&captcha\\_code=06d6b54075a4dccc5d4c6acabe627d46&captcha\\_word=3F5FD&set\\_filter=Y](http://mediascope.net/services/media/media-audience/tv/national-and-regional/audience/?arrFilter_pf%5BCITY%5D=5096&arrFilter_pf%5BPERIOD%5D=12%2F11%2F2018+-+18%2F11%2F2018&arrFilter_pf%5BTYPE%5D=21&arrFilter_pf%5BGENRE%5D=42465&captcha_code=06d6b54075a4dccc5d4c6acabe627d46&captcha_word=3F5FD&set_filter=Y) (date of visit October 10, 2018).

<sup>13</sup> TV in Russia in 2016. Current situation, trends, and prospects of development. Brunch report. – M., 2017. – P. 31.

<sup>14</sup> Mass media: relevance and performance assessment [Web-source] // POF Official site. <https://fom.ru/SMI-i-internet/14028> (date of visit October 10, 2018).

"Short videos" have a great potential as a tool for informing food products consumers about health risks as it was proven by a piece of research performed on a sampling made up of 185 Swedish consumers. An experimental group was shown a short video about results of a scientific assessment that focused on health risks related to food safety (natural and artificial food additives). After having seen the video, consumers from the experimental group had authentically better awareness, more positive attitudes towards food products and lower anxiety than consumers from the reference group [25].

Consumers themselves partly fill up social media field with certain information. But bloggers often don't have enough knowledge in the sphere and pursue predominantly personal goals (for example, a blog about "healthy cooking" can be only a way to present oneself in the public space [26]). Research on food blogging performed in Australia by Lofgren J. (2013) revealed that most bloggers didn't have any specialized education in the sphere of catering or medicine. As a result, population tend to have a specific risk assessment that differs from expert judgments and it makes achievement of social consensus more difficult [27].

Institutions that are responsible for distributing information about health risks including food-related ones enjoy great possibilities that are provided by up-to-date communication means via application of social media. When they apply the most popular social networks (Vkontakte, Odnoklassniki, Facebook, Twitter, YouTube, and Instagram) to communicate relevant information to consumers and try to explain complicated data with simple language, it helps to minimize content distortions caused by spreading rumors and to eliminate negative effects in cases when various mass media or unfair manufacturers exploit this subject only to

pursue their personal goals. Risk communication via social media can be implemented in variable ways. One of the most relevant ones is to create pages of official communities in Vkontakte, Facebook and other active social networks. Another one is to apply banners (to implement exchange with banners among all official sources of information about health risks, electronic mass media, and famous bloggers). Experts can also "re-orientate" efficient bloggers and use them as "translators" of specific ideas and opinions. The World Health Organization experts have long been treating famous bloggers as "significant agents of influence"<sup>15</sup>.

Therefore, as consumers are basic recipients of food-related risks, one can build efficient risk communications only on the basis of profound examination and insight into specific health risks perception by individuals and population groups.

In addition to targeted informing about risks, it is necessary to study value orientations of consumers, their individual psychological peculiarities, peculiarities of spontaneous information spread via informal channels, parameters of confidence in information carriers etc. It is advisable to perform specific sociological research for building up risk profiles and determining peculiarities of risk perception by specific contingents as it will allow to provide a solid base for efficient risk communications.

Providing efficient risk communications in food safety sphere requires the following:

- to create standard and methodological ground (methodical guidelines on informing about health risks that include schemes for information spreading among various consumer groups and highlight the most suitable forms and channels; samples of information materials that determine basic contents of a message (depending on a channel format) and its design; rules that allow to built

<sup>15</sup> How to organize work with concerned parties [Web document // The WHO Regional office for Europe official site. – URL: [http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0009/373248/vss-stakeholder-management-rus.pdf](http://www.euro.who.int/__data/assets/pdf_file/0009/373248/vss-stakeholder-management-rus.pdf) (date of visit October 10, 2018).

risk communications correctly with application of Internet resources; algorithms for building up feedback and involvement of all communication subjects into risk management);

– to provide monitoring of risk perception by various population groups (sociological research via questioning, focus groups, etc.);

– to organize interaction between risk communication subjects in order to increase their communicative competence and exchange of experience (scientific-practical conferences, skills development, workshops, webinars, etc.).

All the above-mentioned activities are to be performed with involvement of experts from the bodies and institutions of the Federal Service for Surveillance over Consumer Rights Protection and Human Well-being, the RF Public Healthcare Ministry, The Federal Service for Veterinary and Phytosanitary Surveillance, scientific research organizations, educational establishments, etc.

To sum up, we can state that there are the following ways to build up an efficient communications system: increased information activity and interest of the population in food safety matters; formation of not only great awareness about risks but also a persis-

tent attitude towards self-preserving behavior in population; further development of the state system for risk communications in the sphere of population health and food safety. A most significant aspect here is to apply information channels that are in demand by a target audience as wide as its only possible (social media can be quite a good example here) and to create favorable conditions for public discussions on risks. Tactical tasks here are methodical support provided for all the concerned parties as regards forms and ways to communicate information about health risks that are relevant for a target audience. More active involvement of experts into a constructive dialogue about risks is a significant tool for increasing risk communications efficiency. And as population tend to confide in scientists, experts, and doctors more than in public agents, representatives from these groups should play a more significant social role within efficient risk communication systems.

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