



# Raising public awareness of the pharmacists' involvement in the fight against the COVID-19 pandemic – the effects of Pharmacy Heroes campaign

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## Abstract

**Background.** The COVID-19 pandemic has significantly impacted health systems around the world. The healthcare burden was visible in all countries struggling with the pandemic. Pharmacists, who are at the frontline beating the COVID-19 pandemic, played a significant role in relieving the burden on healthcare systems. However, the role of pharmacists in the fight against the COVID-19 pandemic was not appreciated. Therefore, our goal was to create the Pharmacy Heroes initiative, which brings together pharmacists from around the world during the COVID-19 pandemic and promotes the role of pharmacists in the health care system.

**Aim.** The article aims to present the results of the Pharmacy Heroes campaign, mainly in terms of dissemination.

**Results.** 85 countries from six continents were involved in the Pharmacy Heroes campaign. Pharmacists who joined the campaign worked in both community and hospital pharmacies.

**Conclusion.** The Pharmacy Heroes campaign showed the significant commitment of pharmacists around the world. Being the third-largest group of medical professionals, pharmacists played a crucial role in fighting the COVID-19 pandemic.

**Keywords:** pharmacists, pharmacy, COVID-19, global health, pandemic

## Introduction

The COVID-19 pandemic has had a profound impact on the functioning of societies, economies, and health systems around the world. Many countries face overburden and shortages of health facilities. The pandemic showed to a large extent the imperfections of the systems and highlighted the needs that should be thoroughly analyzed in order to increase the effectiveness of the health care systems [1,2].

The pandemic has shown that the most important is a multidimensional approach to the patient, including the use of various types of personal

protective equipment to prevent further virus transmission. Patient management, including both quarantine and symptomatic treatment, is also crucial during a pandemic [3].

While the critical point for the most seriously ill patients was the medical staff working in hospitals (including hospital pharmacists who play an essential role in infection control during an outbreak [4]), it seemed that the most important role may be played by staff working in societies, where the largest number of infections is observed [5,6].

Community pharmacies provide widespread, primary health services and

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are often the place of the first contact for patients with health problems. The significant value of community pharmacies was further emphasized during the COVID-19 pandemic crisis [7]. During the pandemic, pharmaceutical services were largely focused on health education of patients or providing preventive measures that can most effectively reduce the spread of the COVID-19 pandemic [8-10].

Pharmacists also play a crucial role in providing information about medicines (based on scientific evidence) and maintaining a stable supply of medicines and personal care products. Additionally, by measuring patients' temperature and knowing about the medications they purchase, pharmacists can be a critical point in diagnosing new cases and thus significantly reducing the spread of infection. Depending on the capabilities of the health care system, pharmacists may test suspected persons or make appropriate referrals as needed [10].

The above information indicates that pharmacists could significantly have relieved the health care system during the COVID-19 pandemic. In many cases, the services they provide do not require medical visits. Many patients, unable to get to doctors, began consulting pharmacists also for other ailments [4].

Thus, the role of pharmacists in preventing the spread of coronavirus should be strengthened and emphasized. Pharmacies were among the few places that remain open even during a lockdown while other service outlets were closed. By serving as direct access points for their patients, they operate on the front lines of public health [4] while being at high risk of becoming infected with COVID-19 [7], much like doctors or nurses working with patients.

Pharmacists are drug experts who provide patient care in various settings, including hospitals, clinics, local pharmacies, and long-term care, playing a huge role in patient care during an epidemic [11].

Given the huge commitment of pharmacists, we developed the Pharmacy Heroes campaign with two main goals:

1. Association and mobilization of pharmacists from around the world during COVID-19
2. Popularization of the pharmacist's role in the health care system, promotion of this professional group.

This article aims to show the campaign results, including its dissemination around the world, and to show the commitment of pharmacists.

### Campaign description

The Pharmacy Heroes campaign has an international character and is based on the [www.pharmacyheroes.com](http://www.pharmacyheroes.com) platform. The initiative is addressed both to pharmacists and pharmacy employees, as well as to all participants of the healthcare system, including patients.

The initiator of the campaign was the Polish Pharmaceutical Group (PGF Poland), one of the largest drug distribution companies. The campaign was supported

by the International Pharmaceutical Federation (FIP) - a global association representing over 4 million pharmacists and scientists.

The main concept of the project was to motivate all pharmacists around the world to take a picture with the letter "P" which stands for "Pharmacist" to show that they also were on the Coronavirus frontline.

Take a picture with the letter "P". P = Pharmacist, and identify with pharmacists fighting COVID-19 around the world.

The main aim of the project was to form a community of pharmacists from around the world, who were in the face of a pandemic, regardless of the danger and the situation, they have faced during the fight against COVID-19 all over the world, while significantly relieving the healthcare system.

The second aim, was to promote the pharmacy profession, as main thanks was focused only on doctors and other healthcare professionals, although we also lost our pharmacists colleagues.

Wherever pharmacists were working, we knew they were doing the right thing, giving their best to help the patients suffering from COVID-19. Anybody around could join our Pharmacy Heroes community by sending an email to [pharmacyheroes@pgf.com.pl](mailto:pharmacyheroes@pgf.com.pl) with the picture shaped with the letter P as a sign of professional integrity. GDPR policy was applied and consent was given for the use of supplied pictures.

The mailing was sent globally via FIP - The International Pharmaceutical Federation network to all pharmacists around the world registered with the organization. All photos sent by pharmacists were documented on the <https://pharmacyheroes.com/#world> website and the campaign was also supported by other big organizations like <https://www.epheu.eu>, <https://www.the-pda.org>, <https://www.apb.be/fr/corp/Pages/default.aspx>, <https://zzpf.org.pl> and public international media. On top, of this, we also asked famous singers, and film stars to send us pictures with the letter P.

In this article, we present the size and scope of the campaign, including the number of continents and countries participating in this project. Our intention is to show the success of pharmacists in the fight against COVID-19.

### Results

Eighty-five countries from six continents joined the action, which constitutes 39.53% of the countries globally (Table I). The number of countries was taken as 215; according to the United Nations (UN), there are 195 countries globally, but some participants of Pharmacy Heroes campaign sent photos from countries that the UN does not consider a country. In total, during the campaign, we received 564 photos with 1037 people. Table II presents the campaign participants by gender, country, continent, functions, type of pharmacy (hospital / community).

**Table I.** Regions involved in the Pharmacy Heroes campaign.

| Continent             | Number of photos from the continent | Number of countries from a continent that joined the campaign | Number of countries on a given continent | Percentage of a continent that joined the campaign |
|-----------------------|-------------------------------------|---|--|--|
| Europe                | 124                                 | 29  | 46                                       | 63.04  |
| Asia                  | 224                                 | 24  | 50                                       | 48.00  |
| Africa                | 128                                 | 15  | 55                                       | 27.27  |
| North America         | 39                                  | 7   | 34                                       | 20.59  |
| South America         | 25                                  | 8   | 12                                       | 66.67  |
| Australia and Oceania | 7                                   | 2   | 18                                       | 11.11  |
| NN                    | 17                                  | xxx   | xxx                                      | xxx  |
| Total                 | 564                                 | 85*   | 215                                      | 39.53  |

\*due to the receipt of photos from countries that are not officially recognized by the United Nations (UN), the total number of countries was 215.

**Table II.** Demographic characteristics of the participants of the Pharmacy Heroes campaign.

| Demographic characteristics | N           | %             |
|-----------------------------|-------------|---------------|
| <b>Gender</b>               |             |               |
| Male                        | 422         | 40.69         |
| Female                      | 615         | 59.31         |
| <b>Continent</b>            |             |               |
| Europe                      | 255         | 24.59         |
| Asia                        | 448         | 43.20         |
| Africa                      | 199         | 19.19         |
| North America               | 72          | 6.94          |
| South America               | 40          | 3.86          |
| Australia and Oceania       | 9           | 0.87          |
| NN                          | 14          | 1.35          |
| <b>Function</b>             |             |               |
| Pharmacist                  | 721         | 69.53         |
| Pharmacy technician         | 297         | 28.64         |
| NN                          | 19          | 1.83          |
| <b>Place of work</b>        |             |               |
| Community pharmacy          | 617         | 59.50         |
| Hospital pharmacy           | 359         | 34.62         |
| NN                          | 61          | 5.88          |
| <b>Total</b>                | <b>1037</b> | <b>100.00</b> |

\* N-number; \*\*% - percent of the group

The total number of users who visited the <https://pharmacyheroes.com/> website was 6,199. Most people came from Europe (Table III). Two thousand one hundred forty-four users from Poland were registered.

In the campaign we also included children who sent art works to thank pharmacists for their work. In total, 55 works prepared by 56 children were received, including 64.29% girls and 35.71% boys. The average age of the sending children was 10 years.

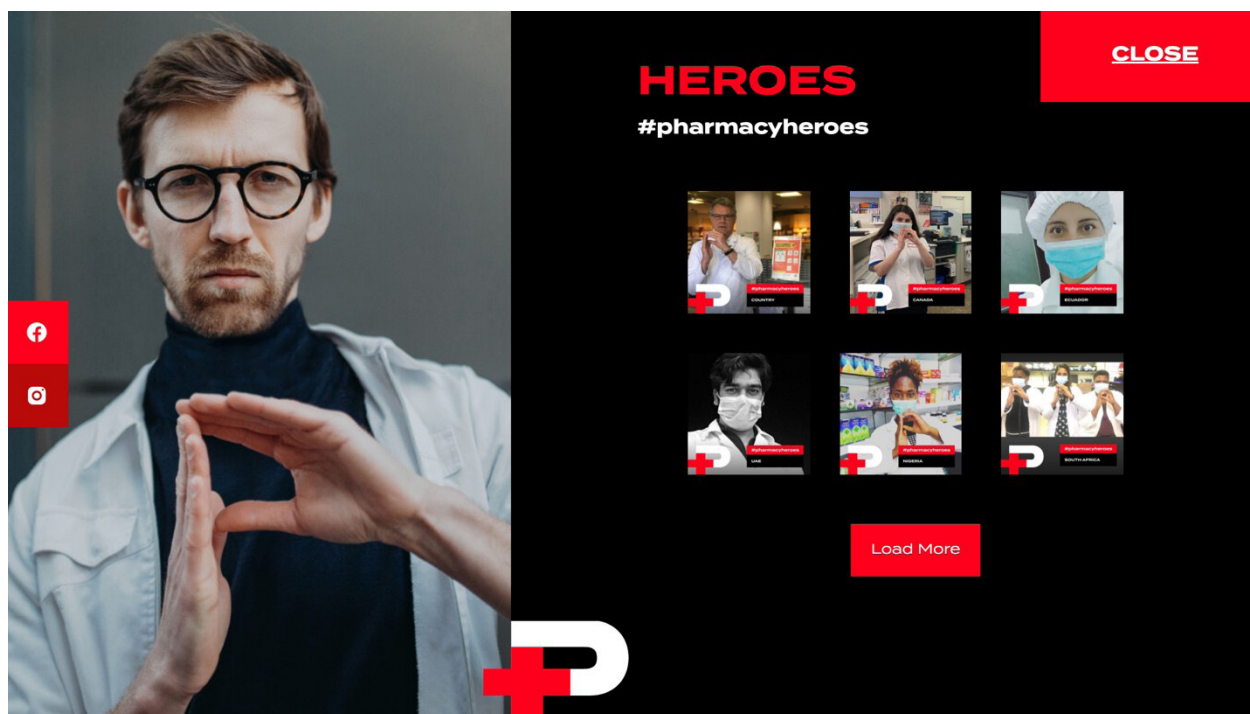
Graphic information about the campaign is presented on Picture 1 and Picture 2.

**Table III.** Place of origin of the users of the website <https://pharmacyheroes.com/>

| Continent             | Number of users | Percentage of users in relation to the whole world (%) | Number of sessions | Percentage of sessions in relation to the whole world (%) |
|-----------------------|-----------------|--|--------------------|---|
| Europe                | 3229            | 52.08  | 4363               | 55.78   |
| North America         | 973             | 15.72  | 1109               | 14.17   |
| South America         | 134             | 2.16   | 176                | 2.25  |
| Asia                  | 903             | 14.55  | 1089               | 13.93   |
| Africa                | 879             | 14.17  | 999                | 12.77   |
| Australia and Oceania | 78              | 1.27   | 85                 | 1.08  |
| NN                    | 3               | 0.05   | 3                  | 0.04  |
| Total                 | 6199            | 100.00   | 7824               | 100.00  |



Picture 1. Website promoting global campaign with the pharmacy profession promotion movie.



Picture 2. Pictures from around the world of pharmacy heroes are collected in pharmacy heroes section.



## Discussion

The COVID-19 pandemic has had a significant impact on public health worldwide, demonstrating weaknesses in systems, including staff shortages and a high need for health education [6].

To maximize the use of currently available resources, it is essential to analyze them carefully and reallocate them efficiently. Being one of the medical profession's largest groups, pharmacists played a crucial role in the COVID-19 pandemic [12]. The role of pharmacists has evolved during the pandemic. During the COVID-19 pandemic, the public relied heavily on pharmacies to supply both medications and other products such as hand sanitizers, gloves and masks [13]. Across the world, pharmacists' primary responsibility has become to control COVID-19 infections, educate patients to prevent disease, and ensure the safe use of drugs in the patient community during a pandemic [14-17].

The scope of pharmaceutical services varies between countries. For example, pharmacists in China played a significant role in responding to the pandemic, and they significantly developed pharmaceutical care during the pandemic, including remote pharmacies to prevent human infection [10]. On the other hand, in Australia, the "Pharmacist COVID" program was implemented, which showed that the pharmacist's skills could be adapted and significantly expanded. Together with cooperation between various groups of health care professionals, these activities significantly relieve doctors, increasing the effectiveness of the entire health care system [18]. Pharmaceutical telecare has developed substantially in many countries during this time [19].

As symptoms of COVID-19 can take different forms, patients purchase various medications. Therefore, pharmacists play a vital role in reviewing a patient's medications or counseling based on scientific evidence [17]. Patients consult pharmacists for many ailments [4]. During the pandemic, the role of pharmacists in controlling chronic disease has increased significantly, which is essential to reduce the burden on health systems. Thanks to these activities, facilities such as clinics and hospitals could provide basic services for patients who needed the most urgent care [20].

The role of pharmacists in coping with drug shortages during the COVID-19 pandemic should also be emphasized. This is crucial given that drug deficiencies can lead to suboptimal prescription and have been associated with harm to the patient [17].

Pharmacists may play a unique role in preventing infections by carrying out vaccinations [21]. This situation is especially important when the COVID-19 vaccine is already available. For this aim, effective mechanisms to train pharmacists in providing vaccinations are needed.

The lessons learned and the systems implemented during the pandemic can be used to improve routine

pharmaceutical services, strengthen the position of pharmacists in protecting public health, and popularize the role of pharmacists as an immunizer [21].

To conclude, as the third-largest group of medical professionals, pharmacists can play a vital role in protecting public health, especially during a pandemic [22]. Pharmacists are the primary source of information on medicines, both for patients, doctors and nurses. During a pandemic, pharmacists play an important role in health education and infection control, being the primary representative of the health care system for many patients. However, pharmacists are usually not considered heroes as doctors or nurses, even though their exposure to infections is similar [23].

## Conclusion

Pharmacy Heroes is an example of an initiative aimed at highlighting the role of pharmacists in the fight against the COVID-19 pandemic. Pharmacists, like other medical professions, were at the frontline of the fight against the coronavirus. The Pharmacy Heroes campaign also aimed to bring together pharmacists from around the world during the COVID-19 pandemic. The campaign turned out to be a great success, with a huge global reach. The study indicated that pharmacists from 85 countries on six continents were involved in the campaign. This result shows that pharmacists are a large, committed group of people who want to participate in protecting patients' health actively.

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## References

1. Hennekens CH, George S, Adirim TA, Johnson H, Maki DG. The Emerging Pandemic of Coronavirus and the Urgent Need for Public Health Leadership. *Am J Med.* 2020;133:648-650.
2. Rahimi F, Talebi Bezmin Abadi A. Tackling the COVID-19 Pandemic. *Arch Med Res.* 2020;51:468-470.
3. Dzieciatkowski T, Szarpak L, Filipiak KJ, Jaguszewski M, Ladny JR, Smereka J. COVID-19 challenge for modern medicine. *Cardiol J.* 2020;27:175-183.
4. Bukhari N, Rasheed H, Nayyer B, Babar ZU. Pharmacists at the frontline beating the COVID-19 pandemic. *J Pharm Policy Pract.* 2020;13:8.
5. Aslan D, Sayek İ. We Need to Rethink on Medical Education for Pandemic Preparedness: Lessons Learnt From COVID-19. *Balkan Med J.* 2020;37:178-179.
6. Blumenthal D, Fowler EJ, Abrams M, Collins SR. Covid-19

- Implications for the Health Care System. *N Engl J Med*. 2020;383:1483-1488.
7. Bahlol M, Dewey RS. Pandemic preparedness of community pharmacies for COVID-19. *Res Social Adm Pharm*. 2021;17:1888-1896.
  8. Binns C, Low WY, Kyung LM. The COVID-19 Pandemic: Public Health and Epidemiology. *Asia Pac J Public Health*. 2020;32:140-144.
  9. Lee SH, Kim JM. Coronavirus Disease 2019 (COVID-19): Pandemic and the Challenge of Public Health. *Korean J Fam Pract*. 2020;10:87-95.
  10. Liu S, Luo P, Tang M, Hu Q, Polidoro JP, Sun S, et al. Providing pharmacy services during the coronavirus pandemic. *Int J Clin Pharm*. 2020;42:299-304.
  11. Goff DA, Ashiru-Oredope D, Cairns KA, Eljaaly K, Gauthier TP, Langford BJ, et al. Global contributions of pharmacists during the COVID-19 pandemic. *J Am Coll Clin Pharm*. 2020;3:1480-1492.
  12. Cadogan CA, Hughes CM. On the frontline against COVID-19: Community pharmacists' contribution during a public health crisis. *Res Social Adm Pharm*. 2021;17:2032-2035.
  13. David KB, Adebisi YA. Proposed model for hospital and community pharmacy services during COVID-19 pandemic in Nigeria. *Int J Pharm Pract*. 2020;28:544-545.
  14. Liao Y, Ma C, Lau AH, Zhong M. Role of pharmacists during the COVID-19 pandemic in China-Shanghai experiences. *J Am Coll Clin Pharm*. 2020;3:997-1002.
  15. Zheng SQ, Yang L, Zhou PX, Li HB, Liu F, Zhao RS. Recommendations and guidance for providing pharmaceutical care services during COVID-19 pandemic: A China perspective. *Res Social Adm Pharm*. 2021;17:1819-1824.
  16. Visacri MB, Figueiredo IV, Lima TM. Role of pharmacist during the COVID-19 pandemic: A scoping review. *Res Social Adm Pharm*. 2021;17:1799-1806.
  17. Gross AE, MacDougall C. Roles of the clinical pharmacist during the COVID-19 pandemic. *JACCP* 2020;3:564-566.
  18. Nguy J, Hitchen SA, Hort AL, Huynh C, Rawlins MDM. The role of a Coronavirus disease 2019 pharmacist: an Australian perspective. *Int J Clin Pharm*. 2020;42:1379-1384.
  19. Bragazzi NL, Mansour M, Bonsignore A, Ciliberti R. The Role of Hospital and Community Pharmacists in the Management of COVID-19: Towards an Expanded Definition of the Roles, Responsibilities, and Duties of the Pharmacist. *Pharmacy (Basel)*. 2020;8:140.
  20. Kretchy IA, Asiedu-Danso M, Kretchy JP. Medication management and adherence during the COVID-19 pandemic: Perspectives and experiences from low-and middle-income countries. *Res Social Adm Pharm*. 2021;17:2023-2026.
  21. Patel C, Dalton L, Dey A, Macartney K, Beard F. Letter: Impact of the COVID-19 pandemic on pharmacist-administered vaccination services. *Res Social Adm Pharm*. 2021;17:2040-2041.
  22. Elbeddini A, Yeats A. Pharmacist intervention amid the coronavirus disease 2019 (COVID-19) pandemic: from direct patient care to telemedicine. *J Pharm Policy Pract*. 2021;13:23.
  23. Bauman JL. Hero clinical pharmacists and the COVID-19 pandemic: Overworked and overlooked. *J Am Coll Clin Pharm*. 2020;3:721-722.