



DOI: 10.22363/2313-2272-2020-20-4-929-938

## Mass hysteria and incidence rate control in the organized groups (RUDN University approach)\*

N.O. Danilina, A.S. Klimenko, Sh. Gulova, V.A. Seryapov, S.V. Nazyuta

RUDN University  
*Miklukho-Maklaya St., 6, Moscow, 117198, Russia*  
(e-mail: [danilina-no@rudn.ru](mailto:danilina-no@rudn.ru); [klimenko-as@rudn.ru](mailto:klimenko-as@rudn.ru);  
[gulova-sh@rudn.ru](mailto:gulova-sh@rudn.ru); [va.seriapov@gmail.com](mailto:va.seriapov@gmail.com); [nazyuta-sv@rudn.ru](mailto:nazyuta-sv@rudn.ru))

**Abstract.** The article presents the results of the comprehensive study of methods for countering mass panic and explosive morbidity in the organized community (on the example of a number of activities implemented at the RUDN University during the ‘first wave’ of the covid-19 pandemic). The authors used elements of theoretical and empirical, sociological and experimental methods of research. After the World Health Organization (WHO) declared a pandemic of the new coronavirus in March 2020, the world will never be the same — most aspects of social interaction have changed, and the RUDN University could not stay away from global and all-Russian trends. In the article, the concept of dealing with stress and mass panic is considered not at the individual level, but at the level of the full-size medical institution with a multinational and multicultural community of 9000 people, completely isolated from the society. The authors managed to develop a model of doctor’s behavior, which proved to be effective when working with the younger generation (aged 18 to 35), including foreign students; provided an opportunity to control (to a certain limit) the mood of the masses on the entrusted territory, to ensure adherence to treatment and emotional support at all its stages. Due to the patient’s feeling of control over his condition, understanding of what is happening and, as a result, the development of critical perception of all information, the negative impact of the mass panic reaction was significantly reduced. Therefore, the authors achieved a disciplined organized community that followed all quarantine and isolation instructions, which significantly smoothed the peak of the incidence curve.

**Key words:** new coronavirus infection; pandemia; hysteria; mass media; organized community; model of doctor’s behavior

In the era of globalization, information technologies, mass media and social networks became the primary means of publicizing community issues. Sources open to uncontrolled publications have a counterproductive influence on the public opinion and contribute to the growth of stress of those influenced by unreliable information [7]. Thus, under the pandemic and the high level of media misinformation, healthcare professionals faced a new task — to work not only with the patient, but also with the media and social environment, which has a significant impact on the public opinion. Mass consciousness is a set of values, attitudes and patterns [2]. In the theoretical sociology, there are fundamental patterns of social functioning, such as the theory of social anomie and the social model of stress,

---

\* © N.O. Danilina, A.S. Klimenko, Sh. Gulova, V.A. Seryapov, S.V. Nazyuta, 2020  
*The article was submitted on 28.06.2020. The article was accepted on 30.08.2020.*

which explain psychopathological conditions of social upheavals [8; 15]. In other words, social stress is an integral reaction to processes connected to the destabilization of society's mood.

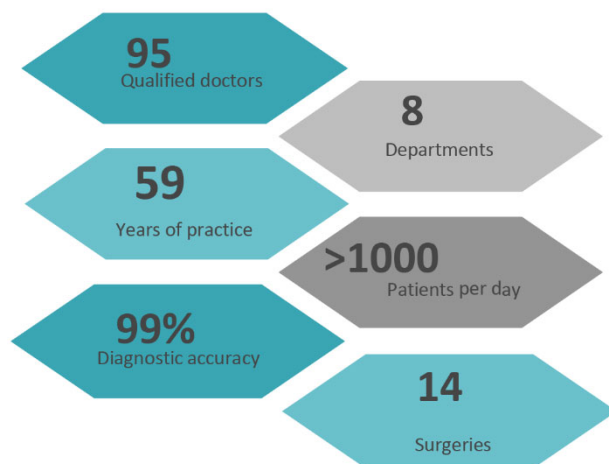
The first official use of stress concepts is presented in *Man under Stress* by Grinker and Spiegel (1945), who studied emotional consequences of captivity called 'military neurosis'. Its most common symptoms were increased fatigue, aggression, depression, impaired memory and inability to concentrate. Research in this area was continued by Wolff who studied psychosomatic disorders in the wider social-cultural context, and developed a 'medical' model of stress, which has been successfully applied in medical-social and medical-sociological research since the 1970s [17]. Today, sociology of medicine focuses on the medical-sociological understanding of health and illness, such as: social health of the population and its factors, the influence of social processes and institutions, including the healthcare system, and relations of the nurse, doctor, patient and his relatives.

Sociology of medicine in an applied field of both medicine and sociology. For instance, Olisen (1968) identifies the following concepts of medical sociology: stress, socialization, professionalism, social organization, dominance, role and behavior of the patient during illness, medical and social culture, variability of the social system, deviance. Olisen defines the theory of the social organization of stress as the 'middle-range theory' [10]. Today, there is growing criticism of the American sociological research tradition as underestimating the worldview aspect due to focusing on cognitivism, interactionism and psychoanalysis and ignoring everyday social challenges [12]. However, the development of high technologies, in particular, in the medical and diagnostic field, allows to involve millions of people in the medical-social functioning, which denies the use of previous theoretical concepts for explaining the new prevailing stereotypes and patterns of social behavior.

In this article, we consider stress and mass panic at the level of the full-size medical institution with an international and multicultural community of 9000 people isolated from the society. This unique study became possible during the pandemic and self-isolation which produced unstable changes in all spheres of social life. In the short term, at the family level, they can lead to family violence, affect the physical and mental health of younger people, who are the main group in the RUDN University, thus, causing loss of motivation and self-confidence, worsening depressions, increasing stress and conflicts at the interethnic and intercultural level, leading to hysteria and mass panic. The negative emotional state of patients significantly reduces the efficiency of complex measures taken to fight the covid-19 pandemic [3].

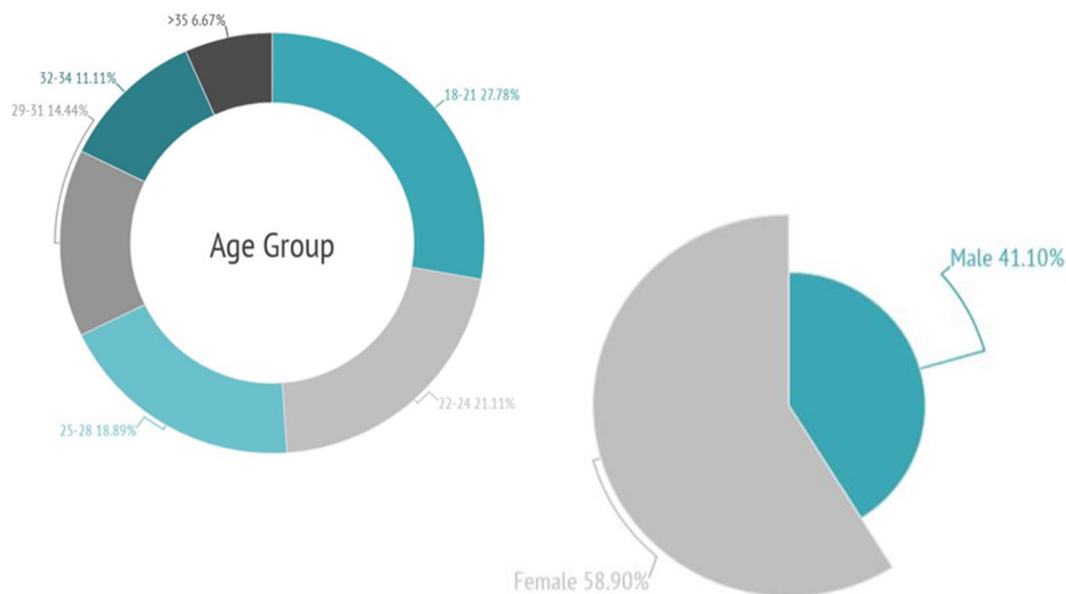
The Outpatient Polyclinic Center of the RUDN University (hereinafter — OPC) is a multidisciplinary clinic that provides health care and specialized care to the assigned population on the outpatient basis. OPC specializes on checking the health condition of the RUDN University employees and students, conducting periodic and preventive medical examinations and high-quality medical services,

preventing occupational diseases, increasing the awareness of risk factors and their timely prevention (Figure 1). The OPC aims at the high-quality medical care in all areas of outpatient observation and treatment.



**Fig. 1.** Statistical data about the OPC

Patients of the OPC are an international, multicultural community (students and employees), which consists of representatives of almost all countries of the world: 3300 people from Asia, 1500 — from Europe, 2200 — from Africa, 1500 — from the Middle East, and so on. The age and gender structure of the patient community is presented in Figure 2.



**Fig. 2.** Age and gender structure of the patient community

As a team, we learned to work out not only with patients but also with employees. The increased workload on medical institutions, predicted by the Chinese healthcare professionals, determined the need to reorganize the entire work of the medical institution, which included effective planning of the work of medical workers, providing them with the necessary protective equipment, and education. The whole reorganization process was based on the daily incoming data from our and foreign colleagues and WHO professionals. We created a group of medical workers who never worked in a pandemic but showed willingness to learn and exchange experience.

The standard organization of work in the outpatient clinic is the so-called ‘joint-individual activity’ with the focus on one’s result and individual achievements since each specialist works in the isolated office with patients of only his profile. The weak point of this approach is organization of team-like activities of specialists who know their specialty well, but do not understand the peculiarities of their colleagues’ work and concentrate on their activities rather than the goals of the organization as a whole [11]. Under the pandemic, it was not possible to continue outpatient reception of the ‘joint-individual’ type, since the work of the outpatient center was completely reorganized — isolated specialists were removed from offices and united into a team. For more effective interaction and optimization of human resources, we started an experiment in the Agile framework — a set of methods and practices for the flexible management and organization of work of small groups in combination with their both liberal and democratic management, which is effective due to iterative execution, interaction of team members and quick reaction to changes in the workspace.

The Scrum method was introduced as the basis for the new doctor’s behavior model. Sutherland introduced this approach for IT and business planning [14]; however, the RUDN University team analyzed available sources and manuals on Agile-Scrum, and concluded that under the pandemic, this approach could work for the medical institution. Scrum methodology is inherently heuristic. It is based on constant learning and adaptation to changing factors. According to Scrum, the team is not aware of the full scope of work to be done at the beginning of the project but can evolve and adapt working methods by learning from experience. The Scrum framework provides freedom to adapt to the changing conditions and requirements. The workflow provides for possible drastic changes in priorities and short reporting cycles, so-called ‘sprints’, which contributes to the continuous learning and improvement.

The team is divided hierarchically: there are project managers and executors — ‘T-shaped people’, i.e., completely interchangeable specialists as parts of the mobile system of the team. This feature distinguishes Scrum from other related Agile methodologies, since if one of the ‘T-shaped people’ leaves, the team will be still fully functional in all areas.

This methodology is based on visual facilitation — with artefacts and rituals that contribute to better assimilation and memorization. Opportunities for implementation

of the next sprint are determined at the beginning of it at the Sprint Planning Meeting, and by using the Scrum Poker method (an assessment technique based on reaching an agreement mainly to assess the complexity of the work ahead or the tasks to be solved), and cannot be changed throughout the whole sprint. At the same time, a fixed short sprint ensures the workflow predictability and flexibility [4; 5; 6; 13].

The results of adaptation of this technique for the RUDN University team are as follows: product — a ready-made scheme of diagnostics, treatment and prediction; MVP — minimum viable product, in our case the minimum for diagnosis and treatment; increments — additions to the MVP that bring it to the state of a finished product — phenotyping, a scale for predicting risks; Klimenko A.S., head of the OPC, — product owner, responsible for it; abstract patient — stakeholder, the user of the product; list of phenotyping, prediction scale, etc. — a plan for bringing the MVP to the product; when the product owner and the stakeholder discuss what can be added to the MVP — backlog grooming; physicians — the product development team, and they can replace each other, i.e. they are ‘T-shaped people’, who have the same skills and always help each other; Elena Kuzmenko, Chief Nurse — Scrum Master, who preserved the team ethics; a conversation at the beginning of the week — planning; daily discussion in the TEAMS group chat — a stand-up; analysis of clinical cases — a retrospective; time spent per patient — a sprint length; discharge of a patient — a demonstration, the stakeholder’s assessment of the product; new patient arrival — start (Figure 3).

Over the past 3 months, more than 500 patients with a confirmed diagnosis of the new coronavirus covid-19 were patients of the the RUDN OPC, and 10 patients in serious condition were hospitalized on time. The methods of interaction in the workplace and methods of infection control introduced by the medical staff proved to be an effective solution — a zero incidence of covid-19 was achieved among employees in the direct contact with patients with coronavirus, not a single case of incorrect diagnosis was recorded, and the mortality of patients in the outpatient setting was avoided.

The comparison of types of the OPC patients show that before coronavirus, the OPC worked mainly within the dispensary prophylactic system (10% — emergency patients, 30% — outpatient work, 60% — paperwork), under the covid-19 pandemic, 85% of patients were in the acute stage of the disease and required immediate medical treatment (10% — outpatient work, 10% — paperwork).

Residents of dormitories live in the area of high population density; it is not designed for proper isolation; therefore, its residents are at a greater risk of contracting the coronavirus compared to those who live in the apartment-type buildings which provide more opportunities for isolations. In these conditions, the targeted dissemination of relevant information about the contagiousness of the disease, preventive measures and social security is of particular importance, since patients who found symptoms similar to those of coronavirus were immediately exposed to aggression from their neighbors in the area of residence, experienced negative public attitude due to the media information, which is often misleading

and disorienting, filled with fake content that provokes panic [4]. The severity of the negative reaction to patients with coronavirus is commensurate with the rejection of HIV patients, with a similar development mechanism — arising from the lack of awareness, constant escalation of the situation in the media, inappropriate information on social networks and media in general [5].

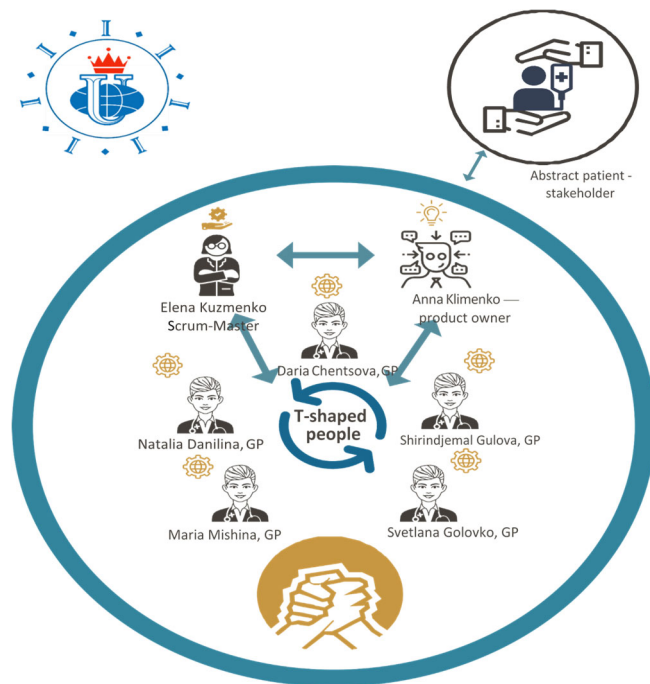


Fig. 3. Agile structure of the medical team

Based on the available data on the mechanisms for the development of mass panic and on the risk factors under the pandemic, the RUDN University team developed a seven ‘I’ method to work with patients — ‘Information, Involvement, Inclusion, Integrity, In Touch , Isolation, Individual Approach’ (Figure 4).

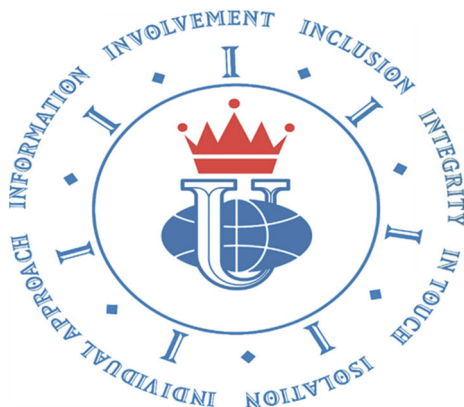


Fig. 4. The emblem of the RUDN team

*Information* — every employee or student of the RUDN University had the opportunity to contact the OPC and receive up-to-date information on covid-19, hygiene and safety rules, actions in case of detection a coronavirus; the RUDN University team printed leaflets and information booklets based on the official information approved by the Rospotrebnadzor.

*Involvement* — patients placed in isolation and quarantine after contacts with covid-19 or mildly ill were offered interactive tasks in the format of diaries, tests and assignments — for the qualitative assessment of their well-being.

*Inclusion* — a multinational multicultural team of volunteer doctors, residents and RUDN University graduates was created, and all its members wanted to contribute to the fight against coronavirus. They were provided with all necessary equipment and practical training. The entire medical team of the OPC collaborated with volunteer doctors, helped them to resolve difficult situations and answer any questions during work.

*Integrity* — straightforwardness and sincerity in communication, without softening or embellishing facts about the patient's condition. Expectations and concerns about the results of laboratory and clinical studies were discussed with the patient, his opinion and understanding of the situation were taken into account; thus, patients developed a more serious attitude to their current status and a persistent adherence to treatment.

*In Touch* — with the support of modern communication technologies and social networks, constant communication was established with patients in audio and video formats, and also as daily face-to-face consultations and patronage. Especially useful was the Teams — a part of the Office 365 provided by the RUDN University, which united employees and students into a single network. This allowed to keep in touch with patients, monitor their state of health and severity of their condition, instantly take action and provide psychological support.

*Isolation* — all patients with pronounced catarrhal symptoms were subject to immediate isolation; however, they had access to all the above-mentioned measures, including full access to available information about their current condition and constant contact with medical personnel. Thereby, we received patients' voluntary consent to isolation, their adherence to follow all quarantine rules, understanding of the importance of their role both in their treatment and in the overall outcome of the pandemic, and maintaining of the positive emotional state during isolation and therapy. For the duration of the pandemic, a dormitory block was provided for isolation, where all patients with catarrhal symptoms and confirmed coronavirus were accommodated. Isolated students and staff were provided with five meals a day, medication, online assignments, and daily patronage, in addition to being in touch with the Teams 24/7.

*Individual Approach* — to every patient and his needs; emphasis was placed on working with his fears, thoughts, worldview, and cultural characteristics.

A significant part of the patients were first-year students who did not speak Russian at the sufficient level and, under the stress, were reluctant to contact

specialists. To solve this problem, we turned to the methods of working with patients who have impairment of speech, hearing or with difficulties in communicative behavior, in particular, to practices for young people with autism spectrum disorders, based on the work by Bondi and Frost, who developed the PECS method (Picture Exchange Communication System) (Figure 5). The PECS system was developed as a teaching tool for children with autism to help and develop a rapidly absorbing, self-activating, functional communication system. Its theoretical roots combine the principles of the applied behavior analysis and the guidelines in the field of alternative and complementary communication. This approach has several potential advantages over simulation-based strategies (both vocal and gesture) and character selection strategies. The system starts with the exchange of simple pictures and logically quickly builds the structure of the ‘proposal’. The system works both ways, being equally adapted for asking simple questions and for formulating answers and commenting [18]. This system turned out to be effective for foreign students who do not speak Russian and helped to establish contact in the ‘doctor-patient’ link. As auxiliary methods, individual tests were used to assess the psycho-emotional state of patients, such as Luscher color test, Wong-Baker scale of faces and anxiety scale, but they turned out to be less effective than the PECS, which allowed a better assessment of the physical condition, clinical examination and timely first aid in case of suspicion of deterioration.

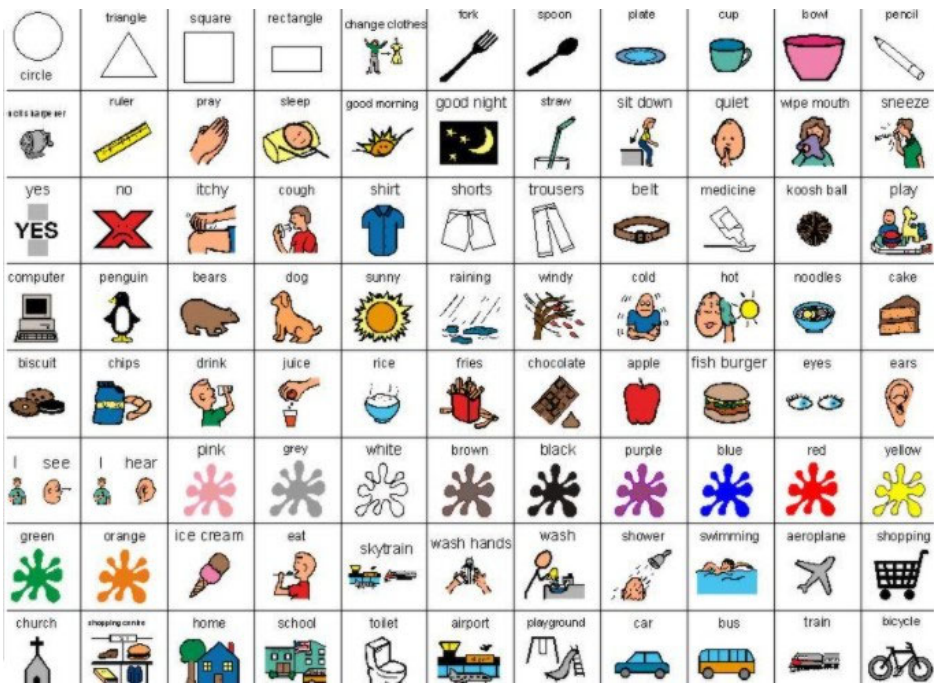


Fig. 5. An example of the PECS sheet used for communication

Thus, positive results and efficiency in the fight against coronavirus were achieved due to the well-coordinated work of the team of medical personnel under



the confident and sensitive management of the leadership, who monitored and provided the necessary support at all stages of the examination and treatment, used methods of flexible management, organization of team-work and an individual empathic approach to treatment. The team mode of work in the suitable environment, organization of the working process, acceptance of their roles by each member of the team made it possible to organize the optimal model for combating the pandemic not only by doctors but also by patients. All patients of the OPC gained more respect for doctors and other support services of the RUDN University, thus, showing maximum intentional assistance to the social system of the University in general and the medical system of in particular at every stage of their work. Positive communication, based on trust in the ‘doctor-patient’ relationship according to the basic Hippocratic principle to treat a person rather than a disease, served as a basis for developing a sense of security for patients, which, in turn, allowed healthcare professionals to fulfill their tasks in a calm atmosphere that significantly influenced the positive dynamics in the treatment of every patient and contributed to the successful results in the fight against the covid-19 pandemic in the entrusted area.

#### Acknowledgements

The authors would like to express deep gratitude to all employees and volunteers of the Outpatient Polyclinic Center for their effort, work, and respect. Thank you, dear colleagues!

#### References

- [1] Book H.E. Empathy: Misconceptions and misuses in psychotherapy. *American Journal of Psychiatry*. 1988; 145.
- [2] Grushin B.A. *Massovoe soznanie: Opyt preodolenija i problemy issledovanija* [Mass Consciousness: Coping Experience and Research Challenges]. Moscow; 1987 (In Russ.).
- [3] Holmes E.A., O'Connor R.C., Perry V.H. et al. Multidisciplinary research priorities for the covid-19 pandemic: A call for action for mental health science. *Lancet Psychiatry*. April 15, 2020. URL: [https://doi.org/10.1016/S2215-0366\(20\)30168-1](https://doi.org/10.1016/S2215-0366(20)30168-1).
- [4] Malakanova O.A., Skobeleva O.V. Rechevoj ekstremizm v novyh media: k postanovke problemy [Speech extremism in the new media: Setting an agenda]. Jubilejny sbornik nauchnyh trudov prepodavatelej, aspirantov i magistrantov sociologicheskogo fakulteta Samarskogo gosudarstvennogo universiteta. Samara; 2014 (In Russ.).
- [5] Maman S., Campbell J., Sweat M.D., Gielen A. The intersections of HIV and violence: Directions for future research and interventions. *Social Science and Medicine* 2000; 50.
- [6] McKenna D. *The Art of Scrum: How Scrum Masters Bind Dev Teams and Unleash Agility*. Aliquippa; 2016.
- [7] McLuhan H.M. *Ponimanie Media: Vneshnie rasshirenija cheloveka* [Understanding Media: The Extensions Of Man]. Moscow; 2003 (In Russ.).
- [8] Merton R.K. Basic research and potentials of relevance. *American Behavioral Scientist*. 1963; 6 (9).
- [9] Nazaretjan A.P. *Psihologija stihijnogo massovogo povedenijaaretjan* [Psychology of Spontaneous Mass Behavior]. Moscow; 2001 (In Russ.).
- [10] Olisen V., Whittaker E. *The Silent Dialogue: A Study in the Social Psychology of Professional Socialization*. San Francisco; 1968.
- [11] Peltokorpi A., Linna M., Malmström T., Torkki P., Lillrank P.M. Five focus strategies to organize health care delivery. *International Journal of Health Care Quality Assurance*. 2016; 29 (2).
- [12] Pflanz M.A Critique of Anglo-American medical sociology. *International Journal of Health Services*. 1974; 4 (3).

- [13] Rubin K. *Essential Scrum: A Practical Guide to the Most Popular Agile Process*. Addison-Wesley Professional; 2012.
- [14] Sutherland J. *Scrum: The Art of Doing Twice the Work in Half the Time*. Crown Business; 2014.
- [15] Viner R. Putting stress in life: Hans Selye and the making of stress theory. *Social Studies of Science*. 1999; 29 (3).
- [16] Wilson K., Bell C., Wilson L., Witteman H. Agile research to complement agile development: A proposal for an mHealth research lifecycle. *NPJ Digital Medicine*. 2018; 1.
- [17] Wolff H.H. Basic psychosomatic concepts. *Postgraduate Medical Journal*. 1971; 47.
- [18] Wong C., Odom S.L., Hume K., Cox A.W., Fetting A., Kucharczyk S., Brock M.E., Plavnick J.B., Fleury V.P., Schultz T.R. Evidence-Based Practices for Children, Youth, and Young Adults with Autism Spectrum Disorder. URL: <https://fpg.unc.edu/node/6614>.

DOI: 10.22363/2313-2272-2020-20-4-929-938

## **Контроль паники и взрывной заболеваемости в организованных коллективах (подход РУДН)\***

**Н.О. Данилина, А.С. Клименко, Ш. Гулова, В.А. Серяпов, С.В. Назюта**

Российский университет дружбы народов»  
ул. Миклухо-Маклая, 6, Москва, 117198, Россия  
(e-mail: [danilina-no@rudn.ru](mailto:danilina-no@rudn.ru); [klimenko-as@rudn.ru](mailto:klimenko-as@rudn.ru);  
[gulova-sh@rudn.ru](mailto:gulova-sh@rudn.ru); [va.seriapov@gmail.com](mailto:va.seriapov@gmail.com); [nazyuta-sv@rudn.ru](mailto:nazyuta-sv@rudn.ru))

В статье представлены результаты комплексного авторского исследования методов противодействия массовой панике и взрывной заболеваемости в условиях организованных коллективов (на примере целого ряда мероприятий, реализованных на базе РУДН в период «первой волны» пандемии covid-19). Авторами были использованы элементы теоретических и эмпирических, социологических и экспериментальных методик исследовательской работы. После того, как в марте 2020 года Всемирная организация здравоохранения (ВОЗ) объявила пандемию новой коронавирусной инфекции, мир уже никогда не будет прежним — изменилось большинство аспектов социального взаимодействия, и РУДН не мог остаться в стороне от глобальных и общероссийских тенденций. В статье концепция взаимодействия со стрессом и массовой паникой рассмотрена не на индивидуальном уровне, а на уровне работы полноразмерного медицинского учреждения с многонациональным и многокультурным сообществом из 9000 человек, полностью изолированным от остального социума. Авторам удалось разработать модель поведения врача, которая доказала свою эффективность при работе с населением молодого возраста (в возрасте от 18 до 35 лет), включая иностранных студентов, предоставила возможность контролировать (до определенного предела) настроение масс на вверенной территории, обеспечить более высокую приверженность лечению и эмоциональную поддержку на всех этапах лечения. Благодаря формированию у пациента ощущения контроля над своим состоянием, понимания происходящего и, как следствие, развития критического восприятия всей поступающей информации удалось значительно уменьшить негативное влияние массовой панической реакции. Как следствие, в доступном для наблюдения сообществе была выработана четкая дисциплина в соблюдении карантинных и изоляционных мер, что существенно сгладило пик кривой заболеваемости.

**Ключевые слова:** новая коронавирусная инфекция; пандемия; паника; средства массовой коммуникации; организованное сообщество; модель поведения врача

---

\* © Данилина Н.О., Клименко А.С., Гулова Ш., Серяпов В.А., Назюта С.В., 2020  
Статья поступила 28.06.2020 г. Статья принята к публикации 30.08.2020 г.