

In light of the increase in cases and deaths of COVID-19 among healthcare workers in the countries and territories in the Region of the Americas, the Pan American Health Organization / World Health Organization (PAHO/WHO) urges Member States to strengthen the capacity of healthcare services across all levels and to equip healthcare workers with the appropriate resources and training in order to ensure an adequate and timely response to the pandemic within the healthcare system.

Introduction

The Region of the Americas is currently experiencing an accelerated increase in the number of reported cases of coronavirus disease 2019 (COVID-19). Between 1 January and 28 August 2020, the total number of COVID-19 cases reported in the Americas exceeded the number of cases reported in all the remaining five WHO Regions during the same period by 1.4 million cases.

As of 28 August 2020, a total of 13,005,995 cases of COVID-19, including 458,444 deaths, have been reported in the 54 countries/areas/territories in the Region of the Americas. The highest proportion of cases has been reported in the United States of America (45%) followed by Brazil (29%), while the highest case-fatality rates have been observed in Mexico (10.8%), Canada (7.2%), and Ecuador (5.8%).

During the previous 4 weeks, a 26% relative increase in cases and 20% relative increase in deaths has been observed. The highest proportions of new cases continue to be reported in the United States of America (36%) and Brazil (31%), while the highest proportions of new deaths were reported in the United States of America (27%), Brazil (26%), and Mexico (16%). A median of 132,322 new cases and 3,697 new deaths were reported every 24 hours over the past 2 weeks.

Furthermore, during the previous 4 weeks, the highest relative increases in cases and deaths were observed in the subregions of the Caribbean Atlantic ocean islands (33% in cases and 35% in deaths), Central America (33% in cases and 28% in deaths), and South America (33% in cases and 27% in deaths).

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Given the epidemiological situation in the Region, which has overwhelmed the current capacity of the healthcare systems and has the potential to continue, strengthening healthcare services is a priority.

Healthcare workers are crucial to maintaining healthcare services during the COVID-19 pandemic. Front-line staff conduct clinical assessments and administer treatment to COVID-19 patients, patients presenting with non-COVID-19 emergencies, and patients requiring routine check-ups. One of the greatest risks to the healthcare system is the potentially high rate of infections due to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), among healthcare workers. This could subsequently lead to a lack of availability of trained personnel to guarantee an adequate local and/or regional response to the pandemic. This risk has been augmented by a need to rapidly increase the capacity of intensive care units (ICUs), the redeployment of clinical staff to front-line positions (for example, ICU or COVID-19 patient care rooms), and the recruitment of less experienced personnel (e.g., recent graduates or healthcare workers from unrelated specialties) into the workforce to respond to the pandemic.

Sustained community-based human-to-human transmission of COVID-19 has been reported in most of the countries and territories in the Region of the Americas; in addition, transmission in the healthcare setting has also been reported. Transmission of COVID-19 includes direct contact and via droplets. Additionally, aerosol generating procedures (AGPs) also play an important role in the transmission of COVID-19 within the context of healthcare services.

Healthcare workers can be exposed to SARS-CoV-2 through unprotected contact with infected patients or through contact with other infected healthcare workers. Exposure in the healthcare services context could be due to non-compliance with infection prevention and control (IPC) standards, inappropriate use of personal protective equipment (PPE), lack of or inadequate PPE, insufficient training, stress, work pressure, working overtime, and limited availability of healthcare workers, amongst other reasons. However, this issue can be addressed not only through the implementation of IPC measures in healthcare services, but also through proper organization and management of healthcare services.

The Pan American Health Organization / World Health Organization (PAHO/WHO) is continuously monitoring the response capacities in the countries and territories in the Region of the Americas through the use of indicators in order to provide strategic support as needed during the pandemic response.

As of 19 August 2020, according to available information from 19¹ countries in the Region of the Americas, a total of 569,304 cases of COVID-19, including 2,506 deaths, have been

¹ Antigua and Barbuda, Argentina, Aruba, Bahamas, Brazil, Canada, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, Guatemala, Jamaica, Mexico, Panama, Paraguay, Saint Lucia, the United States of America, and Venezuela.

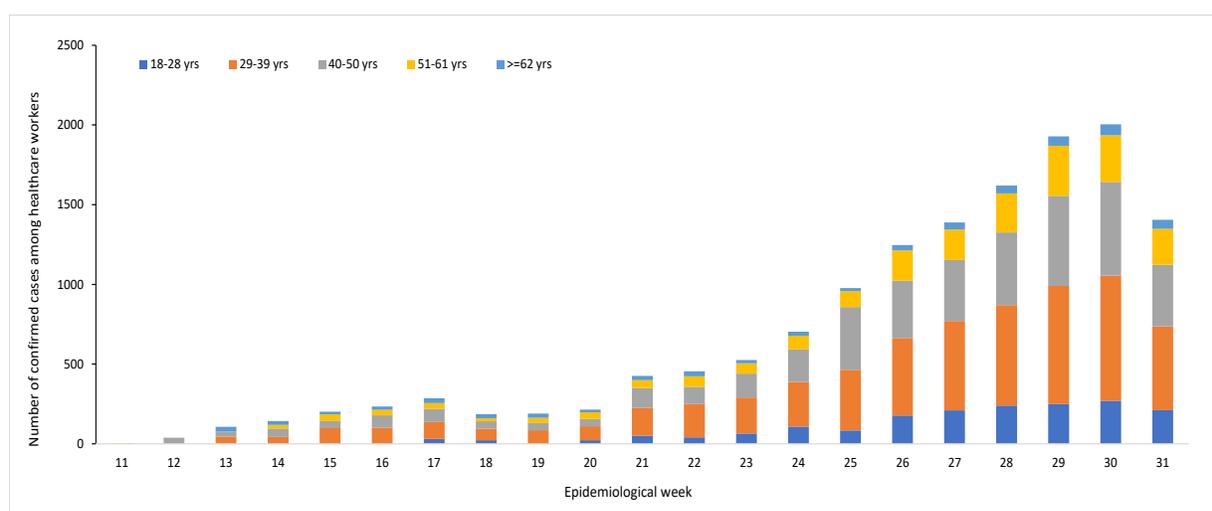
reported among healthcare workers. Of these, 72% are female, and the age groups with the highest proportions of confirmed cases are 30-39 years and 40-49 years.

The following is a summary of the situation of COVID-19 among healthcare workers in countries for which information was available.

COVID-19 among healthcare workers in selected countries

In **Argentina**, between epidemiological week (EW) 11 and EW 31 of 2020, a total of 16,194 confirmed cases of COVID-19 were reported among healthcare workers (**Figure 1**). The highest proportion of cases was observed among persons aged 29-39 years (39%), followed by 40-50 years (28%), 51-61 years (16%), 18-28 years (14%), and 62 years and older (3%).

Figure 1. Distribution of confirmed COVID-19 cases among healthcare workers by age group and epidemiological week (EW). Argentina. EW 11 to EW 31 of 2020.



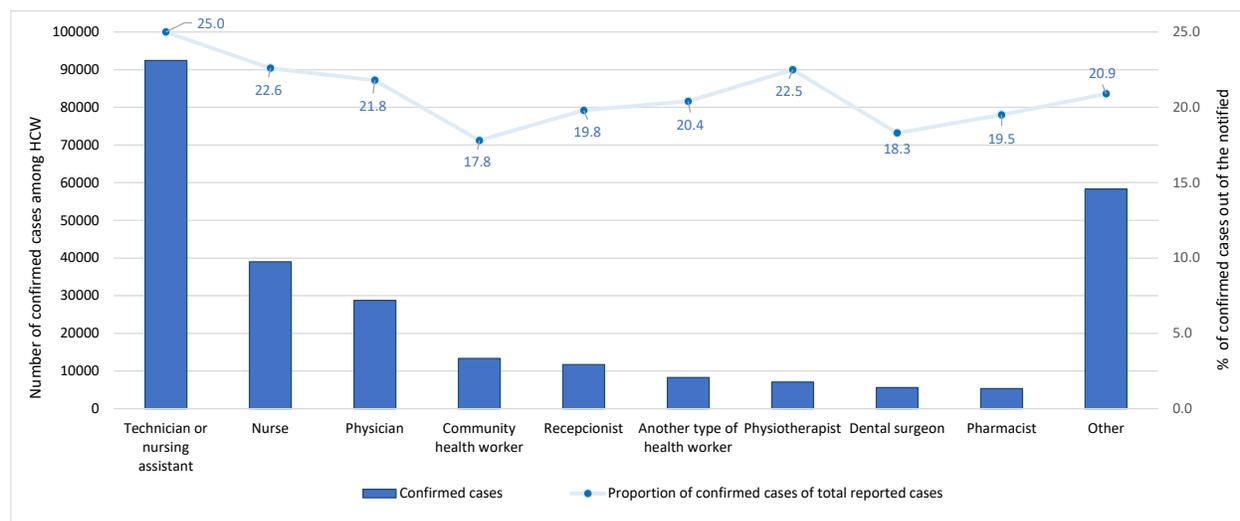
Source: Data from the Argentina Ministry of Health and reproduced by PAHO/WHO.

In **Brazil**, between 26 February and 22 August 2020, a total of 1,212,430 cases of influenza-like illness with suspected COVID-19 were reported among healthcare workers. Of these, 268,954 (22%) were confirmed for COVID-19. The highest proportion of confirmed cases of COVID-19 was among nursing technicians and assistants (34%, 92,324 cases), followed by nurses (14%; 39,058 cases), doctors (11%, 28,596 cases), community health workers (5%, 13,189 cases), and health unit administrative personnel (4%, 11,611 cases) (**Figure 2**).

Between EW 1 and EW 34 of 2020, 1,738 hospitalized cases of severe acute respiratory infection² (SARI) were reported among healthcare workers³. Of these 1,093 (63%) were confirmed for COVID-19 and 395 (23%) remain under investigation. Of the total hospitalized SARI cases among healthcare workers, 62% were female. The highest proportions of hospitalized SARI cases among healthcare workers were observed among nursing technicians and assistants (33%), doctors (20%), and nurses (20%) (**Table 1**). The federal units that have reported the highest numbers of hospitalized SARI cases among healthcare workers are São Paulo (365 cases), Rio de Janeiro (80 cases), and Pará (72 cases).

Of the 1,738 hospitalized SARI cases among healthcare workers as of EW 34 of 2020, there were 289 (17%) deaths, the majority of which were due to COVID-19 (83%). Of the total number of SARI deaths among healthcare workers, 50% were female, and the highest numbers were among nursing technicians and assistants (94 deaths), doctors (52 deaths), and nurses (41 deaths) (**Table 1**). The federal units that have reported the highest numbers of deaths from hospitalized SARI due to COVID-19 among healthcare workers are São Paulo (80 deaths) and Rio de Janeiro (24 deaths).

Figure 2. Distribution of confirmed cases of COVID-19 and proportion of the total reported number of cases of influenza-like illness by healthcare profession according to the Brazilian classification of occupations (CBO, per its acronym in Portuguese) and epidemiological week (EW). Brazil. EW 1 to EW 34 of 2020.



Source: Data published by the Brazil Ministry of Health and reproduced by PAHO/WHO.

² The number of SARI cases and deaths among healthcare workers reflects a group of severe cases and does not present the total number of healthcare workers affected by the disease in the country.

³ On 31 March 2020, the 'occupation' variable was included in the Individual Registration Form for Severe Acute Respiratory Infection (SARI), available in the Influenza Epidemiological Surveillance Information System (SIVEP-Flu, per its acronym in Portuguese), with the possibility of retroactive modification. The categories of the variable correspond to the Brazilian Classification of Occupations (CBO, per its acronym in Portuguese).

Table 1. Distribution of confirmed COVID-19 cases among healthcare workers by healthcare profession according to the Brazilian classification of occupations (CBO, per its acronym in Portuguese). Brazil. Epidemiological week (EW) 1 to EW 34 of 2020.

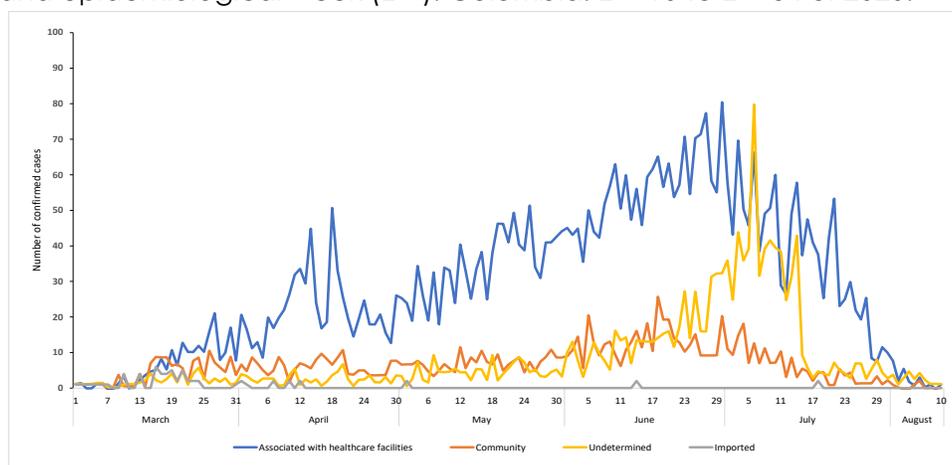
Health professions (CBO)	Cases and deaths due to SARI among HCW		
	Confirmed cases	Deaths confirmed	CFR (%)
Nursing technicians and assistants	355	82	23
Physician	226	48	21
Nurse	207	35	17
Odontologist	42	13	31
Physiotherapist	32	6	19
Pharmacist	28	2	7
Community health worker	26	6	23
Elderly caregiver	24	10	42
Technician or laboratory assistant	18	3	17
Other	135	36	27
Total	1093	241	22

Source: Data published by the Brazil Ministry of Health and reproduced by PAHO/WHO.

In **Colombia**, between 1 March and 20 August 2020, a total of 7,692 confirmed cases of COVID-19 have been reported among healthcare workers, including 52 deaths, 7,362 recovered, and 278 in isolation. Of the total confirmed cases, 600 (8%) were asymptomatic. The territorial entities that have reported the highest proportions of COVID-19 cases are Bogotá, Capital District (29%), Valle de Cauca (16%), Antioquia (12%), Barranquilla District (7%), Cartagena District (5%), Nariño (4%), Cundinamarca (3%), and Chocó (3%).

Of the total confirmed cases of COVID-19 among healthcare workers, 67% (5,142 cases) developed infection following exposure associated with the provision of healthcare services, 15% (1,150 cases) developed infection following exposure in the community, 1% (43 cases) were imported, and 18% (1,357 cases) for which exposure was undetermined (**Figure 3**). The highest proportions of cases were observed among nursing assistants (34%), doctors (16%), nurses (13%), administrative personnel (11%), and cleaning and food personnel (4%).

Figure 3. Distribution of confirmed COVID-19 cases among healthcare workers by type of exposure and epidemiological week (EW). Colombia. EW 10 to EW 34 of 2020.



Source: Data from the Colombia Ministry of Health and Social Protection and reproduced by PAHO/WHO.

In the **Dominican Republic**, between 1 January and 23 August 2020, a total of 272 confirmed cases of COVID-19 have been reported among healthcare workers, of which 64% were female.

The Dominican Republic Ministry of Public Health General Directorate of Epidemiology updates this information regularly and is available at: <https://bit.ly/3h9tbNj>.

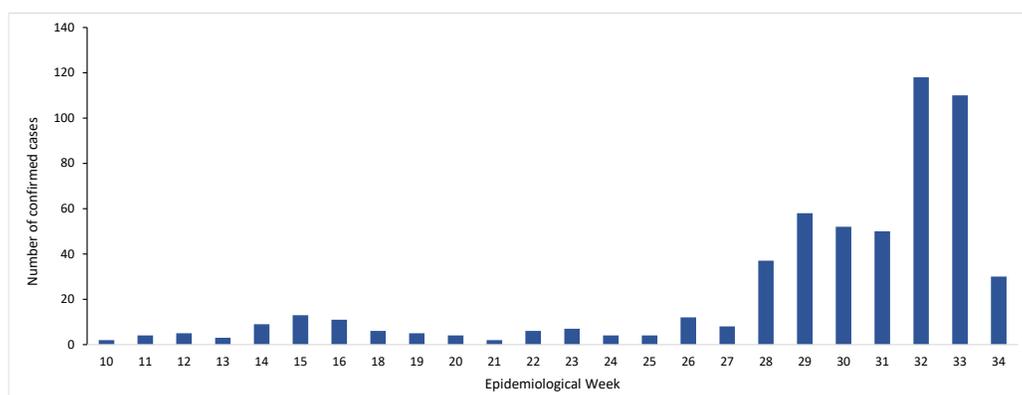
In **Mexico**, between 28 February (when the first case of COVID-19 was detected) and 23 August 2020, a total of 97,632 confirmed cases of COVID-19 have been reported among healthcare workers, of which 60% were female. Of the total confirmed cases, 42% were among nurses, 28% among other health professions, 27% among doctors, 2% among laboratory specialists, and 1% among dentists. During the same period, 1,320 deaths have been reported, representing 1.4% of the confirmed cases; of the total deaths, 70% were male.

In **Paraguay**, between 13 March and 21 August 2020, there have been 6,869 healthcare workers with reported exposure to SARS-CoV-2. Of these, 620 were laboratory-confirmed for SARS-CoV-2 infection, including one death, which accounts for 5% of the total number of confirmed cases reported nationally (**Figure 4**). The health regions with the highest proportions of healthcare workers exposed to COVID-19 are the Capital (39%), Central (28%), and Alto Paraná (10%).

Of the 620 confirmed cases among healthcare workers as of 21 August 2020, 70% were female and the highest proportion has been observed among persons aged 29-39 years (46%), followed by 40-50 years (21%), 18-28 years (15%), and 51-61 years (11%). Overall, 86% developed signs or symptoms of COVID-19 (such as cough, fever, sore throat, and shortness of breath), while 14% were asymptomatic.

The health regions with the highest proportions of confirmed COVID-19 cases among healthcare workers are Alto Paraná (31%), the Capital (30%), Central (23%), and Caaguazú (5%). Among the confirmed cases, 33% were among nurse personnel, 28% among medical personnel, 4% among laboratory personnel, and 29% other health professions/services. Of the total confirmed cases, 40% (250 cases) developed infection following exposure in a healthcare setting, and of these, 60% had exposure through contact with an infected healthcare worker, 34% through patient care, 4% through assistance in shelters, 2% through care in prisons.

Figure 4. Distribution of confirmed COVID-19 cases among healthcare workers by epidemiological week (EW). Paraguay. EW 10 to EW 34 of 2020.



Source: Data published by the Paraguay Ministry of Public Health and Social Welfare and reproduced by PAHO/WHO.

In the **United States of America**, between 1 January and 24 August 2020, there were 143,100 confirmed cases of COVID-19, including 660 deaths, reported among healthcare workers. Of the total confirmed cases among healthcare workers, 79% are female and the highest proportion of cases was reported among 29 to 39-year-olds (27%), followed by 40 to 50-year-olds (23%), 18 to 28-year-olds (23%), 51 to 61-year-olds (20%), and persons aged 62 years and older (8%).

Data were collected for 4,296,060 cases, but healthcare personnel status was only available for 965,329 (22%) cases. Of the 143,743 cases of COVID-19 among healthcare workers, death status was only available for 100,939 (70%) cases.

Information is periodically updated on the United States Centers for Disease Control and Prevention (US CDC) website, available at: <https://bit.ly/31PobbP>.

Guidance for national authorities

The Pan American Health Organization / World Health Organization (PAHO/WHO) reiterates to Member States the recommendations made in the 16 January Epidemiological Alert⁴ for Novel Coronavirus 2019 and the 23 June Epidemiological Update for COVID-19⁵ in regards to implementing IPC across all healthcare levels and implementing COVID-19 surveillance for cases among healthcare workers. PAHO/WHO also recommends that Member States follow the guidelines and recommendations outlined in the following documents: the interim guidance on IPC during health care when COVID-19 is suspected or confirmed, published on

⁴ PAHO/WHO. Epidemiological Alert: Novel Coronavirus. 16 January 2020, Washington, D.C.: PAHO/WHO; 2019. Available at: <https://bit.ly/2G5WI2j>

⁵ PAHO/WHO. Epidemiological Update: Coronavirus Disease. 23 June 2020, Washington, D.C.: PAHO/WHO; 2019. Available at: <https://bit.ly/2YPbl5M>

29 June 2020 and available at: <https://bit.ly/325qVAC>; the interim guidance on the risk assessment and management of exposure of healthcare workers in the context of COVID-19: published on 19 March 2020 and available at: <https://bit.ly/3gHZimw>; the interim Hospital Readiness Checklist for COVID-19 published on 10 February 2020 and available at: <https://bit.ly/317TZlr>; and the interim recommendations for the assessment of IPC practices in isolation areas in acute healthcare settings in the context of COVID-19, published on 14 April 2020 and available at: <https://bit.ly/2EPYUF8>.

PAHO/WHO recommends that Member States address the challenges related to providing adequate resources and training to healthcare workers and to maintain healthcare service capacity during the pandemic. Additionally, PAHO/WHO offers online courses for healthcare workers on various topics, including IPC, available at: <https://bit.ly/3IJXs8q>.

Considering that healthcare systems are diverse in terms of structure and composition of health teams, it is important that the guidelines and recommendations are applied and adapted based on the context, thereby being translated into practical solutions at the local level.

References and useful links

1. Report by the **Argentina** International Health Regulations (IHR) National Focal Point (NFP), received by PAHO/WHO via email.
2. Report by the **Brazil** International Health Regulations (IHR) National Focal Point (NFP), received by PAHO/WHO via email.
3. Data published on the **Colombia** National Institute of Health website. Available at: <https://bit.ly/3jwCR5y>.
4. Data published on the **Dominican Republic** Ministry of Public Health General Directorate of Epidemiology website. Available at: <https://bit.ly/3hqBW5L>.
5. Report from the **Mexico** International Health Regulations (IHR) National Focal Point (NFP), received by PAHO/WHO via email.
6. Data published on the **Paraguay** Ministry of Public Health and Social Welfare General Directorate of Health Surveillance website. Available at: <https://bit.ly/2EHcLhn>.
7. Data published on the **United States** Centers for Disease Control and Prevention (US CDC) website. COVID-19 Data Tracker. Available at: <https://bit.ly/3jy8onM>.
8. Report from the **United States** International Health Regulations (IHR) National Focal Point (NFP), received by PAHO/WHO via email.

9. World Health Organization (WHO). Infection prevention and control during health care when coronavirus disease (COVID-19) is suspected or confirmed. Interim Guidance. 29 June 2020. Available at: <https://bit.ly/325qVAC>.
10. Pan American Health Organization / World Health Organization (PAHO/WHO). Assessment of infection prevention and control practices in isolation areas in acute healthcare settings in the context of the novel coronavirus (COVID-19). Interim recommendations, 14 April 2020. Available at: <https://bit.ly/2EPYUF8>.
11. World Health Organization (WHO). Risk assessment and management of exposure of health care workers in the context of COVID-19: interim guidance, 19 March 2020. Available at: <https://bit.ly/3gHZimw>.
12. Pan American Health Organization / World Health Organization (PAHO/WHO). Care for health workers exposed to the novel coronavirus (COVID-19) in health facilities. Interim recommendations. 13 April 2020. Available at: <https://bit.ly/2Dg0HmD>.
13. Pan American Health Organization / World Health Organization (PAHO/WHO). Hospital Readiness Checklist for COVID-19. Interim document, version 5. 10 February 2020. Available at: <https://bit.ly/317TZlr>.
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15. Pan American Health Organization / World Health Organization (PAHO/WHO). Technical specifications of medical devices for the case management of COVID-19 in healthcare settings. Interim recommendations, 3 March 2020. Available at: <https://bit.ly/34UXPHj>.
16. World Health Organization (WHO). Advice on the use of masks in the context of COVID-19. Interim guidance, 5 June 2020. Available at: <https://bit.ly/2FDzqvc>.
17. World Health Organization (WHO). Criteria for releasing COVID-19 patients from isolation. 17 June 2020. Available at: <https://bit.ly/327IX6d>.
18. World Health Organization (WHO). Clinical Management of COVID-19: interim guidance, 27 May 2020. Available at: <https://bit.ly/3hLMe0l>.
19. Pan American Health Organization / World Health Organization (PAHO/WHO). Guide for the care of critical adult patients with COVID-19 in the Americas. Version 2, 29 July 2020. Available at: <https://bit.ly/2YSZFod> (long version) and <https://bit.ly/2QJLoFC> (Short version).