



# Instant messengers and health professionals' agency in Russian clinical settings<sup>☆</sup>

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## ABSTRACT

This research examines how Russian healthcare professionals use instant messengers (in particular, the group chat function on instant messengers) for work-related tasks. Based on qualitative interviews with Russian doctors and nurses conducted in spring 2020, the article explores how the informal implementation of instant messenger's group chat function facilitated and shaped health professionals' agency in two key areas of professional control: work regulation and medical knowledge. In the first case, front-line healthcare professionals used instant messengers to make horizontal connections, share relevant regulatory information, and smooth over organizational discrepancies. Hospital management, on the other hand, employed this technology as an additional tool for imposing top-down control on employees. The adoption of instant messengers for medical knowledge dissemination is more consistently linked with professional logic. By utilizing this technology, healthcare personnel not only shared clinical recommendations, publications, and clinical experience, but also fostered solidarity within the country's medical community and forged connections with international medical professionals. These findings support the social science assumption concerning the contextualized character of both professionalism and digital innovations in healthcare. In state-dominated Russian healthcare, instant messengers not only assist structurally disempowered professionals in dealing with pragmatic challenges, but also create more space for their ground-level discretion in the face of intense administrative pressure. Moreover, since the messaging technology helps Russian health workers in navigating and agentially connecting different knowledge and regulatory landscapes, it also fosters a new - trans-local and more reflexive - form of professionalism in post-socialist medicine.

## 1. Introduction

The unprecedented growth in the use of digital health technologies, particularly during and after the COVID-19 pandemic, has reinvigorated debates about the digital future of medicine (Budd et al., 2020; Hollander and Carr, 2020). This study contributes to the discussion on digitalization and medical professionalism by offering an account of WhatsApp (WhatsApp Inc.) and Telegram (Telegram Messenger Inc.) messengers' utilization in Russian healthcare. More specifically, this research focuses on instant messengers' group chat function (GC) and examines how, during the pandemic, healthcare practitioners adapted this technology, which lacks formal clinical applications, for their work.

Instant messaging technology is firmly rooted in our everyday lives. It enables quick and clear communication with text messages, as well as calls and the distribution of different file formats. Because of its versatility, this technology is increasingly being used for workplace

communication, acquiring a variety of meanings and usages across occupational contexts, including clinical settings. In this latter case, studies usually portray instant messengers as a reliable, cost-effective, and user-friendly instrument that is an adjunct to telemedicine (Giordano et al., 2017). Some researchers emphasize that messaging apps facilitate access to medical care, especially in health systems with the lack of medical personnel and the geographical scatteredness of hospitals (Martinez et al., 2018; Pahwa et al., 2018). Others describe this technology as particularly effective for rapid information exchange, coordination of medical teamwork, and consolidation of the medical community in emergencies (Johnston et al., 2015; Basu et al., 2017; Giordano et al., 2017; Abdel-Razig et al., 2021).

Most of the researchers in the field also express concerns about messaging apps being at odds with healthcare regulations. Since instant messenger apps do not correspond to the information governance policies of EU and US health systems, their usage for clinical

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communication creates threats to patients' privacy and data security (Johnston et al., 2015; Martinez et al., 2018; Giordano et al., 2017; Masoni and Guelfi, 2020). Moreover, extensive utilization of messaging apps for professional tasks results in health workers' constant accessibility, thus violating the boundaries of their personal time and amplifying stress (Pahwa et al., 2018).

However, when considering messaging apps, most of the studies tend to approach them as predesigned 'solutions' that are more or less useful for the clinical tasks at hand. This study seeks to go beyond such an instrumental approach and examine the contextualized relationships between the messaging technology and professionalism in the medical field. It draws on a critical analysis of technologies (Timmermans and Berg, 2003) and institutional studies of professions (see for e.g., Scott et al., 2000; Noordegraaf, 2016) to explore not only how social factors determine the use of technology, but also how technologies reconfigure professional practices and organizational relations in which they are embedded.

Scholars engaged in these intellectual traditions have already accomplished a considerable amount of work, tracing the dynamics between professionalism and digitalization in different healthcare contexts. Studies conducted in Europe, Australia, and the United States typically consider computer technologies in light of the challenges that standardization of medical practice and patient empowerment pose to professional authority and autonomy (Currie and Guah, 2007; Petrakaki and Kornelakis, 2016; Kamp and Hansen, 2019). When addressing less developed health systems, researchers examine whether digital tools can help in solving such pressing problems as insufficient professional knowledge and inequalities in healthcare access (Al Dahdah and Mishra, 2023; Petrakaki et al., 2023). This study adds to the discussion on social contingencies in the professionalism-digitalization relationship by concentrating on post-socialist Russian healthcare, which does not quite fit into the opposition between the Global North and the Global South.

The Russian health system is characterized by the twofold limitation of professional autonomy. On the one hand, in this highly centralized and bureaucratic structure, the state exercises extensive control over medical education, standards of practice, and professional associations (Saks, 2015). On the other hand, post-Soviet neoliberal reforms have advanced the principles of cost-effectiveness, accountability, and evidence-based standardization in medical services, further restricting professionals' discretion (Kamenschikova, 2018; Matveev and Novkunskaia, 2022). This study addresses this institutional context through qualitative interviews with Russian healthcare professionals and pursues two research aims. First, it explores how digital technologies (in particular, instant messaging technology) facilitate and shape professionals' agency in the face of intense managerial pressure. Second, it examines how digitization is affecting (post-socialist) professionalism in healthcare, specifically by offering clinical practitioners novel ways of engaging with medical knowledge and regulations.

## 2. Theoretical background

Sociological theories, including those that describe professional work, often mirror the environment in which they originate. In the case of digital health technologies and professionalism, current conceptualizations are largely molded by the transformation that 'Western' health professions and organizations have experienced since the second half of the twentieth century. The first sociological attempts to define (medical) professionalism took place on the eve of this transformation. Seeking to explain doctors' exceptional authority in the society of the time, scholars attributed it to the fact that professions, unlike other occupations, control the content and conditions of their work (Freidson, 1970). That is, professionals can regulate their own practice and coordinate the performance of auxiliary personnel because they exclusively possess expert knowledge, which is needed to accomplish the task (i.e., they control training, certification, and standards of practice).

The late 20th century, however, marked a decrease in professional

dominance in healthcare. As governmental agencies, insurance firms, and healthcare customers looked for cost-effectiveness, accountability, and efficiency in the delivery of medical services, they simultaneously challenged professional discretion in the field (Scott et al., 2000; Kuhlmann and Allsop, 2008; Numerato et al., 2012). By linking practice guidelines, performance indicators, and financial incentives, external parties enforced the standardization of clinical work and constrained professionals' decision-making (Timmermans and Almeling, 2009). With professional power in decline, the focus of academic discourse has shifted from analyzing professions to examining professionalism as a distinct institutional logic that foregrounds expertise and service quality. While essential for healthcare, this logic does not necessarily prevail; rather, it exists alongside, intersects with, or is subordinate to other organizational rationales, most notably market and managerial logics (Scott et al., 2000; Goodrick and Reay, 2011). Individual professionals often face normative uncertainties as a consequence of this institutional complexity. Some scholars put forth the notion of hybridized professionalism to capture this professional position at the intersection of diverse logics, as well as to recognize doctors' and nurses' efforts to reconcile professional and managerial values (Carvalho, 2014; McGivern et al., 2015).

Digital technologies entered the healthcare environment as a part of these major transformations. Hospital information systems and electronic patient records frequently turned into vehicles for managerial rationale and clinical routine standardization (Currie and Guah, 2007; Petrakaki et al., 2012). The greater focus on quantified digital data also impacted the knowledge hierarchies in the medical field, reducing the status of professionals' clinical judgment (Hoeyer and Wadmann, 2020). Yet, the results of digitalization for healthcare professions were far from straightforward.

Researchers commonly conclude that the introduction of digital technologies has led to the renegotiation of professional autonomy and authority rather than their restriction (Petrakaki and Kornelakis, 2016). In doctor-patient relations, technologies, such as health tracking apps and digital health platforms, empower patients vis-à-vis clinicians by equipping them with more information (Nielsen and Langstrup, 2018), but they also play a role in strengthening patients' trust in healthcare professionals (Piras and Miele, 2019). Regarding interprofessional dynamics, some researchers warn that hospital information systems and electronic patient records can disrupt traditional chains of accountability in medical practice (Nicolini, 2007; Ziebland et al., 2021). However, others argue that we evidence not a disturbance but a reallocation of responsibilities in favor of professionals who have direct involvement with hospital electronic systems (Håland, 2012; Kamp and Hansen, 2019).

Furthermore, institutional scholars document the rescaling of professional governance in two directions: downwards, with the growing importance of managerial control at the organizational level, and upwards, with the emergence of the supra-national regulatory bodies and international standards of practice (Faulconbridge and Muzio, 2012; Noordegraaf, 2016; Blok et al., 2018). Digital infrastructures mediate and intensify both of these processes, complicating relationships between organizational, institutional, and transnational levels of professionalism. Some studies document instances in which healthcare facilities use gig apps to recruit nurses, despite the lack of relevant institutional regulations (Lien, 2023). The others show how digital platforms entangle professional and institutional issues in unique cross-border ways, for example by introducing medical practitioners in the Global South to 'Western' standards of clinical practice (Petrakaki et al., 2023).

Professionals' own ground-level agency constitutes one of the factors behind this multilayered ambiguity over the effects of digitalization in healthcare. On the one hand, mundane professional efforts are crucial for adapting technologies to a given healthcare environment and reconfiguring power relations in it. As professionals familiarize themselves with digital health infrastructures, they not only make these

systems work but also expand the confines of their jurisdiction and improve their professional status (Håland, 2012; Petrakaki et al., 2012; Kamp and Hansen, 2019). On the other hand, since digitalization sometimes challenges conventional regulatory boundaries, professionals get involved in navigating and reflectively connecting standards and norms that belong to different contexts (Noordegraaf, 2016).

This study adds to the discussion on digital technologies, healthcare professionalism, and standardization of medical work by focusing on post-socialist Russian medicine. Rather than being external and contested influences, bureaucracy and managerialism have formed part and parcel of this system (Navarro, 1977: 113). Thus, from the viewpoint of the sociology of professions, (post)socialist medicine have constituted the ultimate alternative of the 'Western' medicine, as well as an instructive case, in comparison to which healthcare professions in other contexts can be better understood (Freidson, 1970; Saks, 2015). However, the digital transformation of post-socialist healthcare, particularly professionals' agency with regard to managerial pressure and new technologies, remains underexplored. In what follows, I describe in more detail the current state of the Russian medical field and professionals' positions within it. Based on this description, I proceed with examining how Russian doctors and nurses utilized instant messaging technology to increase their control (at least on the ground level) over two 'traditional' areas of professional discretion: content (knowledge) and conditions (regulation) of clinical work.

### 3. Russian healthcare: professional governance, digitalization, and COVID-19 management

The Russian health system presents a vivid example of institutional contradictions. The post-Soviet reforms were partially successful in marketization, liberalization, and internationalization of the country's healthcare: the health insurance system was established in the country, private clinics emerged (Cook, 2014), and 'Western' principles of evidence-based medicine were adopted as a foundation for medical practice (Geltzer, 2009). However, centralized health governance has never been fully dismantled. The state has preserved its dominance in healthcare financing and regulation, with state-funded medical organizations being the primary care provider for the Russian population (Shishkin et al., 2022).

This unstable mixture of statist and neoliberal policies has resulted in inconsistencies on the organisational level. Instead of creating incentives for more efficient care provision, Russian health insurance organizations evolved into bureaucratic intermediaries between the state budget and healthcare facilities (Gordeev et al., 2011; Shishkin et al., 2022). The Russian Ministry of Health gained responsibility for authorizing both medical standards and clinical recommendations, turning these documents into yet another means of administrative control over medical workers (Kamenschikova, 2018; Borozdina, 2023). Since the process of standards' development is bureaucratic and opaque, researchers problematize the dubious scientific basis of these documents, as well as contradictions between them (Starodubov et al., 2015).

The digitalization of Russian healthcare continues this list of institutional innovations that do not work quite as expected. While some digital services - making appointments with physicians online, doctor rating websites, and online medical consultations - were introduced as a convenience for patients and corresponded to the marketization trend (Bogomiagkova, 2022), overall healthcare digitalization has unraveled as a state-dominated process (Shepel et al., 2019). In 2006, the authorities launched the Foreground National Project 'Health' that aimed at introducing telemedicine systems in every Russian region and at assembling those systems into the unified state healthcare information system. The Foreground National Project 'Healthcare' (2019–2024) has continued this work with all Russian medical facilities, including private clinics, being legally obliged to join the new centralized digital infrastructure. The Russian nongovernmental association for the development of medical IT criticized both these projects for prioritizing state

administrative goals over healthcare tasks and the unequal distribution of medical IT technologies across the country (ARMIT, 2023).

State dominance in the healthcare sector has resulted in the disempowerment of healthcare professionals (Saks, 2015). The great majority of Russian doctors and nurses are employees of state medical organizations. Their work is regulated in a top-down manner through a chain of command, which includes the Russian Ministry of Health, its regional offices, and heads of the facilities. The functioning of medical organizations is also supervised by local governments (regional Health Committees and Health Departments), and several controlling bodies (the Federal Mandatory Health Insurance Fund, the Federal Services for Surveillance in Healthcare, the Investigative Committee, and the Federal Service for Consumer Rights Protection). Russian professional associations have only minor influence on healthcare regulation, with some researchers in the field harshly calling these associations' activities 'an imitation' (Shishkin et al., 2022: 49). Consequentially, most health professionals find themselves at the bottom of a power hierarchy, burdened with bureaucratic tasks, and in need of navigating (sometimes conflicting) rules imposed by different governing bodies (Kuhlmann et al., 2019; Litvina et al., 2020; Denisova et al., 2024).

The management of the COVID-19 pandemic reflected the general situation in the country's healthcare system. The universal care provision via mandatory health insurance contributed to wide access of the Russian population to COVID-19 diagnostics and treatments (Cook and Twigg, 2020; King and Dudina, 2021). The federal government played a leading role in defining Russia's pandemic response. However, its' decisions were inconsistent and frequently driven by political rationale. In early 2020, the federal authorities delegated a surprising amount of decision-making to regional governments in order to deflect responsibility for unpopular epidemiological restrictions. This sudden decentralization exacerbated institutional discrepancies in healthcare, since different governing bodies did not properly coordinate their actions (Åslund, 2020; Shirikov et al., 2023).

Moreover, during the pandemic, President Putin focused on advancing constitutional reform that would extend the duration of his presidency. As the health emergency interfered with this plan, the authorities tried to downplay the extent of the pandemic (Shirikov et al., 2023). They arguably manipulated COVID-19 mortality data (Karlinsky and Kobak, 2021). The state also silenced healthcare professionals who were dissatisfied with the poor material supply of hospitals and inconsistent regulations. In October 2020, the Russian Ministry of Health prohibited the country's health practitioners from spreading any information about the pandemic without the Ministry's formal approval (Meduza, 2020).

Several studies highlight that Russian health professionals, though disempowered on the structural level, still realize professional discretion and introduce innovations through ground-level organizational efforts (Novkunskaia, 2020; Borozdina, 2022). This study expands this line of research by discussing how ground-level institutional agency of Russian health professionals intertwines with their efforts of adopting the instant messaging technology to clinical settings.

### 4. Materials and methods

The empirical materials for the study consist of semi-structured qualitative interviews with Russian healthcare professionals, which were conducted in March–June of 2020 in the frame of the research project 'Medicine and professionals in the context of the COVID-19 pandemic'. The author of the article acted as the head of the project and participated in data collection. The question blocks of the interview guide were devoted to different aspects of change that the COVID-19 pandemic induced in healthcare: regulatory changes and their implementation in medical organizations; the development and dissemination of scientific knowledge about new infections; and professionals' own experience of the pandemic, including clinical but also emotional and bodily experiences. Questions about the usage of instant messengers

were spread across all the interview blocks. The project received ethical approval from the Ethical Committee of the St.Petersburg Sociological Association.

#### 4.1. Data generation

This study follows a purposive sampling strategy. As the focus of the research was on a pandemic-affected setting, the first interviews were conducted with healthcare professionals who provided medical care to patients with the coronavirus infection and worked in infectious disease hospitals, dedicated COVID-19 hospitals, or hospitals repurposed for the admission of COVID-19 patients. However, it became evident soon that the pandemic affects professional work in all medical organizations, regardless of their type. Thus, I also recruited informants from specialized, multispecialty, and research hospitals, outpatient clinics, and ambulance services. Since some issues regarding the organization of work required explanation from an administrative perspective, the materials were supplemented with several interviews with healthcare administrators. All informants were recruited using a snowball method, with the initial contacts obtained from social networks of the research team.

Overall, 49 healthcare workers from state-funded medical facilities participated in the study. Table 1 represents the distribution of the informants across workplaces and medical specializations in the resulting sample. The informants' work experience ranged in the sample from 1 to 36 years of work, with a median of 13.5 years of work. Notably, the research predominantly reflects the perspective of healthcare professionals from Russia's largest cities: 40 interviewees lived and worked in St. Petersburg, 6 were from Moscow, and only 3 were from smaller Russian cities. In the article, the informants are designated by their

**Table 1**  
Distribution of study respondents by workplace and medical specialization.

	Specialized, multispecialty, and research hospitals	Infectious disease hospitals, dedicated COVID-19 hospitals and hospitals repurposed for the admission of COVID-19 patients	Outpatient clinics	Ambulance service
<b>Nurses</b>	3	5		1
Chief nurses		1		
<b>Midwives</b>		1		
Chief midwives	2			
<b>Physicians</b>				
Allergology			1	
Anesthesiology and resuscitation	2	5		3
Cardiology	4	1		
Clinical pathology	1			
General practice		2	1	2
Gerontology	2			
Gynecology and obstetrics	1	1		
Infectious disease treatment		1		
Otolaryngology		1		
Pediatrics		2	1	
Surgery		2		
Chief physicians	2	1		
<b>TOTAL</b>	<b>17</b>	<b>23</b>	<b>3</b>	<b>6</b>

clinical specialty and a numerical code.

All interviews were conducted remotely, using the communication method preferred by the informant: Skype, WhatsApp, or phone call. The duration of the interviews ranged from 20 min to 2 h, with the average duration being 46 min. The majority of interviews were audio-recorded and transcribed verbatim. However, four informants objected to the voice recording. In these cases, the interviewers created detailed summaries of the talks in the form of text files. Two of the informants, due to their busy work schedules, were not able to devote sufficient uninterrupted time to the interview. The asynchronous mode of interviewing was employed in these cases; the conversation was held as an exchange of voice messages on WhatsApp, which were later transcribed.

#### 4.2. Data analysis

To analyze the data, I used a variation of the thematic analysis method (Deterding and Waters, 2021). First, I indexed the full texts of interviews using the following categories: regulatory changes, knowledge-related changes, personal pandemic experience, and digital technologies. The first three categories reflected different aspects of transformation that the pandemic brought to professional life (changes in regulation, knowledge, and clinical experience) and corresponded to the thematic blocks of the interview guide. The fourth category reflected the focus of this study on health professionals' interactions with digital technologies. At this stage, I also created memos to account for the particularities of each informant's case. This allowed me later to trace how different groups of professionals (e.g., front-line workers and administrators) utilized GCs in their work.

At the second stage, I coded the selected pieces of interviews using codes derived from the data. I singled out 116 codes, including the 'instant messengers' and 'group chats' codes. At the final stage, I delineated relations between different codes and categories in the interview texts, specifically focusing on the two codes mentioned above. I used the Atlas.ti program at all stages of the analysis.

In December 2023, when the COVID-19 pandemic was over, I contacted several informants from the initial sample to ask follow-up questions. The talks took place in Zoom, and I summarized their content in the form of text notes. I did not analyze those notes but used them to produce a description of instant messengers' clinical usage in a post-pandemic period.

### 5. Findings

The interview analysis identifies five ways in which health professionals employed instant messengers during the pandemic: (1) to disseminate information on regulatory changes; (2) to share new medical knowledge; (3) to provide emotional support; (4) to coordinate clinical work during the emergency; (5) to organize collective action. In this section, I start with a brief overview of instant messengers' role in Russian pandemic-affected healthcare. After that, I concentrate on the first two themes to trace how instant messaging technology mediated informants' agency in areas definitive for professionalism: expert knowledge and work regulation.

#### 5.1. The multiple applications of instant messengers in Russian clinics

In the first months of the COVID-19 pandemic, Russian medical facilities faced a rising tide of incoming orders and guidelines, which quickly replaced or contradicted one another. As the epidemiological restrictions came into force, the lack of face-to-face staff meetings further complicated the distribution of information and impeded the coordination of work. Hospitals' digital infrastructure could be a solution for some of these issues. However, its' design and operation corresponded to administrative rather than clinical purposes. For instance, some interviewees pointed out that their hospital administration, trying to control the spread of information, limited access to the electronic

records of the COVID-19 patients. Although the centralized Russian healthcare system discourages grassroots initiative, professionals increasingly utilized messaging apps on their personal mobile devices to ensure prompt and effective communication amid the health crisis.

*Those patients who have COVID are consulted remotely [by a cardiologist] (...) We have a unified patients' database within the hospital. Those patients who are admitted due to COVID, their medical records, and their presence in general are hidden [from the personnel]. Perhaps this is done so that the information does not leak out [of the hospital]. For me, they opened [access to those hidden] medical records (...) I had many questions about this patient. I waited for a very long, long time [to receive the answers via the hospital information system], but in the end I just called my [colleague], who was right there in the intensive care ward. He conveyed my questions to the patient (...) Then they sent me ECG results via WhatsApp. (cardiologist\_19)*

Messenger's group chat function became especially popular among healthcare practitioners. While interviewees occasionally used this technology at work before the pandemic, in March 2020, an entire ecosystem of GCs emerged in Russian clinical settings. Almost all medical facilities and subdivisions created inner GCs to deal with the organizations' immediate problems. For instance, as personnel were contracting coronavirus and dropping out, hospital administration used GCs to notify staff about the work schedule changes. Administrators also spread relevant regulatory materials via GCs. Professional associations established their own GCs to spread specialty-specific materials regarding the pandemic. There were GCs that responded to particular local problems. For example, in St. Petersburg, healthcare workers from different organizations created a GC to coordinate quarantine measures in students' dormitories. Finally, personnel at one St. Petersburg medical facility utilized a GC to compose a legal appeal to the city governor and mediate collective action. The quotation below illustrates how, during the pandemic, GCs, while not being an official channel of communication, became an inherent part of Russian clinical routine.

*There [in the GC] we share information with each other, and we solve all acute problems. There is a huge number of all sorts of bureaucratic moments: arranging papers, [issuing] sick leaves, extracting [information from the clinical records], transferring [the patients] to free wards [and] from occupied wards ... In general, we are trying to solve any current problem in this group. All the doctors that are involved [in care provision], they've been added to this group. (anesthesiologist-resuscitator\_17)*

Such instant messengers as WhatsApp and Telegram were not designed specifically for medical communication, thus lacking a well-defined set of clinical applications. However, this very quality made them easily adaptable to the multitude of unforeseen tasks that arose during the pandemic. An interview fragment below portrays Russian 'medical' GCs as a cauldron, where different types of information were mixed—from scientific and regulatory materials to details of patients' cases to professionals' expressions of emotional support.

*What is happening in these chats [GCs]? Well, colleagues post there ... There are some translated articles, there is information about patients, let's say, some information about patients of the neighboring department can be obtained from colleagues [via the GC]. And jokes are there too. People defuse the situation. (pediatrician\_14)*

Summing up, during the pandemic, GCs acquired many different meanings and usages in Russian clinical settings. They constituted efficient communication means and provided space for professional ground-level collaboration. However, given the lack of relevant regulations, GCs also turned into a vehicle through which patients' and professionals' personal data got disseminated without much consideration. In what follows, I discuss how instant messengers build into the interplay between managerial and professional rationales in Russian healthcare, and how this technology helped healthcare professionals carve more space for their (ground-level) discretion vis-à-vis

administrative pressure.

## 5.2. Instant messengers as vehicles for medical knowledge exchange

In the spring of 2020, Russian health professionals, like their counterparts in other countries, suffered an acute dearth of knowledge about the new coronavirus infection. However, in Russia's bureaucratized health system, this challenge was exacerbated by medical workers' lack of trust in official clinical guidelines and training. Since governmental bodies, rather than the medical community, controlled clinical work standards and education, informants frequently regarded those sources of information as scientifically unreliable, contradictory, and incomplete. The following quote illustrates this skepticism of health workers toward Russian clinical guidelines.

*There are some [Russian guidelines regarding the COVID-19] that were published. However, to be honest, I haven't read them deeply, because everyone just mocked them. I know a little bit about them. For example, [according to the guidelines] after contacting a patient with COVID, you should rinse your mouth with a twelve percent solution of alcohol .... In general, there is just a lot of stupid stuff there. (cardiologist\_3)*

The study participants, in particular doctors, considered the 'Western' medical profession as more advanced and powerful in terms of professionals' control over clinical knowledge. Many informants, who doubted official Russian sources, utilized foreign clinical recommendations and academic articles to support their decision-making. Doctors employed GCs to informally share and discuss this alternative knowledge. Constituting a space for professional solidarity, GCs offered access to scientific evidence on COVID-19 even to those health workers who lacked the language skills, research experience, or spare time to seek out foreign materials by themselves. Importantly, this technology also allowed for coupling the two types of medical expertise that are usually contraposed: formalized scientific knowledge presented in academic publications and the experiential knowledge of medical practitioners who were trying out new approaches.

*There is this acute lack of information. You know, these webinars [online training organized by the Russian Ministry of Health], unfortunately, they do not cover [all the issues] (...) Therefore, I try [to learn from] the experience of colleagues. Some discreet information is coming from social media. Personally, I am not a specialist in methods, I am not a researcher. So, I don't usually read foreign studies. But if there are, for example, some translated articles, they [colleagues] constantly post this information [in the GC]. (pediatrician\_14)*

The audience of some GCs extended far beyond the circle of immediate colleagues—to other organizations, other cities, and other countries. These GCs (usually specialization-specific) functioned as social networks for health professionals, facilitating the exchange of recent scientific information about coronavirus infection, providing a forum for sharing pandemic-relevant clinical experiences, and encouraging discussion on a variety of pandemic-related topics. Interviewees highly valued these GCs as a tool of consolidation for the Russian medical community but also as a means of integration with 'Western' medical profession.

*We know very well - we got to know it instantly in the online mode - what was happening in Italy [during the first wave of the COVID-19 pandemic]. We know what is happening in Germany. We also are in contact with our American colleagues (...) We have an inter-professional chat [GC]. I'm a big fan of professional communication there. We have a community there that exists for a long time - [doctors] not only from Moscow, but also from St. Petersburg, and from everywhere in Russia, and not only from Russia (...) [We discuss in the GC] not only medical stuff, but some information of public importance. (infectious disease doctor\_22)*

### 5.3. Instant messengers as vehicles for professional work regulation

The ever-reforming Russian healthcare system is notorious for regulatory inconsistencies. As the COVID-19 pandemic further complicated the situation, health workers had to develop elaborate strategies for finding relevant regulatory materials. The GCs constituted an essential component of such strategies; this technology helped professionals gather information from different administrative sources and promptly disseminate it. The following quotation illustrates the general confidence that professionals placed in orders and instructions communicated through instant messengers.

*Like most medical workers, we do not read some garbage, but [we read] official sources, official data. These are official documents from the Ministry of Health, from the regional government, from the government of the Russian Federation (...) We have a geriatricians' group on WhatsApp, where we are also informed about absolutely all the [regulatory] changes (...) These are all trusted sources. (gerontologist\_35)*

However, when it came to disseminating regulatory information, GCs often constituted the place where professional and managerial rationales collided. This study material allows for distinguishing between two types of GCs in Russian medical organizations: those created by administration and by front-line health workers. Administrators employed this technology as a rapid way of informing employees about new regulations. Some administrators oscillated to the professional role, using the messaging technology to get personnel feedback on the latest guidelines and work out context-sensitive adjustments. Whereas, others considered GCs as yet another instrument for exerting top-down control over personnel. In this latter case, instructions disseminated via GCs only aggravated the stress and uncertainty of the pandemic situation for hospital personnel. Front-line professionals recalled receiving via messaging apps abrupt orders that lacked necessary details, had dubious legal status, contradicted one another, or diverged from the situation on the ground. If workers tried to obtain clarifications or voice concerns, the administration frequently did not respond to their messages or deleted the GC to abort the discussion.

*This order completely disregarded all the basics of labor legislation. We were forbidden to [work part-time]. And everything was conditional—just words. There is this group on WhatsApp. This message was just sent out there [by the hospital administration]. I talked to my direct supervisor. I said, "How should I react to this? It's just a WhatsApp message. Is it some kind of order or what?" (anesthesiologist-resuscitator\_17)*

*They [the hospital administration] wrote the instruction in the common group [GC on WhatsApp]: "There should be no one on the territory of the hospital [without a protective mask]." The territory of the hospital ... But what is it exactly? Courtyard? Adjoining buildings? Wards? "There should be no one without masks or everyone will be deprived of bonuses". Everyone ... Who is 'everyone'? What bonuses? (nurse\_49)*

In order to coordinate their work more efficiently, front-line professionals created their own organization-level GCs. Unlike GCs that subjected healthcare practitioners to managerial rationale, 'professional' GCs fostered horizontal ties within the hospital community. The informants used them to spread context-relevant regulatory information and to bridge organizational discrepancies that emerged during the pandemic. With restricted formal opportunities for professional self-governance, such 'professional' GCs informally supported health workers' participation in decision-making.

*We have intra-hospital chats [on instant messenger], where we share some information with each other. (...) Our administration explains nothing and does not give any clear instructions (...) And we ourselves [front-line doctors], in fact, are often included in the process of somehow determining what is the best thing to do. (...) Some guidelines [are disseminated] only in internal chats [GCs], we exchange [information] in*

*professional chats. This information is spreading horizontally (anesthesiologist-resuscitator\_45)*

In the aftermath of the COVID-19 pandemic, Russian health practitioners continued using GCs for work-related purposes. However, with the restoration of normal clinical routine, the intensity of messenger-mediated communication has decreased, particularly in terms of spreading administrative orders and coordinating work. Another factor that affected the usage of GCs in post-pandemic Russia was a regulatory change. In 2022, the Russian Federal Law "On information, information technologies, and information protection" was amended to include a paragraph imposing fines on state organizations that use foreign instant messengers (WhatsApp, Telegram, Viber, etc.) to transfer personal data of Russian citizens. According to the authors of the amendment, the measure has been targeted predominantly at governmental bodies and financial organizations (Fedotova, 2023). However, since the majority of Russian healthcare workers are employed in state-funded facilities, this law has significantly limited their workplace usage of messaging apps.

## 6. Discussion and conclusion

Health systems across the globe are experiencing an unprecedented surge in the use of digital health technologies. The changes introduced by this new digital era build upon institutional transformations that have been unfolding in the medical sector for several decades, namely the rise of managerial rationale and the standardization of medical care provision. In line with this, many studies that consider the digitalization-professionalism relationship focus on (and sometimes argue for) systematic technological solutions, such as electronic patient records, hospital information systems, or digital platforms (Currie and Guah, 2007; Petrakaki and Kornelakis, 2016; Budd et al., 2020). This study adds to the discussion on the interaction between managerialism, digitalization, and professional discretion. However, it does this by focusing on instant messaging technology, a versatile instrument that lacks pre-designed healthcare applications and has been adapted for clinical purposes by front-line health workers.

Relying on qualitative interviews with Russian doctors and nurses, this article analyzes how messaging technology mediated professionals' agency in the highly centralized and state-dominated healthcare setting. At the time of data collection, there were no formal regulations regarding the use of instant messengers in Russian medical facilities. Medical practitioners informally introduced this digital tool into their practice. They extensively utilized it for a variety of purposes, such as sharing regulatory information, disseminating scientific knowledge, coordinating urgent work, providing emotional support, and even launching a collective action. The flexibility of this technology was precisely what made it an answer to a wide range of issues that the interviewees faced in their professional lives.

While instant messaging technology aided medical professionals in tackling immediate clinical responsibilities, most importantly, it helped them to deal with institutional inconsistencies and obtain more workplace autonomy. In post-socialist medicine, the volatile mixture of statist and neoliberal governing principles conditioned discrepancies between institutional rules and regulations (Matveev and Novkunskaya, 2022). It also determined the particularly weak position of healthcare professionals, who found themselves at the bottom of the state bureaucratic hierarchy and under pressure to provide cost-effective services (Litvina et al., 2020; Borozdina, 2023). Although this picture significantly differs from the notion of professionals as powerful social actors (Freidson, 1970), there are forms of agency that are still available for Russian doctors and nurses. This article provides insights into how professionals employed instant messengers to expand their discretion in two traditional areas of professional control: medical expertise and regulation of work.

The study participants actively used the messaging technology to

share different types of medical knowledge – from evidence-based standards, to research articles, to clinicians' experiential knowledge. With the assistance of the instant messengers' group chat function, front-line professionals were able to discuss and combine these multiple sources of information, tailoring their application to the situation on the ground. With regard to the dissemination of regulatory materials, the data shows a more ambiguous picture. While Russian health workers exercised initiative in bringing messaging apps into the clinical environment, intra-professional power differences still affected the modes of this technology application. On the one hand, the new method of communication helped health workers in navigating regulatory changes and adapting them to the volatile situation of the ground, particularly during the health crises. On the other hand, hospital administrators often used this same technology as an additional means of controlling medical professionals.

These findings support the social science assumption concerning the contextualized character of both professionalism and digital innovations in healthcare (see for e.g., [Timmermans and Berg, 2003](#); [Noordegraaf, 2016](#); [Petraiki et al., 2023](#)). The study depicts instant messengers as a technological bypass that Russian professionals used to engage with various standards, instructions, and sources of knowledge. Through this informal activity, front-line doctors and nurses tried to reduce administrative pressure, address discrepancies in institutional rules, and, ultimately, pursue the goal of quality in medical care.

Scholars have already noted that in healthcare, such technologies as digital health platforms and work platforms increase their users' discretion regarding the choice and nature of connections ([Lupton, 2014](#); [Lien, 2023](#)). In Russia, where formal professional associations lack power ([Shishkin et al., 2022](#)), instant messengers presented healthcare workers with an alternative way of fostering professional solidarity and self-governance. While sharing information via GCs, medical practitioners simultaneously developed collaborative networks with colleagues in the same facility, professionals throughout the country, and beyond Russia's borders. Notably, some of the interviewees used these networks as a means to initiate collective action.

Along with exploring contextualized professional agency, this study contributes to the growing debate on new forms of professionalism in the era of professional governance rescaling. Scholars involved in this debate call for investigating how, amidst increasing local administrative control and expanding international standards of practice, professionals assert their discretion and legitimize new jurisdictions by bridging different levels of governance ([Noordegraaf, 2016](#); [Blok et al., 2018](#)). By addressing the case of instant messengers in Russian clinical settings, my analysis provides insights into the role of digital technologies in the rise of such connective professionalism.

As my informants used GCs to exchange and discuss medical information from foreign sources, they not only tackled clinical tasks, but also aligned with the apparently more powerful 'Western' medical profession. Although in Europe and the US, evidence-based guidelines are frequently criticized for limiting professional autonomy (see, e.g., [Armstrong, 2002](#)), Russian health workers shared and unofficially implemented these 'Western' documents to attain wider professional discretion vis-a-vis local healthcare bureaucracy. Thus, rather than fully subjugating to or opposing standardization, they used GCs to engage with various standards in context-dependent ways. This finding demonstrates how, by helping professionals navigate different knowledge and regulatory landscapes, digital technology enables the development of new – reflexive and trans-local – professionalism in post-socialist healthcare.

It is important to emphasize, however, that the informal use of instant messaging technology for clinical purposes also amplified some uncertainties and vulnerabilities in healthcare work. Because of a lack of relevant legal norms, the informants used this technology without taking patient data protection into account. The ambiguous status of communication via messaging apps sometimes translated into medical personnel's doubts about the instructions transferred via GCs. Finally,

the sustainability of this technology as a vehicle for professional agency proved to be questionable, since official governing bodies were able to easily restrict its use.

## Ethics approval

This research has received ethical approval from the Ethical Committee of the St.Petersburg Sociological Association.

## CRediT authorship contribution statement

**Ekaterina Borozdina:** Writing – review & editing, Writing – original draft, Project administration, Formal analysis, Conceptualization.

## Data availability

The authors do not have permission to share data.

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## References

- Abdel-Razig, S., Anglade, P., Ibrahim, H., 2021. Impact of the COVID-19 pandemic on a physician group's WhatsApp chat: qualitative content analysis. *JMIR Form Res* 5 (12), e31791. <https://doi.org/10.2196/31791>.
- Al Dahdah, M., Mishra, R.K., 2023. Digital health for all: the turn to digitized healthcare in India. *Soc. Sci. Med.* 319, 114968 <https://doi.org/10.1016/j.socscimed.2022.114968>.
- ARMIT, 2023. Analytics of the association for the development of medical information technologies. <https://www.armit.ru/news/analitica/>. (Accessed 15 August 2023).
- Armstrong, D., 2002. Clinical autonomy, individual and collective: the problem of changing doctors' behaviour. *Soc. Sci. Med.* 55 (10), 1771–1777. [https://doi.org/10.1016/S0277-9536\(01\)00309-4](https://doi.org/10.1016/S0277-9536(01)00309-4).
- Aslund, A., 2020. Responses to the COVID-19 crisis in Russia, Ukraine, and Belarus. *Eurasian Geogr. Econ.* 61 (4–5), 532–545. <https://doi.org/10.1080/15387216.2020.1778499>.
- Basu, M., Ghosh, S., Jana, A., Bandyopadhyay, S., Singh, R., 2017. Medical requirements during a natural disaster: a case study on WhatsApp Chats among medical personnel during the 2015 Nepal earthquake. *Disaster Med. Public Health Prep.* 11 (6), 652–655. <https://doi.org/10.1017/dmp.2017.8>.
- Blok, A., Lindström, M.D., Meilvang, M.L., Pedersen, I.K., 2018. Trans-local professional projects: Re-scaling the linked ecology of expert jurisdictions. *Journal of Professions and Organization* 5 (2), 106–122. <https://doi.org/10.1093/jpo/joy003>.
- Bogomiagkova, E., 2022. 'Doveriaj, no proveriaj': praktiki zaboty o zdorovje v usloviakh cifrovizatsii zdravoohraneniia ['Trust but verify': health care practices in the context of digitalization]. *The Journal of Social Policy Studies* 20 (2), 263–278. <https://doi.org/10.17323/727-0634-2022-20-2-263-278>.
- Borozdina, E., 2022. Emotional labour as a vehicle of organisational change in maternity care: The case of Russian doulas' institutional work. *Sociol. Health Illness* 44 (7), 1059–1076. <https://doi.org/10.1111/1467-9566.13478>.
- Borozdina, E., 2023. Evidence-based medicine and physicians' institutional agency in Russian clinical settings. *Critical Public Health* 33 (4), 409–420. <https://doi.org/10.1080/09581596.2023.2180608>.
- Budd, J., Miller, B.S., Manning, E.M., et al., 2020. Digital technologies in the public-health response to COVID-19. *Nat. Med.* 26, 1183–1192. <https://doi.org/10.1038/s41591-020-1011-4>.
- Carvalho, T., 2014. Changing connections between professionalism and managerialism: a case study of nursing in Portugal. *Journal of Professions and Organization* 1 (2), 176–190. <https://doi.org/10.1093/jpo/jou004>.
- Cook, L.J., 2014. "Spontaneous privatization" in Russia and its political consequences in Russia's postcommunist health sector. In: Cammett, M., MacLean, L. (Eds.), *The Politics of Non-state Social Welfare*. Cornell University Press, pp. 217–236.
- Cook, L.J., Twigg, J., 2020. Can Russia's health and welfare systems handle the pandemic? *Curr. Hist.* 119 (819), 251–257. <https://doi.org/10.1525/cuhr.2020.119.819.251>.
- Currie, W.L., Guah, M.W., 2007. Conflicting institutional logics: a national programme for IT in the organisational field of healthcare. *J. Inf. Technol.* 22, 235–247. <https://doi.org/10.1057/palgrave.jit.2000102>.

- Denisova, M., Zvonareva, O., Horstman, K., 2024. To dwell or drown? Private clinics in the swampy infrastructure of cancer care in Russia. *SSM-Qualitative Research in Health* 5, 100375. <https://doi.org/10.1016/j.ssmqr.2023.100375>.
- Deterding, N.M., Waters, M.C., 2021. Flexible coding of in-depth interviews: a twenty-first-century approach. *Socio. Methods Res.* 50 (2), 708–739. <https://doi.org/10.1177/0049124118799377>.
- Faulconbridge, J.R., Muzio, D., 2012. Professions in a globalizing world: towards a transnational sociology of the professions. *Int. Sociol.* 27 (1), 136–152. <https://doi.org/10.1177/0268580911423059>.
- Fedotova, V., Koch, H., Godoy-Santos, A., Belangero, W.D., Pires, R.E.S., Labronici, P., 2017. WhatsApp messenger as an adjunctive tool for telemedicine: an overview. *Interact J Med Res* 6 (2), e11. <https://doi.org/10.2196/ijmr.6214>.
- Goodrick, E., Reay, T., 2011. Constellations of institutional logics: changes in the professional work of pharmacists. *Work Occup.* 38 (3), 372–416. <https://doi.org/10.1177/0730888411406824>.
- Gordeev, V.S., Pavlova, M., Groot, W., 2011. Two decades of reforms. appraisal of the financial reforms in the Russian public healthcare sector. *Health Pol.* 102 (2–3), 270–277. <https://doi.org/10.1016/j.healthpol.2010.08.009>.
- Håland, E., 2012. Introducing the electronic patient record (EPR) in a hospital setting: boundary work and shifting constructions of professional identities. *Sociol. Health Illness* 34 (5), 761–775. <https://doi.org/10.1111/j.1467-9566.2011.01413.x>.
- Hoeyer, K., Wadmann, S., 2020. 'Meaningless work': how the datification of health reconfigures knowledge about work and erodes professional judgement. *Econ. Soc.* 49 (3), 433–454. <https://doi.org/10.1080/03085147.2020.1733842>.
- Hollander, J.E., Carr, B.G., 2020. Virtually perfect? Telemedicine for covid-19. *N. Engl. J. Med.* 382, 1679–1681. <https://doi.org/10.1056/NEJMp2003539>.
- Johnston, M., King, D., Arora, S., Behar, N., Athanasiou, T., Sevdalis, N., Darzi, A., 2015. Smartphones let surgeons know WhatsApp: an analysis of communication in emergency surgical teams. *Am. J. Surg.* 209 (1), 45–51. <https://doi.org/10.1016/j.amjsurg.2014.08.030>.
- Kamenshchikova, A., 2018. Medico-economic standards in Russia: balancing legal requirements and patients' needs. In: Zvonareva, O., Popova, E., Horstman, K. (Eds.), *Health, Technologies, and Politics in Post-Soviet Settings: Navigating Uncertainties*. Palgrave Macmillan, pp. 117–142.
- Kamp, A., Hansen, A.M., 2019. Negotiating professional knowledge and responsibility in cross-sectoral telemedicine. *Nordic Journal of Working Life Studies* 9 (S5). <https://doi.org/10.18291/njwls.v9iS5.112691>.
- Karlinsky, A., Kobak, D., 2021. Tracking excess mortality across countries during the COVID-19 pandemic with the World Mortality Dataset. *Elife* 10, e69336. <https://doi.org/10.7554/eLife.69336>.
- King, E., Dudina, V., 2021. COVID-19 in Russia: should we expect a novel response to the novel coronavirus? *Global Publ. Health* 16 (8–9), 1237–1250. <https://doi.org/10.1080/17441692.2021.1900317>.
- Kuhlmann, E., Allsop, J., 2008. Professional self-regulation in a changing architecture of governance: comparing health policy in the UK and Germany. *Pol. Polit.* 36 (2), 173–189. <https://doi.org/10.1332/030557308783995099>.
- Kuhlmann, E., Shishkin, S., Richardson, E., Ivanov, I., Shvabskii, O., Minulin, I., Shcheblykina, A., Kontsevaya, A., Bates, K., McKee, M., 2019. Understanding the role of physicians within the managerial structure of Russian hospitals. *Health Pol.* 123 (8), 773–781. <https://doi.org/10.1016/j.healthpol.2019.05.020>.
- Lien, C.Y., 2023. Temp nurses go digital: examining gig care in US nursing homes. *Sociol. Health Illness* 45 (3), 542–559. <https://doi.org/10.1111/1467-9566.13600>.
- Litvina, D., Novkunskaia, A., Temkina, A., 2020. Multiple vulnerabilities in medical settings: invisible suffering of doctors. *Societies* 10 (1). <https://doi.org/10.3390/soc10010005>. Article 5.
- Lupton, D., 2014. The commodification of patient opinion: the digital patient experience economy in the age of big data. *Sociol. Health Illness* 36 (6), 856–869. <https://doi.org/10.1111/soc4.12226>.
- Martinez, R., Rogers, A., Numanoglu, Rode, H., 2018. The value of WhatsApp communication in paediatric burn care. *Burns* 44 (4), 947–955. <https://doi.org/10.1016/j.burns.2017.11.005>.
- Masoni, M., Guelfi, M.R., 2020. WhatsApp and other messaging apps in medicine: opportunities and risks. *Intern Emerg Med* 15 (2), 171–173. <https://doi.org/10.1007/s11739-020-02292-5>.
- Matveev, I., Novkunskaia, A., 2022. Welfare restructuring in Russia since 2012: national trends and evidence from the regions. *Eur. Asia Stud.* 74 (1), 50–71. <https://doi.org/10.1080/09668136.2020.1826907>.
- McGivern, G., Currie, G., Ferlie, E., Fitzgerald, L., Waring, J., 2015. Hybrid manager-professionals' identity work: the maintenance and hybridization of medical professionalism in managerial contexts. *Publ. Adm.* 93 (2), 412–432. <https://doi.org/10.1111/padm.12119>.
- Meduza, 2020. Minzdrav zapretil vracham publichno vyskazyvatsya o koronavirusie [The Ministry of Health has banned doctors from speaking publicly about coronavirus]. <https://meduza.io/news/2020/10/28/minzdrav-zapretil-vracham-publichno-vyskazyvatsya-o-koronavirusie>. (Accessed 4 August 2024).
- Navarro, V., 1977. *Social Security and Medicine in the USSR: A Marxist Critique*. Lexington Books.
- Nicolini, D., 2007. Stretching out and expanding work practices in time and space: the case of telemedicine. *Hum. Relat.* 60 (6), 889–920. <https://doi.org/10.1177/0018726707080080>.
- Nielsen, K.D., Langstrup, H., 2018. Tactics of material participation: how patients shape their engagement through e-health. *Soc. Stud. Sci.* 48 (2), 259–282. <https://doi.org/10.1177/0306312718769156>.
- Noordegraaf, M., 2016. Reconfiguring professional work: changing forms of professionalism in public services. *Adm. Soc.* 48 (7), 783–810. <https://doi.org/10.1177/00953997135092>.
- Novkunskaia, A., 2020. Professional Agency and Institutional Change: Case of Maternity Services in Small-Town Russia. University of Helsinki. Digital Repository of the University of Helsinki. Doctoral dissertation. <http://hdl.handle.net/10138/311872>.
- Numerato, D., Salvatore, D., Fattore, G., 2012. The impact of management on medical professionalism: a review. *Sociol. Health Illness* 34 (4), 626–644. <https://doi.org/10.1111/j.1467-9566.2011.01393.x>.
- Pahwa, P., Lunsford, S., Livesley, N., 2018. Experiences of Indian health workers using WhatsApp for improving aseptic practices with newborns: exploratory qualitative study. *JMIR Med Inform* 6 (1), e13. <https://doi.org/10.2196/medinform.8154>.
- Petrakaki, D., Barber, N., Waring, J., 2012. The possibilities of technology in shaping healthcare professionals: (re/de-)professionalisation of pharmacists in England. *Soc. Sci. Med.* 75 (2), 429–437. <https://doi.org/10.1016/j.socscimed.2012.03.033>.
- Petrakaki, D., Kornelakis, A., 2016. 'We can only request what's in our protocol': technology and work autonomy in healthcare. *New Technol. Work. Employ.* 31 (3), 223–237. <https://doi.org/10.1111/ntwe.12072>.
- Petrakaki, D., Chamakiotis, P., Curto-Millet, D., 2023. From 'making up' professionals to epistemic colonialism: digital health platforms in the Global South. *Soc. Sci. Med.* 321, 115787. <https://doi.org/10.1016/j.socscimed.2023.115787>.
- Piras, E.M., Miele, F., 2019. On digital intimacy: redefining provider-patient relationships in remote monitoring. *Sociol. Health Illness* 41, 116–131. <https://doi.org/10.1111/1467-9566.12947>.
- Saks, M., 2015. *The Professions, State and the Market; Medicine in Britain, the United States and Russia*. Routledge.
- Scott, W.R., Ruef, M., Mendel, P., Caronna, C., 2000. *Institutional Change and Healthcare Organizations: from Professional Dominance to Managed Care*. The University of Chicago Press.
- Shepel, R.N., Kutcher, A.V., Vakhovskaya, T.V., Drapkina, O.M., 2019. Istoriya razvitiya telemeditsiny v Rossijskoi Federatsii [History of the development of telemedicine in the Russian Federation]. *Emergency Cardiology and Cardiovascular Risks* 3 (2), 765–771. <https://org.gnicpm.ru/wp-content/uploads/2021/12/tm.pdf>.
- Shirikov, A., Umanets, V., Herrera, Y., 2023. Russia: muddling through populism and the pandemic. In: Ringe, N., Rennó, L. (Eds.), *Populists and the Pandemic: How Populists Around the World Responded to COVID-19*. Routledge, pp. 173–183.
- Shishkin, S.V., Sheiman, I.M., Vlasov, V.V., Potapchik, E.G., Sazhina, S.V., 2022. Strukturnyye izmeneniya v zdoravookhraneni: tendentsii i perspektivy [Structural changes in healthcare: trends and perspectives]. In: Conference Paper. XXIII Yasin International Scientific Conference on Problems of Economic and Social Development. HSE Press. [https://conference.hse.ru/files/download\\_file\\_ex?id=D2B9E680-EF14-3F89-4D08-7ABDE5EA833A&hash=097802899BB248D8E5442DB15E40414C](https://conference.hse.ru/files/download_file_ex?id=D2B9E680-EF14-3F89-4D08-7ABDE5EA833A&hash=097802899BB248D8E5442DB15E40414C).
- Starodubov, V., Efremova, T., Korobov, N., Loshakov, L., 2015. Standarty meditsinskoy pomoshchi v sisteme zdoravookhraneniya rossijskoy federatsii: sostoyaniye i perspektivy. [Standards of medical care in Russian healthcare system: condition and perspectives]. *Zdoravookhraneniye Rossijskoy Federatsii*. 59 (4), 4–9.
- Timmermans, S., Almeling, R., 2009. Objectification, standardization, and commodification in health care: a conceptual readjustment. *Soc. Sci. Med.* 69 (1), 21–27. <https://doi.org/10.1016/j.socscimed.2009.04.020>.
- Timmermans, S., Berg, M., 2003. The practice of medical technology. *Sociol. Health Illness* 25 (3), 97–114. <https://doi.org/10.1111/1467-9566.00342>.
- Ziebland, S., Hyde, E., Powell, J., 2021. Power, paradox and pessimism: on the unintended consequences of digital health technologies in primary care. *Soc. Sci. Med.* 289, 114419. <https://doi.org/10.1016/j.socscimed.2021.114419>.