

EAHP REPORT

COVID-19

Hospital Pharmacists fighting at the frontline
for patients during the pandemic



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Foreword



The COVID-19 pandemic has been hard to endure for everyone, but it has especially been a challenge for all healthcare professionals in frontline care, including hospital pharmacists. COVID-19 found the world largely unprepared. Shortages of essential equipment and medicines as well as the uncertainty about treatment options shaped the work of the profession during the first waves of the pandemic.

Hospital pharmacists have become key stakeholders alongside physicians, nurses, and other healthcare professionals to fight the pandemic. For instance, the profession has been participating and supporting vaccination campaigns across Europe and hospital pharmacists have also participated in conducting clinical trials and assumed primary roles in pharmacovigilance activities regarding adverse events and drug interactions of COVID-19 therapies. Moreover, hospital pharmacists had to adapt to this new environment and have been bringing their pharmacology expertise to support nurses with drug preparation at ICU wards or working collaboratively with medical doctors doing medication reconciliation and review to ensure prudent and evidence-based medicinal therapy management.

Since the pandemic started, EAHP has been offering support to its members and hospital pharmacists across Europe and globally to better understand the needs and challenges of the profession during these difficult times. A survey was launched in 2020 to collect information on the lessons learned from the COVID-19 pandemic. In addition, EAHP teamed up with the European Society of Clinical Pharmacy (ESCP) to collect best practice examples of clinical and hospital pharmacy services that made a palpable difference for patients on all levels of healthcare systems. In addition, a resource center was created on the EAHP website to collect resources and information that could be helpful to all healthcare professionals.

As we now know more about the virus and its impact on healthcare services, EAHP has decided to prepare this report to gather information on how our profession has been fighting the pandemic and specifically to present key recommendations on what is needed for better preparedness to face future pandemics or similar health threats. This document also gathers feedback and experiences from all our member countries.

I hope that you find this report helpful, and I want to take this opportunity to thank all our members that have participated in its development as well as all the hospital pharmacists and healthcare professionals that have been tirelessly fighting the COVID-19 pandemic, even, in many cases, at a personal cost.

Sincerely yours,

Andras Süle, President of EAHP

EAHP and COVID-19

Two years have passed since the COVID-19 pandemic started. Throughout these past 24 months, **the European Association of Hospital Pharmacists (EAHP) has carried out several tasks to provide support to its member associations and to share views of the hospital pharmacy profession** in larger European discussions with for example the European Commission and the European Medicines Agency (EMA).

To assist its member associations and individual hospital pharmacists in this critical time with the provision of the best possible care for patients, **EAHP decided to gather and make available information on COVID-19 relevant to the hospital pharmacy profession.**

The collected information has been included in **EAHP's COVID-19 Resource Centre accessible via the Association's website which was launched on the 17th of March 2020.**¹ In April 2020, EAHP created a discussion group for its members to allow individual hospital pharmacists to exchange with each other on COVID-19 developments.

Collaboration with others formed a big part during the initial phase of the pandemic. At the end of April 2020, **EAHP issued a Joint Statement** with the European Association of Senior Hospital Physicians (AEMH), the European Society of Clinical Pharmacy (ESCP) and the European Society of Oncology Pharmacy (ESOP) on the treatment of COVID-19 patients.² **In June 2020, EAHP teamed up with the European Society of Clinical Pharmacy (ESCP) to collect best practice examples of clinical and hospital pharmacy services that made a difference for patients during the COVID-19 pandemic.** Short 2 to 3-minute videos have been made available on the initiative's YouTube channel to demonstrate how clinical and hospital pharmacists coped with the challenges posed by the novel coronavirus.

1 EAHP's COVID-19 Resource Centre, available at: <https://www.eahp.eu/hp-practice/hospital-pharmacy/eahp-covid-19-resource-centre> (last visited on 21 June 2022).

2 Joint Statement of the European Association of Hospital Pharmacists, the European Association of Senior Hospital Physicians, the European Society of Clinical Pharmacy and the European Society of Oncology Pharmacy on the treatment of COVID-19 patients, available at: <https://www.eahp.eu/press-room/joint-statement-european-association-hospital-pharmacists-european-association-senior> (last visited on 21 June 2022).

Contributions were submitted from all across Europe touching for example on the preparation of disinfectants, the creation of new workflows and the resolution of medicines shortage problems.³

The European Commission sought out the expertise of EAHP concerning the discussions on shortages of medicinal products used in hospitals for the treatment of COVID-19 patients. Exchanges commenced in April and continued throughout 2020. In this context, EAHP also provided feedback to the European Commission's Draft consultation document on the optimization of the supply of medicines for COVID-19.

To obtain a better understanding of the situation, EAHP worked on the development of a survey. **Between 16 September and 23 December 2020, EAHP collected information on the lessons learned from the COVID-19 pandemic.** The Survey on the future crisis preparedness of hospital pharmacies targeted EAHP's membership. It gathered on the one hand details on the medicines for which shortages were experienced.

On the other hand, it took stock of the experiences made in hospitals during the first few months of the crisis and explored suggestions for improving the future crisis preparedness of hospital pharmacies.⁴ **In addition, EAHP teamed up with ESOP (European Society of Oncology Pharmacy) to gain more insights into the situation of cancer patients during the COVID-19 pandemic.** Building on the success of its weekly surveys, which were completed by pharmacists from 63 countries, ESOP had put together a structured approach to collect further perceptions and facts about the pandemic on a monthly basis. The survey exercise was carried out between September 2020 and February 2021.

In September 2020, EAHP met with EU Health Commissioner Stella Kyriakides and her team. Among other things, hospital pharmacy engagement during COVID-19 was covered during this virtual exchange.

Engagement in the fourth quarter of 2020 focused very much on COVID-19 vaccines. In December 2020, EAHP issued an Opinion on COVID-19 Vaccine Programmes and their Implementation. The opinion touches on challenges posed by the distribution of COVID-19 vaccines and their administration. EAHP draws attention to transport and storage conditions, underlines the importance of good logistic processes

3 EAHP-ESCP Video Initiative, available at: <https://www.youtube.com/channel/UCjOzzti48bRJcrxyihNIEfA> (last visited on 21 June 2022).

4 EAHP Survey on the future crisis preparedness of hospital pharmacies, available at: https://www.eahp.eu/sites/default/files/eahp_survey_on_the_future_crisis_preparedness_of_hospital_pharmacies.pdf (last visited on 21 June 2022).

and record-keeping and shares information that could help with combatting vaccine hesitancy.⁵

As a member of EMA's Healthcare Professional Working Party, EAHP engaged in the public meetings that EMA organised in relation to the COVID-19 vaccines on the 11th of December 2020 and the 8th of January 2021.

The results of EAHP's Survey on the future crisis preparedness of hospital pharmacies were released during EAHP's 25th Congress in March 2021.⁶ Cooperation, including collaboration with other healthcare professionals, was one of the reoccurring themes of the feedback received from this survey. Hospital pharmacists supported their colleagues through the production of disinfectants and sourcing medicines that were in shortage. Besides, they valued discussions with other healthcare professionals supporting the quest for treatment options and finding solutions to other problems that occurred during the pandemic. Room for improvement was found in relation to preparedness. More work in the field of risk assessments is needed but also communication with others could be further enhanced.

Linked to COVID-19 vaccines, EAHP continued its engagement with the EMA and attended the third public meeting organised on the 26th of March 2021. In the second half of 2021, EAHP gathered further input from its members on the roles that hospital pharmacists played and are still playing during the pandemic.

5 Ibid.

6 Ibid.

Tasks carried out by Hospital Pharmacists

Hospital pharmacists have been key stakeholders (alongside other healthcare professionals) in the fight against the pandemic. The profession has been on the front-line of the COVID-19 pandemic.

As the experts in medications, hospital pharmacists have been instrumental to ensure that hospital patients were able to access their medication. From ensuring the medicines supply chain through new purchase procedures and new logistic supports (to fight shortages) to conducting medication reviews for COVID-19 patients, hospital pharmacists have executed a broad range of tasks to support the optimal functioning of the hospital and the safe delivery of pharmacy services during these difficult times. For instance, COVID-19 has also highlighted the importance of the hospital pharmacy profession in ensuring a rapid response to patient needs and evidence-based approaches to medicinal therapy management.

The following list contains some of the main tasks (this is not an exhaustive list) conducted by hospital pharmacists during the COVID-19 pandemic.



SELECTION, PROCUREMENT AND DISTRIBUTION

Ensure the medicines supply chain through new purchase procedures and new logistic support

Daily follow-up for medicine and medical device shortages

Participation in the vaccination campaigns: procurement, storage and distribution of vaccine doses, training for nurses and participation in doses preparation

Coordination of the vaccines supply, particularly for pharmacists working in hospitals distributing vaccines to other hospitals and regional areas

Management of residual COVID-19 doses in an effort not to waste doses, due to the limited shelf-life of vaccines and opened vials

Explore and secure alternative ways to obtain medications to combat medicine shortages. This included relying on new distribution channels and buying from new countries

Improve cold storage capacity at various levels and locations to ensure distribution and use of COVID vaccines

Coordination of national procurement programmes for vital critical care medicines such as propofol, IV-fluids and noradrenaline

Ensure medicines supply for temporary COVID wards, including the organisation and management of ward stocks

Reorganisation of circuits and distribution flows inside and outside the pharmacy



PRODUCTION AND COMPOUNDING

Prepare the use of medicines outside of the marketing authorisation

Compound and distribute hydroalcoholic solutions

Estimate the increase and decrease needs of various medicines. Adjusting medicine logistics and storage accordingly

Aseptic batch preparation of selected critical care medicines to save nurses' time, such as propofol in syringes, cefotaxime and piperacillin/tazobactam

Advise on the development of protocols for the use of handheld inhalators as an alternative when the use of standard nebulizers was discouraged

Supporting nurses at COVID wards and ICUs with medicine preparation

Combating medicine shortages of sterile water for irrigation by developing a local extemporaneous manufacturing process to fill IV bags with dialysis water to moisturize ventilators



CLINICAL PHARMACY SERVICES

Collaboration with other healthcare professionals to build up new intensive care units or COVID-units in order to provide appropriate medicines on the ward (definition of a list of medicines with medical validation, creation of secure new medicine storage locations, dispensing, re-evaluation)

Antibiotic stewardship to ensure the correct prescription of antibiotics for COVID-19 patients

Medication reviews for COVID patients to ensure therapeutic management

Ensure the availability of all the necessary medicines for COVID-19 treatment, according to valid guidelines, either authorised or for off-label use

Coordination with clinical services in order to maintain the response to the preparation needs.

Optimisation and adjustment of dosages (clinical pharmacokinetics)

Promotion of computerised reports

Follow-up of patients, monitoring, review, and medication reconciliation

Working proactively to try to estimate increased and decreased needs of various medicines and adjusting medicine logistics and storage accordingly



PATIENT SAFETY AND QUALITY ASSURANCE

Training of doctors and healthcare professionals in order to find equivalences to adapt to multiple stock-outs

Information, education and advice to patients and healthcare professionals in regard to treatments and vaccines for COVID-19

Participation in the pharmacovigilance procedures of COVID-19 medicines and vaccines

Provide training in pharmacometrics to doctors and nurses

Creation of passive and active medication information systems

Coordination of nutritional therapies

Development of telepharmacy services

Identification of medication needs, consumption analysis and request

Preparation and review of treatment protocols, analysis of the evidence that has been generated, evaluation of benefits and risks

Creation of prescription protocols in assisted electronic prescription programs. Training of personnel who had no experience with these programs and preparation of quick reference documents



EDUCATION AND RESEARCH

Review of medical literature and participation in the elaboration of (evolving) protocols for in-patients infected with COVID-19

Collaboration in clinical trials including specific drugs to treat inpatients infected with COVID-19

Participation in clinical trials, research projects and studies and publications

EAHP Recommendations

Healthcare systems responded to the COVID-19 pandemic the best they could. European and national authorities, healthcare professionals and patients did their best to jointly fight a new virus and to work through a pandemic for which they were not as prepared as they thought. **While, in theory, the scientific community was aware of the risks and the possibilities of a worldwide pandemic, COVID-19 still demonstrated how unprepared the world and Europe were to tackle a health crisis of such a large scale.** Despite these challenges, the pandemic has also been an opportunity to acquire new skills and has showed the strong adaptability of healthcare professionals when facing health threats.

The hospital pharmacy profession has therefore learned very valuable lessons from this pandemic. EAHP would like to use this opportunity to point out several recommendations that will not only help to respond to future health threats but will also support the overall activities of the hospital pharmacy service to obtain better outcomes for patients.

- 1. The healthcare workforce should be a priority for healthcare systems (both quantitatively and qualitatively).** The COVID-19 pandemic intensified healthcare workforce challenges, leading to significant staffing shortages and increased healthcare worker burnout. This also applied to hospital pharmacists, as they have been and still are a key part of the multidisciplinary teams fighting the pandemic.

A review of the hospital pharmacy workforce should be carried out in each European country to make sure that the needs of the healthcare systems are adequately addressed. A robust plan for training and education of hospital pharmacists to respond to future health threats should also be put in place. This will be essential for building better resilience into hospital pharmacy services through appropriate staffing, capacity, updated training, and resilience assessments.

- 2.** Frequent shortages of medicines that impact patient outcomes are not a new phenomenon for hospital pharmacists. EAHP has worked on this issue for the past decade. Research conducted by EAHP in 2014, 2018 and 2019 showed that the impact that shortages have on patient care and the work of hospital pharmacists has increased. These problems seemed to have worsened dur-

ing the COVID-19 pandemic with many countries reporting shortages of medicines used for patients in intensive care units. For that reason, **EHP advises national governments to evaluate if their shortage measures and management systems are fit for purpose and to rectify shortcomings where and when needed and specifically to assess if they will be ready to respond to future health threats.**

3. Anticipation of shortages during the pandemic was also a problem for a lot of health systems. **Thus, the implementation of prospective risk assessment at multi-stakeholder level, and the design of robust methodologies, together with IT programmes to effectively monitor and manage regional and national stocks should be developed, as well as communication platforms to exchange information between all the stakeholders involved.**
4. **Open communication and direct dialogue between health authorities and hospital pharmacy professionals (including national hospital pharmacy associations) are key to face future health threats and should be utilised in future crises situations.** Representatives from the hospital pharmacy profession should be included in the national working groups that will react and prepare plans to respond to these threats, as they are the experts in medication management within the European health systems.
5. **Multidisciplinary networks involving hospital pharmacists should be created to work on developing pathways for hospitals to better face future health threats.** The pandemic has pointed out the need for coordinated and multidisciplinary work, and the importance of including hospital pharmacists within these teams as medication experts.
6. Hospital pharmacists are specialists in the procurement, manufacturing, and logistics of medicines. **The networks and systems established during the pandemic should be further manifested and expanded to avoid issues like medicines shortages or miscommunications, between hospitals and healthcare systems.** These networks should also be strengthened in all aspects linked with medicines distribution.
7. During the pandemic, a strong and transparent collaboration between the pharmaceutical industry, wholesalers and healthcare professionals has proven to be highly effective in supporting the continuation of care. Through cross-sector collaboration, attention was able to be put to optimising the care of COVID-19 patients. **Thus, a strong, transparent, and honest collaboration between all stakeholders involved in the supply of medicines should be applied to prevent shortages during health threats.**



8. **EAHP would like to raise awareness among national authorities concerning the importance of having national and robust hospital pharmacy programmes** specialisations programmes to better prepare hospital pharmacies to respond to the needs of a pandemic or other health threats. The more EAHP's member countries move towards the implementation of the European Statements of Hospital Pharmacy, the safer the delivery of hospital pharmacy will be, and the readier the profession will be to face future challenges like the COVID-19 pandemic.
9. Hospital pharmacists have played and still are playing an essential part in ensuring that patients receive the best treatment possible during the pandemic, especially as an essential part of antimicrobial stewardship teams. From medicine reconciliation to medicine review or the securement of treatment protocols, hospital pharmacists have worked side by side with doctors and nurses to guarantee the best treatments for patients. **Thus, EAHP urges increased involvement of hospital pharmacists in all patient care settings to prospectively influence collaborative, multidisciplinary therapeutic decision-making.** They should play an integral part in decision-making including advising, implementing and monitoring medication changes in full partnership with patients, carers, and other healthcare professionals
10. Hospital pharmacists have been instrumental in the development of clinical trials both to optimise treatments for COVID-19 patients and to evaluate the effects of the COVID-19 vaccines. **EAHP calls on national governments to recognise the important roles that hospital pharmacists play in clinical trials by requiring their involvement to increase patient safety** specifically to support the development of treatments during future pandemics or health threats.
11. European hospital pharmacies have provided expertise and coordinated hubs to distribute and organise COVID-19 vaccination campaigns not only at the hospital level but in a lot of cases at the regional level. **EAHP recommends continuing to engage hospital pharmacists in vaccination campaigns as vaccination experts and trusted sources of information for patients.**

EAHP Member Countries

EAHP represents more than 23000 hospital pharmacists from 35 member countries. In addition, since 2021 Egypt is also an associate member of EAHP.

The following section of the report contains personal views and experiences from our members countries during the pandemic. We want to thank the tireless work done by all hospital pharmacists across Europe to ensure the correct functioning of the hospital pharmacies during the COVID-19 pandemic. Thank you for being in the frontline of the pandemic.



A complete report will be published in Fall 2022 with information from all our member countries. Stay tuned!



ARBEITSGEMEINSCHAFT
ÖSTERREICHISCHER
KRANKENHAUSAPOTHEKER

AUSTRIAN ASSOCIATION OF HOSPITAL PHARMACISTS (AAHP)

"Since the beginning of the COVID 19 pandemic hospital pharmacists have made an indispensable contribution to the health care of the population. Our thanks go to all our colleagues who have worked tirelessly to ensure that there have been virtually no supply shortages in Austrian hospitals. We would also like to thank all colleagues who ensured a high quality and timely provision and preparation of COVID medications and vaccines'."

Hospital pharmacists in Austria were heavily involved in the logistics and preparation for use of the Covid vaccines. They also prepared large quantities of disinfectants, for example, and produced swab systems for SARS-CoV-2 tests to avoid shortages. For example, the hospital pharmacy at the Favoriten Clinic in Vienna was involved in the development of the COVID-19 gargle tests and assisted in the selection of the optimal gargle preparation, which made it possible to develop the PCR gargle tests that have since been used millions of times.

Some of the challenges that our colleagues from Austria had to face during the pandemic:

- handling the various supply shortages of both drugs and medical devices and the logistics of Covid-19-medicines posed major challenges
- organising and keeping up all pharmacy services in times of home office/ splitting teams (for safety reasons) was a challenge in some phases of the pandemic.

► <https://www.eahp.eu/members/austria>



BELGIUM ASSOCIATION OF HOSPITAL PHARMACISTS (Association Francophone des Pharmaciens Hospitaliers de Belgique & Belgische Vereniging van Ziekenhuisapothekers)

"It was heart-warming to see that HCP's and scientists shared information freely and learned from each other and. It was hard to hear how during the first wave HP's in some countries had to work continuously for multiple days to fight the virus with hardly any hope to succeed. The pandemic also changed the world for our good, digital evolution has proceeded at high-speed resulting in possibilities for a better ecological footprint and better work-life balances.-By joining forces and skills we beat the virus and change the world."

As our colleagues from Belgium pointed out, hospital pharmacists played a crucial role in maintaining safe and quality healthcare during the pandemic. An important thing that our colleagues wanted to share is that if the COVID-19 pandemic has showed us something is that multidisciplinary cooperation works.

These are some of the challenges faced by our Belgium colleagues during the pandemic:

- extreme shortages of critical drugs and devices
- shortages of personal protection equipment and testing materials
- preventing staff from becoming infected in order to guarantee continuity of care
- help personnel in finding work-life balance and mental health. By informing and reassuring them.

► <https://www.eahp.eu/members/belgium>



BULGARIAN ASSOCIATION OF HOSPITAL PHARMACISTS

“Two very difficult years have passed, which have changed our whole life, views, and values. Hospital pharmacists have once again proven to be an indispensable part of health systems and specialists with a lot of knowledge and skills that doctors, and patients can rely on.”

When asked about with two key recommendations for future health threats, our colleagues from the Bulgarian association stated:

- prepare action plans with the best specialists and healthcare professionals
- to have a reserve of essential drugs and consumables.

► <https://www.eahp.eu/members/bulgaria>



FRENCH COLLECTIVE FOR HOSPITAL PHARMACY IN EUROPE

composed by

E.F.P. – European Fellowship for Pharmacists | SYNPREFH – Syndicat National des Pharmaciens des établissements publics de santé | Fédération Nationale des Syndicats d’internes en Pharmacie et en Biologie Médicale | EURO-PHARMAT – Base de données sur les Dispositifs Médicaux | SNPHPU – Syndicat National des Pharmaciens Praticiens Hospitaliers et Praticiens Hospitaliers Universitaires | SFPC – Société Française de Pharmacie Clinique

“We would like to acknowledge and congratulate the adaptability of those working in hospital pharmacy during the pandemic to respond to unfamiliar issues that have disrupted our practice.”

Our colleagues from France explained some of the tasks that they carried out at the beginning of the pandemic:

“One of the first important tasks in the early days of the pandemic was to set up a circuit to alleviate the shortage of hydro-alcoholic solution in the face of unprecedented demand.

Another task, which emerged later in the pandemic, was the coordination of vaccine supply, particularly for pharmacists working in “hub” hospitals, distributing vaccines to other hospitals in the area.

A significant organisation was required to ensure timely supply to support the vaccination efforts, adapting to storage constraints, which evolved over time, and the associated material needs.

We also had a pedagogical role with the physicians in order to find equivalences to adapt to multiple stock-outs.

A great deal of bibliographic work was done to understand how other hospitals and other countries have reacted in order to maintain a qualitative health care system.”

One of the most important challenges pointed out by the French platform has been the management of the therapeutics needed for COVID treatment, in a context of supply tensions, particularly on critical products, with, for example, tensions on molecules such as midazolam, propofol, etc...

“Multidisciplinary collaboration was necessary with physicians to rationalise the use of molecules in short supply, to adapt to rapidly changing treatment recommendations, and to propose alternative therapeutic protocols to ensure continuity of care despite stock-outs.

These supply tensions did not only impact drugs, but also medical devices (intubation systems, masks, etc.).

It also required a great deal of work in order to find alternatives and innovate in the logistical processes to get around these supply problems.

Finally, hospital pharmacists were reactive to the creation of specific COVID hospitalisation units, in particular by proposing adapted drug supplies (which were refined as the pandemic evolved)."

▶ <https://www.eahp.eu/members/france>



Bundesverband Deutscher
Krankenhausapotheker e.V.

GERMAN SOCIETY OF HOSPITAL PHARMACISTS (ADKA)

"We thank all hospital pharmacists for their outstanding contributions to the pandemic response. Hospital pharmacists produced hectoliters of hand sanitizer, provided medicines for prevention and treatment of COVID19 as part of the civil protection, managed vaccine logistics and prepared vaccine for application, and protected patients from the effects of numerous drug supply shortages. The society can rely on us!"

During the pandemic, the German hospital pharmacists have (among other things):

- ensured the supply of hand disinfectants, when the market was unable to provide sufficient supplies due to the disruption of supply chains
- managed and distributed the medicines provided by the federal government as part of the civil protection for the prevention and treatment of COVID19
- supported the vaccination campaign by managing COVID19 vaccines and preparing vaccines for application in clinics and vaccination centers.

When asked about the main challenges faced by German hospital pharmacists, our colleagues from ADKA answered that the greatest challenges during the pandemic were:

- coping with the additional tasks in addition to ensuring routine care
- maintaining our performance as a critical infrastructure
- procuring all the necessary medicines and medical devices necessary to care for the patients entrusted to us.

Our colleagues from ADKA explained that addressing pandemic-associated challenges has strengthened collaboration among healthcare providers. Many successful solutions were only possible by combining the different expertises. These experiences have improved mutual appreciation and certainly have positive implications for future requirements.

Emergency response regulations should be based as closely as possible on established care processes. Necessary exemptions should be actively granted and widely communicated. The existing concepts should be revised on the basis of the experience gained. Hospital pharmacies have made a significant contribution to coping with the pandemic. In order to obtain this option for similar scenarios, investments in the personnel and structural equipment of these facilities are necessary.

► <https://www.eahp.eu/members/germany>



Π.Ε.Φ.Ν.Ι. PANHELLENIC ASSOCIATION OF HOSPITAL PHARMACISTS (PEFNI)

“Teamwork and cross-functional cooperation are essential for ensuring effectiveness and sustainability of the healthcare system. Hospital Pharmacists and other Healthcare professionals in Greece, have worked together successfully during health crisis of pandemic Covid-19, collaborated with Hospital Managers and essentially supported Healthcare System. The main tasks we had to succeed, included participating in the vaccination campaign, providing relative information, participating in logistics and pharmacovigilance, and ensuring that the overall quality of services was achieved. At the same time, we successfully managed the challenges of drug shortages in the country during the health crisis of Covid-19.”

The bigger need of pharmaceutical services in combination with the lack of adequate human resources and the management of drug shortages have been the main challenges for our colleagues in Greece.

► <https://www.eahp.eu/members/greece>



HUNGARIAN SOCIETY OF HOSPITAL PHARMACISTS (MGYT)

"The Hospital Pharmacy has played and continues to play a key role in the procurement and receiving of vaccines, their proper storage at the appropriate temperature, their preparation for vaccination, their transport to vaccination points and the provision of information on vaccines. The concept of working time changed during the epidemic. It was a "task," not working hours. At the other end of which was a patient, his hopeful family, loved ones, a narrower and wider environment, and we did our best to do our best for these fellow human beings. We also left home for medicine at night, even to another hospital, to a wholesaler, or we just handed over a medicine to a patient hospitalized in another institution.

During the vaccination campaign of the residents of the nursing homes, we packed the vaccines shivering in the cold room for days to get everything ready in time. In the care wards, several people took part in voluntary tasks beyond working hours, which meant both administration and specific patient care activities. Institutional pharmacy is the underwater part of the iceberg. It is conceivable that it is there, but it often remains invisible to the outside observer, even though there is no medicine that reach patients through the pharmacy."

Besides maintaining the safe and continuous supply of medicines and oxygen, hospital pharmacists in Hungary were involved in vaccination with ordering, storing, dispensing and preparing pre-filled syringes of vaccines; distribution of COVID-19 antiviral medicines amid high workload including continuous and regular weekend work.

Our colleagues from MGYT also remarked that simulation exercises should be performed to test the capability of systems for future health treats.

► <https://www.eahp.eu/members/hungary>



THE HOSPITAL PHARMACY GROUP OF THE PHARMACEUTICAL SOCIETY OF ICELAND

"Successful teamwork of all healthcare specialities within the hospital setting and with primary care."

During the COVID-19 pandemic, time and manpower was focused on COVID and COVID patients. The main challenges was to keep other services running for the rest of the hospital. Later COVID patients were given treatment at the ward they were placed at the time, and that involved more pharmacists to consult and give advice. Drug shortages for common medication was also a big challenge in Iceland, but Iceland hospital pharmacists managed it well with great teamwork.

Our colleagues from Iceland also stated that new services have arised and they will need funding to further support and develop. In addition pay rise for healthcare staff is needed to attract a much-needed workforce.

► <https://www.eahp.eu/members/iceland>



HOSPITAL PHARMACISTS ASSOCIATION OF IRELAND (HPAI)

Our colleagues from HPAI pointed out that the main challenge they faced during the pandemic was an increased pressure on individual hospital pharmacists due to staffing shortages caused by COVID shortages of key medicines.

“Thank you to all hospital Pharmacists who showed true dedication and selflessness during the Coronavirus pandemic. In such difficult times you overcame many personal and professional challenges in order to help your patients”.

Irish hospital pharmacists were key on setting up and maintaining vaccination centres, identifying and delivering best practice in the assembly of vaccine doses and on rapidly upskilling knowledge to cover expanded ICUs/CCUs.

► <https://www.eahp.eu/members/ireland>



SIFO ITALIAN SOCIETY OF HOSPITAL PHARMACY (SIFO)

"We would like to thank all those hospital and community pharmacists who never gave up during the pandemic; all those who worked beyond their strengths, who made it possible to access therapies normally used for other diseases, who studied at night together with doctors to draw up protocols, who networked together with doctors, biologists, nurses, both nationally and beyond. And even today, despite the fact that little has changed in terms of resources, they are still going strong."

Our colleagues from SIFO commented on the importance on creating a structured multidisciplinary network of top-level professionals to create defined and shared pathways at national level. This will be important to minimise regional differences and increase the level of training of each health professional. In addition, an increase the number of health professional is needed. SIFO colleagues explained that above all there must be at least one pharmacist per ward.

► <https://www.eahp.eu/members/italy>



ASSOCIATION DES PHARMACIENS HOSPITALIERS DU LUXEMBOURG (APHL)

"The exceptional situation was hard and stressful but also a great experience to live as a Health professional. It gave to the Hospital Pharmacy team confirmation that everyone had a key-role to play in the hospital. This crisis also showed us how close the team was."

These are two of the main challenges that hospital pharmacists in Luxembourg had to face during the pandemic:

- drugs and medical devices shortages: a national taskforce with hospital pharmacists was created and APHL built a national strategic stock, to meet the hospital needs
- hydro-alcoholic solutions shortages: APHL decided to start a production of hydroalcoholic solutions in our hospitals. We have decided to use the formulation proposed by the WHO ("Guide to Local production"). The pharmacist was in charge of the organisation and of the control of the preparations. Three pharmacy technicians have been trained and they were in charge of the compounding. We prepare almost every day according to hospital needs.

► <https://www.eahp.eu/members/luxembourg>



MALTA ASSOCIATION OF HOSPITAL PHARMACISTS (MAHP)

"The COVID-19 pandemic has radically and rapidly changed our daily life. But hospital pharmacists have shown that through their dedication, determination, resilience and expertise, they have continued to deliver exceptional care to their patients."

Some of the challenges faced during the pandemic pointed out by our colleagues from Malta:

- lack of communication with patients due to lockdown/quarantine
- out of stock medicine due to increase in consumption
- lack of staff due to quarantine.

Hospital Pharmacists in Malta have also implemented extend hours of their shifts to be able to manage all their pandemic. In addition, they had to take over tasks and innovate their workflow to get for instance home deliveries of medicines during lockdown.

► <https://www.eahp.eu/members/malta>

PHARMACEUTICAL ASSOCIATION OF MONTENEGRO

"This situation was very challenging and stimulating. We were put in a situation and circumstance like never before. But we did get new skills, and they are going to be very important in the future working as a hospital pharmacist."

Our colleagues from Montenegro explained that medicines shortages was the biggest challenge.

▶ <https://www.eahp.eu/members/montenegro>



NORWEGIAN ASSOCIATION OF HOSPITAL PHARMACISTS

"A big thank you to everyone who have contributed to patient treatment and vaccination during the pandemic – you have saved many lives! With safe and effective vaccine distribution, the employees of the hospital pharmacy have shown that we are an important part of the health care system that has helped to save many lives through the pandemic."

Our colleagues from the Norwegian association explained that a lesson learned from the pandemic is that there must be a system to rapidly establish national treatment committees which can evaluate the effect of drugs and make recommendations as to whether these drugs should be used for the illness in question or not. For them it has to be clear if the recommendations from these treatment committees should be followed directly or if a national body decides which recommendations are to be followed and which are not to be followed.

Thus, for the Norwegian Association, if this decision is taken by other bodies than the treatment committees it has to be clearly stated which national body is responsible for this, and maybe also which timelines they shall adhere to "All recommendations have to be published or distributed in a channel accessible by all healthcare workers in a timely manner. National recommendations are preferred".

► <https://www.eahp.eu/members/norway>



Naczelna Izba
Aptekarska

POLISH PHARMACEUTICAL CHAMBER – HOSPITAL PHARMACY SECTION

“We would like to thank to all our fellow colleagues, pharmacists and other medical professionals, for managing the COVID crisis. We believe that this difficult experience made us stronger and that we will be even better able to help patients in the future.”

Our colleagues from Poland explained that the COVID pandemic put huge challenge on medical professionals, including hospital pharmacists: *“We faced an urgent need for us to deliver more clinical services to our patients. When the COVID-19 vaccines were introduced, at first, we did a huge work on logistics and preparation, but then we have been granted the possibility to qualify patients for vaccination, and to vaccinate adult patients. This was a huge change for us. We have learned how to work in vaccination points and cooperated with other medical professionals in that matter. Also, we were involved in COVID-19 vaccines and medications procurement and supervision.”*

Our colleagues from Poland explained that hospital pharmacists:

- embraced the logistics, preparation and distribution processes of COVID-19 medications and vaccines
- performed patients qualification for vaccination, and administered vaccines to patients
- educated patients about COVID vaccine mechanism of action, efficacy, adverse effects, etc
- have been working in interdisciplinary team (physician, nurse, pharmacist) in vaccination points.

The most challenging for our colleagues was to learn and perform patient qualification for vaccination, and then making subcutaneous injections in real-life. The second one was to collaborate with doctors and nurses from COVID units in the hospital, to give a substantive support refer to drugs and to assure there's no shortages of medications. Hard work done to provide therapy continuation in spite of drugs deficit in the country.

► <https://www.eahp.eu/members/poland>



PORTUGUESE ASSOCIATION OF HOSPITAL PHARMACISTS (APFH)

“The Portuguese Association of Hospital Pharmacists thanks all colleagues for the effort on behalf of patients made during the COVID-19 pandemic. We have all experienced difficult times, where stress and work overload were demanding, but now we can say that together, we managed to overcome all difficulties, without leaving any patient behind. We hope that the future will bring us the fruits of the seeds we have sown during this period and that the innovation implemented to overcome the challenges, such as tele pharmacy, is here to stay. Being a pharmacist is being fearless, being in the line of innovation and knowing how to adapt to each situation and needs of those who need us. Congratulations to all of us.”

Portuguese hospital pharmacists faced many challenges like anxiety and stress due to the eminent lack of resources (human resources, medicines, medical devices, and other products) was a problem that involved us throughout the pandemic.

Our colleagues from APFH explained that they had to efficiently manage all the stock and on the other hand, be very attentive to new information and guidelines, whether regulatory or scientific, regarding the new medicines used.

Also at the administrative level, new processes were installed, with a rapid need to change circuits, change routines and schedules and implement new tasks, such as tele pharmacy or home delivery.

► <https://www.eahp.eu/members/portugal>



THE NATIONAL HOSPITAL PHARMACISTS ASSOCIATION OF ROMANIAN (ANFSR)

*"In the depth of winter, I finally learned that within me there lay
an invincible summer."*

Albert Camus

AFNSR's colleagues explained that managing the vaccination centres was the most challenging activity during the Covid-19 pandemic. The main issues that they faced were that the fact of having different vaccines with different storage conditions and different vaccination schedules. In addition, working in multidisciplinary teams (especially in the ICU wards with epidemiologists) to provide the best therapeutic outcomes was also challenging, considering many novel drugs used to treat.

*"Informing doctors about specific Covid medications revealed pharmacists' key role in
the healthcare systems."*

AFNSR's board explained that during the pandemic, new therapeutic anti-viral drugs have been developed and without the hospital pharmacist's role, the distribution and understanding of this type of drug were impossible. For example, *"whenever Favipirum or Molnupivirum pills were disposed of from the hospital pharmacy a commission made of epidemiologists and pharmacists approved the transfer to the patients"*.

► <https://www.eahp.eu/members/romania>

THE PHARMACEUTICAL ASSOCIATION OF SERBIA, HOSPITAL PHARMACY SECTION

“Hospital pharmacists in Serbia showed how quickly and efficiently can adapt to pandemic conditions, remodel hospital pharmacy services and secure supply of medicines and medical devices to all patients. This pandemic increased interdisciplinary collaboration and proved how important is the hospital pharmacists’ involvement in the assessment of information on medicines and medical devices and securing treatment protocols implementation in order to optimise health outcomes and save patients’ lives.”

Some of the tasks carried out by our colleagues in Serbia during the pandemic:

- intensified remote consultations with healthcare professionals treating Covid-19 patients
- quick evidence-based assessment of information on proposed various treatments for COVID-19 patients and efficient dissemination of information to all healthcare professionals
- quick adaptation of hospital pharmacy facilities to assure workforce safety and efficient medicines and medical devices’ distribution
- setting up new hospital pharmacies from scratch in newly built hospitals dedicated for COVID-19 patients.

When asked about the two main challenges they faced our colleagues from Serbia commented the following:

- overcoming workforce challenges in order to secure the continuous provision of healthcare services and overall security throughout the pandemic
- dealing with misinformation on COVID-19 treatments.

► <https://www.eahp.eu/members/serbia>



SLOVAK CHAMBER OF PHARMACISTS – SECTION OF HOSPITAL PHARMACISTS

“The Section of Hospital Pharmacists of Slovak Pharmaceutical Chamber thanks hospital pharmacists that despite difficult situations, various pressures and a huge amount of work, they did not give up and were available when and how much was needed. Hospital pharmacists have shown their ability of self-organization despite the lack of guidelines due to new situations. At the same time, they have shown that they can be a driving force in dealing with complex situations. The COVID-19 pandemic has made the importance of the work of hospital pharmacists more visible, which we want to continue in the activities of our association. Addressing the pandemic challenges required considerable proactivity and creativity from hospital pharmacists. We managed the situation also thanks to intensive communication and mutual assistance between hospital pharmacists throughout all Slovakia.”

Some of examples of how our colleagues from Slovakia addressed drug shortages:

- due to the high need for therapy by oxygen during COVID-19 pandemic, the distribution of water for injections used for moistening during therapy by oxygen got out of stock in the distribution and even was not available at foreign manufacturers at that time. It was the hospital's chief pharmacist who was able to persuade the infusion solution manufacturer in Slovakia to immediate production of the much-needed water for injections in sufficient quantities for all patients who needed it as part of the therapy by oxygen
- hospital pharmacists, with their skills and knowledge, have shown that they can replace unavailable dexamethasone tablets due to a pandemic. Hospital pharmacists compounded dexamethasone capsules in various doses for COVID-19 patients and cancer patients as well.

► <https://www.eahp.eu/members/slovakia>



SPANISH SOCIETY OF HOSPITAL PHARMACISTS (SEFH)

"We would like sincerely to thank, from the Spanish Society of Hospital Pharmacy, all the efforts and commitment of health professionals involved in patient care during the pandemic. During the last months we have faced new challenges in many aspects of our lives, from a professional perspective but also social, personal and familiar, that have brought us new learnings."

Our colleagues from SEFH explained that hospital pharmacists in Spain have developed a key role in the COVID-19 vaccination campaign, contributing to its high success. Spanish hospital pharmacists have also enhanced the support to nurses with drug preparation at UCI wards.

When asked about some of the challenges, our colleagues from SEFH provided two examples:

- assessment of evidence for COVID-19 related treatments: we have played a key paper in protocolization of COVID-19 treatments, evaluating new evidence and positioning each treatment according to it. We have also participated in research projects and clinical trials
- ambulatory patients follow-up: we have developed Tele pharmacy activities to respond to all ambulatory patients' needs, adapting circuits and communications tools to each situation with the main objective of assure best pharmaceutical care to patients.

► <https://www.eahp.eu/members/spain>



Apotekarsocieteten
Swedish Pharmaceutical Society

SECTION FOR HOSPITAL PHARMACY OF THE SWEDISH PHARMACEUTICAL SOCIETY

"The absence of major drug distribution crises during the COVID-19 pandemic is an indirect, but significant, testament to the collective efforts of hospital pharmacists. For the most part drugs were available when and where required. This did not just happen, but was the end result of numerous collaborations, inventive solutions and concerted efforts by dedicated hospital pharmacists."

When asked about the challenges their faced, our Swedish colleagues stated that:

- one major challenge for hospital pharmacists during the pandemic has been to adapt to disrupted global supply chains to still ensure access to crucial medications. Another challenge has been having to allocate significant resources to the distribution of COVID vaccines while still operating normal services and responsibilities largely unaffected
- the drug distribution system in Sweden needs strategic strengthening in order to improve preparedness and resilience in times of crises like war, pandemics, disrupted global supply chains *et cetera*.

► <https://www.eahp.eu/members/sweden>



DUTCH ASSOCIATION OF HOSPITAL PHARMACISTS (NVZA)

"The past two years have taught us that the parties in the pharmaceutical sector can join forces and move mountains. It is also thanks to their flexibility that we have been able to avoid serious shortages of corona-related medicines in the past two years. I look forward to using these experiences to make the pharmaceutical sector in the Netherlands even more resilient and agile."

Minister of Health, Welfare and Sport, Ernst Kuipers

The Dutch Coördination center for Medication (LCG) was set up in which all the Dutch hospital pharmacies joined forces, shared data and collaborated in drug manufacturing in hospitals. Almost every Dutch hospital pharmacy was supporting nurses with drug preparation, 7 days a week.

Our colleagues from NVZA explained that assuring the availability of medication and adequate pharmaceutical care during times of high (global) drug demand.

► <https://www.eahp.eu/members/netherland>



GUILD OF HEALTHCARE PHARMACISTS

"The Guild of Healthcare Pharmacists (GHP) and the Royal Pharmaceutical Society (RPS) are incredibly proud of how our members, working in both secondary and primary care, rose to every trial put forth by the COVID pandemic. We have been honoured to be Pharmacists during this Global crisis and to be able to support our patients, our pharmacy teams, our healthcare colleagues and our communities in one of the most challenging periods of all of our careers. We want to take this opportunity to thank the Pharmacy Teams in the UK for all of their work throughout the pandemic and to remind them how uniquely valuable their work is in the care of their patients, in all healthcare settings."

Upskilling of Acute Clinical Pharmacist Teams across the UK in the management of ICU patients – In March 2020, when a global pandemic was announced, and lock-down was implemented in most of Europe, Pharmacists in practice needed guidance and information to support their decision making for their patients. Clinical and professional organisations for Pharmacists across the UK developed resources, delivered webinars and provided mentorship to support colleagues to provide the best care for patients across the UK, as the ICU beds, and admissions, quadrupled overnight **1-4**. The RPS also worked with a Team of clinicians and academics across the UK to develop an ethical framework to support decision making during the pandemic. This document supported pharmacists in practice to make timely, safe decisions in the best interest of their patients, where evidence was lacking.

When asked about the main challenges during the pandemic our colleagues from GHP answered:

Challenge 1 – For all of us, the challenge of the impact of a prolonged pandemic on staff and colleagues mental health and well-being, coupled with the personal impact of the pandemic, including loss of family and friends, on staff ability to keep giving the "extra mile" demanded by the pandemic. As organisations, the GHP and RPS have kept a clear focus on the well-being of the pharmacy team, trying to ensure that all staff are aware that they have somewhere to turn, and that there are people who will offer support

Challenge 2 – The pandemic also was an enormous disrupter of the status quo, and accepted working practices. In every healthcare setting, much of the planned, elective work was replaced by emergency, reactive work, and this was challenging for staff, and has taken some adjustment. Now we must think about how a "new normal" will look and feel for us. There are some of the "emergency" roles that teams have taken on that will be retained and developed, and this is an exciting direction for pharmacy teams.

EAHP REPORT

COVID-19

Hospital Pharmacists fighting at the frontline
for patients during the pandemic

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