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Health and safety of primary care workers during the pandemic period of COVID-19: Rio Grande do Sul/Brazil

Saúde e segurança de trabalhadores da atenção primária durante o período de pandemia do covid-19: Rio Grande do Sul/Brasil

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Abstract

Introduction: Health professionals are among the population directly exposed to the COVID-19 virus, due to their work, in the assistance and care they provide to infected people. Objectives: to analyze health and safety aspects of primary care workers in southern Brazilian cities, in the context of the COVID-19 pandemic. **Materials and methods:** quantitative and descriptive research, carried out from a population-based study. The participants were primary care health professionals from 13 municipalities in the interior of Rio Grande do Sul. Data collection took place in 2020, using a previously structured questionnaire consisting of 34 closed questions. Absolute and relative frequencies were evaluated. **Results:** the analysis showed that the Primary Care professionals in this study have adequate working conditions, 60 (78.9%) reported not having been impacted by the pandemic, 19 (25%) were on leave due to respiratory symptoms, 74 (97, 4%) of the professionals reported having changed the way and frequency of use of PPE, 51 (67.1%) reported that, during the pandemic, there was a financial investment in the purchase of materials and equipment by their work institution and 64 (84.2%) mentioned the creation of new flows and routines during health care. Due to the pandemic situation, some professionals (5.3%) needed to leave due to contamination, as well as mental health issues. **Conclusions:** The adherence of workers to prevention measures and the correct use of PPE during the pandemic was evidenced, as well as the analysis of several municipalities allowed for different work situations.

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Keywords: Coronavirus Infections; Health professionals; Work conditions; Safety at work; Primary Health Care.

Resumo

Introdução: Profissionais da saúde estão entre a população exposta ao vírus da COVID-19 de forma direta, devido ao seu trabalho, na assistência e cuidado que dispensam às pessoas infectadas. Objetivos: analisar aspectos da saúde e segurança de trabalhadores da Atenção Primária em municípios do sul do Brasil, no contexto da pandemia da COVID-19. Materiais e métodos: pesquisa quantitativa e descritiva, realizada a partir de um estudo de base populacional. Os participantes foram profissionais de saúde da Atenção Primária de 13 municípios do interior do Rio Grande do Sul. A coleta de dados ocorreu em 2020, com questionário previamente estruturado composto por 34 perguntas fechadas. Avaliaram-se frequências absolutas e relativas. Resultados: a análise evidenciou que os profissionais da Atenção Primária deste estudo têm condições laborais adequadas, 60 (78,9%) referiram não ter sofrido impacto com a pandemia, 19 (25%) ficaram afastados devido a sintomas respiratórios, 74 (97,4%) dos profissionais informaram ter modificado a forma e frequência de uso de EPIs, 51 (67,1%) relataram que, durante a pandemia, houve investimento financeiro para compra de materiais e equipamentos por parte da sua instituição de trabalho e 64 (84,2%) mencionaram a criação de novos fluxos e rotinas durante os atendimentos em saúde. Devido à situação pandêmica, alguns profissionais (5,3%) precisaram afastar-se por contaminação, bem como, questões de saúde mental. Conclusões: Evidenciou-se a adesão dos trabalhadores às medidas de prevenção e o uso correto dos EPI durante a pandemia, bem como, a análise de diversos municípios possibilitou situações de trabalho distintas.

Palavras-chave: infecções por coronavírus; profissionais de saúde; condições de trabalho; segurança no trabalho; atenção primária à saúde.

Introduction

The report published by the World Health Organization, in May 2021, reveals the current picture of the pandemic caused by COVID-19, where more than 166 million confirmed cases and around three million deaths from the disease are documented[1]. In Brazil, in the same period, the number of people affected by the virus has been growing gradually and the country has confirmed more than 16 million cases and 449 thousand deaths[2].

Brazil and many other countries have concentrated their actions to combat coronaviruses in hospital services, expanding the number of beds, especially for intensive care units. Without intending to detract from the importance of these achievements, it is alerted that in Primary Health Care (PHC), much can be done in pandemic situations[3]. For this, it is necessary to establish a reorganization of primary care services in the fight against the pandemic as well as seeking to maintain the supply of fundamental actions carried out in the territories[4].

Family Health Strategies (ESFs), units that are part of the PHC network, are characterized as the main gateway for users into the Unified Health System (SUS) and stand out for their multidisciplinary actions, based on promotion, protection and recovery of the population's health, acting holistically and respecting the demands and individualities of each territory[5]. Thus, it is necessary to maintain contact and bond between people and professionals to strengthen the work in the primary care network[3].

Health professionals are among the population directly exposed to the virus, due to their work, the assistance and care they provide to infected people. The high viral load they are likely to receive, as well as the stress when treating patients, some in serious situations and working conditions, often inadequate, are challenges to be overcome on a daily basis[6,7]. Thus, one of the ways to offer protection and safety to professionals that is well known and widespread is the use of Personal Protective Equipment (PPE), such as masks, gloves, aprons,

glasses, face shields and through standard isolation, contact protocols and by air[7].

In a pandemic situation, physical wear and tear is common among professionals, however, another aspect that needs to be considered concerns the mental health of workers who work on the front lines of COVID-19, in the most diverse levels of care. It is necessary to observe the scenario in which professionals are inserted, as well as to consider the workload that is imposed on them, which impacts, albeit indirectly, their mental health. Thus, it is urgent to carry out individual, collective and institutional measures to mitigate the harmful effects on workers[8,9].

COVID-19 has many impacts related to worker health, hence the practical importance of infection control in work environments, as well as prevention of contagion among workers, considering their physical safety, working conditions and emotional and psychological stability. All these aspects are essential for the continuation of services and the quality of life of professionals[10,11,12]. It is considered that fighting the pandemic is part of the essential functions of public health, through actions aimed at the population or groups at higher risk of contamination, such as health professionals[13].

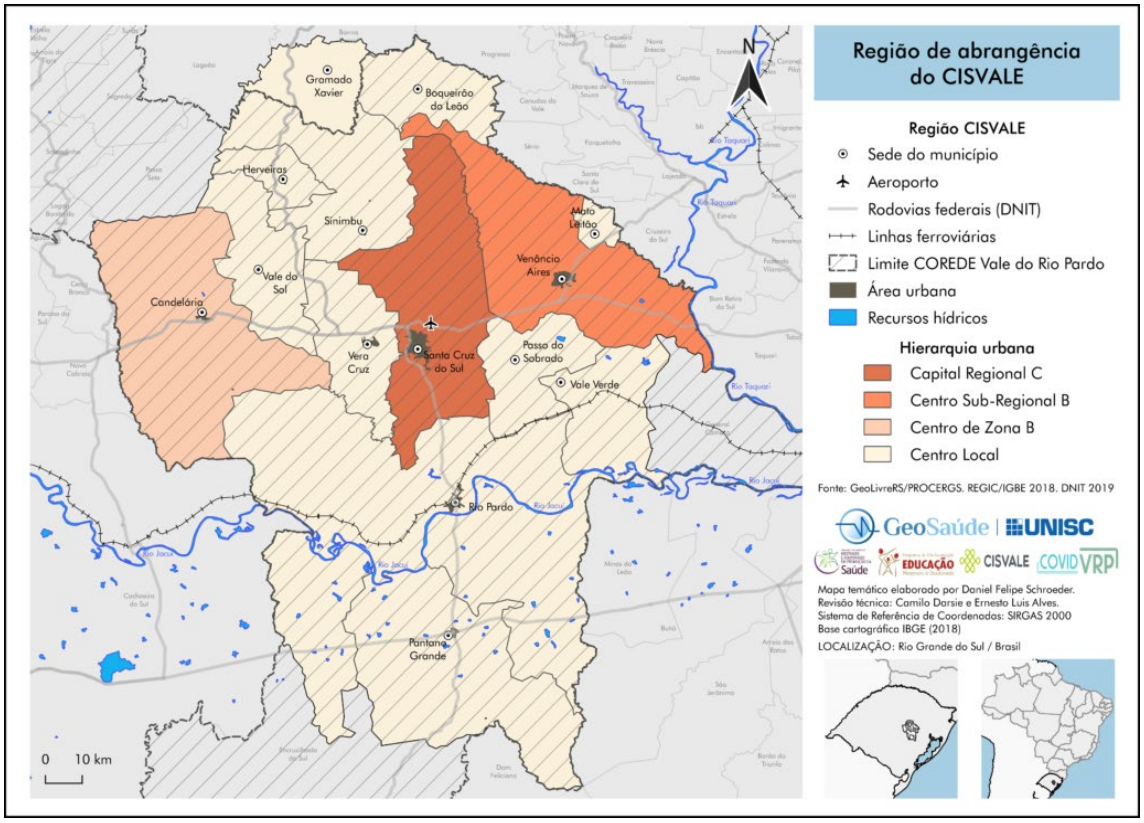
It is noteworthy that a determining factor for carrying out this study in municipalities in Rio Grande do Sul/Brazil was the option to investigate primary health care workers, who experience work situations with social, economic, political and cultural characteristics and specificities. and that can be decisive for the organization of work in pandemic situations, different from the reality of large urban centers.

Considering the work context exercised in the primary health care network, in order to know the situations experienced by health professionals at work during the pandemic and aiming to serve as a subsidy for future improvements and adjustments in workers' health, this study aims to objective to analyze health and safety aspects of primary care workers in municipalities in southern Brazil, in the context of the COVID-19 pandemic.

Materials and methods

This is a quantitative, descriptive study, part of a population-based study entitled “Seroprevalence Study of SARS-Cov-2 in the Vale do Rio Pardo Region (COVID-VRP)”. This article refers to the second moment of a research that involved 14 municipalities that are part of the Intermunicipal Services Consortium of Vale do Rio Pardo (CISVALE), located in the interior of Rio Grande do Sul/Brazil, as shown in Figure 1.

Figure 1 - Map of the region covered by CISVALE



The first stage of the population-based study measured the seroprevalence of SARS-CoV-2 in the population that is part of CISVALE. Data collection took place between August and October 2020, through rapid tests and questionnaires with the population. The second stage of the research, to which this article refers, and whose data collection took place in November 2020, covered primary care health professionals from 13 of the 14 cities in CISVALE.

Together, the evaluated municipalities have a population of approximately 228,788 inhabitants, who share extensive rural and predominantly agricultural areas, based mainly on tobacco production. Most of the health vulnerability situations in this region are related to work in agriculture, the aging process and non-communicable diseases. Almost in its entirety, the cities mentioned have a large percentage of coverage of the Family Health Strategy (ESF) and some have hospital units that offer medium complexity care, however, many high complex care are referred to regionalized reference centers, agreed upon by the management.

In all, 97 health professionals were eligible for this study. For this purpose, the inclusion criteria were to be a primary health care professional and to have participated as a collector of a rapid SARS serology test – COV-2 and a questionnaire with the population of CISVALE's municipalities.

For data collection, a previously structured and tested questionnaire was used, consisting of 34 closed questions made and registered in the Google Forms tool and sent via email, with a link to access professionals. During access, participants received an invitation to participate in the study, as well as guidance, clarification and the Informed Consent Form (FICF).

The collected information was typed in Excel and later exported to a

database, and, through the Jasp program version 013.1, statistical analyzes were performed, evaluating absolute and relative frequencies. The study was approved by the Research Ethics Committee of the University of Santa Cruz do Sul, under number 4,278,695.

Results

Of the 97 health professionals eligible for the study, 76 (78.3%) answered the questionnaire and joined the present study. Table 1 presents the sociodemographic data of the participants in this research.

Table 1 - Sociodemographic characteristics of the participating professionals.

CHARACTERISTIC	N = 76	%
Sex		
Woman	74	97,3
Man	2	2,7
Skin color		
White	68	89,5
Brown	6	7,9
Black	2	2,6
Marital Status		
Married	32	42,2
Single	23	30,2
Stable Union	15	19,7
Divorced	6	7,9
Age range		
31 - 40 years old	28	37
41-50 years old	27	35,5
21 - 30 years old	12	15,8
51 - 60 years old	9	11,9
Religion		
Catholic	48	63,2
Evangelical	16	21,1
Spiritist	9	11,8
No religion	2	2,6
African	1	1,3
Education		
Technical Course	29	38,1
Post Graduation	27	35,5
Higher Education Complete	12	15,9
Incomplete Higher Education	8	10,5
Family income*		
Between 5 and 10 minimum wages	32	42.1
Between 3 and 5 minimum wages	19	25
Between 1 and 3 minimum wages	16	21,1
Between 11 and 24 minimum wages	6	7,8
Between half and 1 minimum wage	3	4

*The value of the minimum wage is considered, according to the national floor, R $1,045.
Source: Study data, 2020.

This study was predominantly composed of female health workers 74 (97.3%), most respondents were white 68 (89.5%), were aged between 31 and 40 years, married 32 (42.2%), 48 (63.2%) Catholics and 29 (38.1%) with technical training.

Regarding family aspects, 57 (75%) of the professionals said they had between one and two children. When analyzing the sample, it is highlighted that 27 (35.5%) of respondents live with their partner and children, 16 (21.1%) only with a partner, 13 (17.1%) with family members, considered here as parents, uncles, grandparents and/or other relatives, 12 (15.8%) with children and 4 (5.3%) live alone. Furthermore,

among the public with whom the health professionals lived, 36 (47.4%) of the sample were children, 14 (18.4%) were elderly and 11 (14.5%) had risk factors such as hypertension, diabetes, cancer, among others. Most participants 32 (42.1%) declared having an individual income between R$ 5,641.60 to R$ 11,279.13, which, according to the classification of the Brazilian Association of Research Companies (ABEP) represents class B, equivalent between 5 and 10 minimum wages and 3 (4%) of the people declared to receive between R$ 719.81 to R$ 1,748.58, half and one minimum wage (class E).

As for occupational aspects, as shown in table 2, 36 (47.3%) of the respondents were nursing technicians, followed by 28 (36.8%) nurses. Regarding the time working in the health network, 35 (46%) of the participants had more than 10 years of service and 5 (6.6%) reported having been working in the network for less than a year. When asked about more than one employment relationship, 58 (76.3%) have a job, with the majority 63 (82.9%) working 21 to 40 hours a week, 63 (82.9%) in the morning shift and 68 (89.5%) in the afternoon. It was found that 56 (73.7%) worked in primary health care units (Family Health Strategies (ESF) and Basic Health Units (UBS)), located in the urban area 61 (80.3%).

Table 2 - Occupational characteristics of the participating professionals.

OCCUPATIONAL DATA	N = 76	%
Occupation		
Nursing Technician	36	47,3
Nurse	28	36,8
Social Worker	4	5,2
Dental Surgeon	3	3,9
Psychologist	2	2,6
Occupational Therapist	1	1,3
Receptionist	1	1,3
Physician	1	1,3
Time of professional activity in the health network		
11 years or more	35	46
From 1 to 5 years	22	29
6 - 10 years	14	18,4
Less than 1 year	5	6,6
Employment relationships		
Only one employment relationship	58	76,3
More than one employment relationship	18	23,7
Working hours		
21-40 hours weekly	63	82,9
41-60 hours weekly	8	10,5
61-80 hours	4	5,3
Less than 20 hours	1	1,3
Workplace		
ESF/UBS	56	73,7
CAPS	10	13,1
Others	6	7,9
Health Surveillance	4	5,3
Time off work during the pandemic		
No	47	61,9
Yes	29	38,1
Reasons for absence from work		
Respiratory symptoms	19	25
Mental health	4	5,3
Risk factors for COVID-19	3	4
Due to COVID-19	2	2,6

Family follow-up	1	1,3

Source: Study data, 2020.

As for issues related to health at work, 47 (61.9%) reported not having left their occupational activities during the pandemic, until the moment they responded to the survey. However, it is noteworthy that some of the reasons that led to the professionals' leave were respiratory symptoms (19 - 25%) and mental suffering (4 - 5.3%). When asked about the impact generated by the pandemic on the working day, 60 (78.9%) reported not having undergone any changes.

When addressing the topic of safety and protection at work (Table 3), the participants made notes about the use of Personal Protective Equipment (PPE), thus, 74 (97.4%) of the professionals reported having changed the form and frequency of use of them after the start of the pandemic, in order to increase them to protect themselves. Furthermore, according to 76 respondents (100%), the most used PPE was the mask (100%), followed by gloves (76%), disposable apron, surgical pajamas and/or Tyveck (67.1), glasses (56, 6%) and face shield (48.7%).

Most of the workers 51 (67.1%) reported that during the pandemic, there was a financial investment in the purchase of materials and equipment by their work institution. In addition, 64 (84.2%) of the professionals reported changes in flows and routines in the workplace, as well as 41 (53.9%) reported having received training and/or training on COVID-19 (Table 3).

Table 3 - Data on protection and safety at work of the professionals participating in the pandemic

SECURITY	N = 76	%
Modifications to PPE use		
Yes	74	97,4
No	2	2,6
PPE's most used		
Masks	76	100
Gloves	59	76
Disposable apron, surgical pyjamas and/or Tyveck	51	67,1
Face Shield	43	56,6
Glasses	37	48,7
Investments for Health		
Yes	51	67,1
No	25	32,9
Changes in workplace flows and routines		
Yes	64	84,2
No	12	15,8
COVID-19 Capacity building and/or training		
Yes	41	53,9
No	35	46,1

Source: Study data, 2020.

Discussion

When analyzing the sociodemographic profile of the subjects of this study, there was a predominance of females among the health professionals of the PHC, which is in line with a study carried out in Family Health Strategies in the South Region, where 95.1% of the subjects were women, confirming the trend of feminization of the workforce in primary care[15,16]. This situation can be justified by the fact that women represent the largest workforce, especially in health-related activities, when compared to men[17].

Regarding skin color, most participants in this research declare themselves to be white, which is also

corroborated in a survey by Fiocruz (2020)[18] that evaluated more than 25 thousand Brazilian health professionals, where 57.7% also declared himself white. Regarding to marital status, a study carried out with 34 family health teams in the state of Paraíba identified that most nursing professionals linked to the FHS were married19, results similar to the data in this research.

As for the age group of professionals, predominantly from 30 to 40 years old, it is clear that it is in line with other studies, which discussed that most professionals working in PHC are young adults19,20. As for the education of the participants in this research, most had a technical level, followed by professionals who had a postgraduate degree. The large number of postgraduate workers may infer a tendency to seek better qualifications, which is also corroborated by other studies[15,21].

It is possible to highlight that the socioeconomic position directly influences the daily lives of individuals, that is, it can increase vulnerabilities, as well as offer healthier life possibilities[22]. In this sense, this research showed that most of the participating workers had a high socioeconomic standard, that is, they received from five to ten minimum wages and were included in Class B, according to the ABEP. This reality differs from that experienced by the general population of the 13 evaluated municipalities, which are included in Class D, according to data provided by the Getúlio Vargas Foundation (2021) and ABEP. It is understood that the economic condition is decisive for changes in living conditions, that is, high economic standards allow more leisure activities, investments in exercise practices, medical monitoring and professional training[23].

As for the residents who lived with the participants in this research, 14.5% of the family members had risk factors such as hypertension, diabetes, cancer, among others. About this, authors show that feelings, such as anxiety, fear and stress are experienced by professionals exposed to the virus in their workplace, due to the fear of infecting their family members, especially those who suffer from comorbidities and the elderly[7].

Regarding the occupational characteristics of the workers in this research, it is highlighted that most professionals are nurses, which is in line with a survey carried out in Santa Rosa, in Rio Grande do Sul, where 47.4% belonged to this category. professional[24]. Most professionals had more than ten years of service in the PHC, which may represent movements of stagnation and consolidation of the activities developed[16]. Authors infer that the permanence of professionals for longer periods provides effective contact with the community, as well as facilitates the recognition of health demands and the continuity of health programs in the ascribed territories[24].

Still regarding the subject, it was possible to verify that the fulfillment of a full workload favors the performance of activities, as well as favors the formation of bonds between team members and with the community served, factors that directly reflect on the quality of the service provided[15]. Another characteristic observed in this study was the high number of workers dedicated exclusively to activities in primary health care, working 40 hours a week, similar to the information from João Pessoa (PA)[25].

In this study, 25% of professionals needed to take time away from their work activities in the health network for presenting respiratory symptoms, due to the suspicion of COVID-19. The workers, in addition to experiencing the distancing of their professional colleagues, still end up overloaded by activities in the health units[26]. The physical and mental wear of

professionals can also be linked to the possibility of a lack of materials, medicines, as well as the fact that need to deal with critical/tragic outcomes[27].

As mentioned above about the causes that generate leaves of professionals in Primary Health Care (PHC) during the pandemic, this study also highlights mental suffering, reported by 4% of the participants, as a reason for absenteeism. It is known that the impacts on mental health resulting from high levels of stress during epidemic periods tend to compromise workers' attention, as well as decision-making capacity, which affects not only the fight against the coronavirus, but can have a lasting effect in the well-being of professionals[28]. Thus, encouraging the construction of support networks among colleagues, family or community, even using digital tools, it is an important resource for good emotional health[29]. Welcoming and encouraging spaces for dialogue are fundamental interventions that tend to strengthen bonds between professionals and improve the development of their work processes[13].

Differently from what is seen in the Fiocruz research (2021)[18], mentioned above, where professionals admitted changes in their working hours due to the pandemic, the participants of this research reported that there were no changes with their workload and with this they managed to remain with their daily schedules.

Regarding to the item of protection and safety, the authors infer that adjustment in the health services of Primary Care must be established to provide PPE to all health professionals30. In this sense, regarding the use of these equipment, the participants of this study, in general, when answering the questions in the questionnaire, they reported having increased the frequency of their use with the pandemic, as well as being using them correctly and completely, to avoid contagion through the various routes of infection. The reality experienced by the subjects of this research differs from other studies, which present a different context in other Brazilian cities in 2020, where the availability of PPE, three months after the beginning of the pandemic, was still scarce[31]. Furthermore, 24% of professionals indicated the availability of a set of PPE – face protection, eye protection, gloves and apron at the UBS.

Still focused on safety aspects, the service areas at the health units need to be differentiated for each activity carried out and hygiene must be constant, serving as measures to mitigate the contamination of professionals. It is important to emphasize that if the necessary measures to reduce the risk of infection in professionals who make up the health teams are not observed, their functioning may present more risk than aid in the pandemic[32].

The work overload and the precariousness of health facilities interfere in the adherence to biosafety protocols and measures. Thus, it is up to the work management to provide professionals with dignified and safe means to ensure their health, particularly in a pandemic context, where the risk of contamination by the coronavirus is high ([26,33]). This research demonstrates that more than half of the interviewed professionals perceive financial investments by the institution/management, unlike other Brazilian locations, which as highlighted by Bousquat et al (2020) face increasing difficulties with the lack of funds, which it causes scrapping of health units, as well as the lack of materials and labor[31].

Most participants in this research confirmed the establishment of new flows, as well as changes in routines and during appointments at their workplaces. Corroborating this information, the Brazilian Nursing Association (2020) highlighted that several changes needed

to be instituted so that workers could adapt during the pandemic. Thus, this current health context forced professionals to reinvent themselves, re-establish and create new care plans, and that they were focused primarily on the management and health care of respiratory cases[33].

The qualifications or training received about COVID-19 were a reality presented by the participants of this research, and about this, Medina and collaborators (2021) infer that, in order to face the pandemic, we are experiencing constant training and ongoing education of the health professionals, thus strengthening the safety of these workers in health care, as well as providing a higher quality of service to users[3]. New health strategies must be agile and comprehensive, so that they are remodeled for the context in which we operate, where most forms of communication occur at a distance, remotely[31].

Primary Health Care is also noted for being a huge power against the pandemic that we are facing and this is due to the diversity of professionals, the size of health networks, as well as their functions related to health surveillance and care integral, egalitarian and universal[31].

Conclusion

The primary health care professionals in this study have a strong and organized support network in their workplaces. A small number of participants had to withdraw from their work activities during the pandemic, although the most cited reasons are concerning respiratory symptoms and mental distress.

The study showed that the work in the PHC pandemic highlighted the important and evident adherence of health workers to prevention measures, in general and very intensely to the correct and permanent use of PPE, a measure that is always so highlighted and oriented in any situation and Desktop. Furthermore, the study in various health services of primary health care in several municipalities in the interior of RS, each with its work reality, was a differential of the research, as the regional geographic location showed that the work situations in the pandemic of COVID-19 are not distinct between them.

The results found by the research point to the need for more studies that demonstrate the impacts caused by COVID-19 on work in Primary Health Care, in order to have greater scientific knowledge to deal with other critical events such as the one we are experiencing, in order to maintain and/or create effective strategies in the field of public and collective health.

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