



# Hospital Pharmacy 5.0

## THE FUTURE OF PATIENT CARE

| 2<sup>nd</sup> announcement

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#EAHP2021



24-26 March 2021,  
Vienna, Austria

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### CONGRESS VENUE

AUSTRIA CENTER VIENNA  
Internationales Amtssitz- und  
Konferenzzentrum Wien, AG  
Bruno-Kreisky-Platz 1 - 1220 Wien, Austria

### REGISTRATION

Registration Fee **Student** | 150 €

Registration Fee **before 1 December 2020** | 520 €

Registration Fee **beginning 1 December 2020** | 610 €

Registration Fee **beginning 1 February 2021** | 695 €

Registration Fee **Young Professional at 50% of the regular rate**

Registration fee includes access to all sessions, the opening reception, the exhibition, lunches on Wednesday and Thursday and coffee/tea during official breaks.

**The registration fee does not include VAT. 10% Austrian VAT will be added at the end.**

### CANCELLATION POLICY

For group reservations, a maximum of 15 % of the registrations may be cancelled before 31 December 2020. Cancellation of registrations received before 31 December 2020 will be refunded, less an amount of €100 per registration in order to cover the bank and administration charges. No refunds and cancellation can be made after this date but a registration name change is always accepted.

This cancellation policy does not apply to fees already paid for the Gothenburg congress and which have been transferred to the Vienna congress. Such fees shall not be refunded.

For individuals, cancellation of registrations received before 31 December 2020 will be refunded, less an amount of €100 per registration in order to cover the bank and administration charges. No refunds and cancellation can be made after this date but a registration name change is always accepted. A handling fee of €50 (10% Austrian VAT excluded) will be charged for every name change to an existing registration.

This cancellation policy does not apply to fees already paid for the Gothenburg congress and which have been transferred to the Vienna congress. Such fees shall not be refunded.

Notice of cancellation must be made in writing to EAHP, by email:  
[registration@eahp.eu](mailto:registration@eahp.eu)

### CONGRESS & EXHIBITION ORGANISERS

EAHP Congress Secretariat

European Association of Hospital Pharmacists (EAHP)

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E-mail: [congress@eahp.eu](mailto:congress@eahp.eu) | Website: [www.eahp.eu](http://www.eahp.eu)

### HOTEL ACCOMMODATION

Mondial Congress & Events

Opengasse 20b - 1040 Vienna

+ 43 (0)1 588 04 111 | Email: [eahp@mondial-congress.com](mailto:eahp@mondial-congress.com)

NOTE THAT ALL HOTEL BOOKINGS WILL BE MADE THROUGH THE EAHP WEBSITE VIA A LINK TO THE HOUSING BUREAU.

ALL PAYMENTS, CHANGES AND CANCELLATIONS FOR HOTEL ACCOMMODATIONS

WILL BE HANDLED DIRECTLY BY THE HOUSING BUREAU.

### CALL FOR ABSTRACTS

The Scientific Committee welcomes the submission of original contributions from all fields of hospital pharmacy. Abstracts submitted must not have been previously published or submitted to another congress except at the congress of their own national association. All abstracts will be accepted for poster presentation only. The poster prize nominees will be requested to give an oral presentation on 24<sup>th</sup> March during the congress. The abstracts will be reviewed by colleagues from different European countries. Accepted abstracts will be published in the official Abstract Book and will also be available for viewing via the EAHP web site. Presenters are encouraged to have available handouts of their poster when presenting at the congress, and/or to have an e-mail address to allow attendants to ask for "electronic handouts" after the congress. For more information on submission and abstracts, please visit the following website, <https://www.eahp.eu/congresses/25th-congress-eahp-hospital-pharmacy-50-future-patient-care/abstract>.

### Deadline for submission : 15<sup>th</sup> October 2020

\*EAHP confirms that Scientific Committee members responsible for the development of the Congress programme have signed and submitted the Conflict of Interest Disclosure forms.

### POSTER AWARD

Encouragement prize for investigators.

The best abstracts/posters – with regards to aspects like originality, scientific quality and practical applicability – will be awarded with 3 prizes amounting 750 €, 500 € and 250 €. The Poster prize nominees will be requested to give an oral presentation on 24<sup>th</sup> March. The winners will be announced at the closing ceremony on 26<sup>th</sup> March 2021. Winners must be present to win.

## KEYNOTE 1: ARTIFICIAL INTELLIGENCE, TO BOLDLY GO WHERE NO ONE HAS GONE BEFORE

We live in a quick evolving world where boundaries are moved continuously toward new horizons. Our knowledge expands and healthcare is capable of more than our ancestors could ever dream of. Technology evolves exponentially, medical devices are smart, and robots take their place in healthcare. Meanwhile the digitisation wave floods the medical record and a lot of structured big data is becoming available. We use databases and build computer algorithms to help us improve quality and patient safety. Most of the computerised physician order entry (CPOE) systems already have clinical decision support systems (CDSS) on board to assist the prescriber. But what if we push the limits and go further?

When Artificial Intelligence (AI) comes into the picture, the future looks amazing and frightening at the same time. These new algorithms can review, interpret and even suggest solutions to complex medical problems. They can help healthcare professionals to augment safety and quality of care. Increase efficiency and free up scarce expert resources by redesigning our approach.

Artificial Intelligence can play a role in drug development, image recognition (e.g. interpreting radiographic images in order to identify patients with chronic pulmonary hypertension), screening patients for eligibility for clinical trials, predict responsiveness to therapy and estimate the likelihood of adverse events (e.g. acute kidney failure, QT-prolongation, heart attack, death). Using machine learning, the outcome and predictive value becomes more accurate. On top of this, the machine never suffers from fatigue or distractions.

But are algorithms always right? These algorithms are trained by datasets which reflect the variability between health care providers and this approach will undoubtedly influence the potential error rate. Do we not need a real neural network, such as our brain, to identify and treat the exceptional patient?

Will artificial neural networks replace the human healthcare professional or are they just a powerful supporting tool? How can they add to cost-effectiveness and can we trust them while we focus on new tasks?

In this keynote we are introduced to the world of artificial intelligence in relation to healthcare and learn about the endless potentials and possible pitfalls. After all, we cannot stop this evolution and the world will never be the same again.

## KEYNOTE 2 : PHARMACIST PRESCRIBING - FROM VISION TO REALITY

Pharmacist prescribing has transformed medicines optimisation in the UK. Ever since it was introduced in 2003 many thousands of pharmacists have qualified as independent prescribers and use their skills to run medication clinics, optimise medicine across primary and secondary care. In many ways this legitimised what was happening in practice anyway where pharmacists would leave notes for doctors to action – being a prescriber empowers pharmacists to make autonomous decisions and to take the lead in shared decision making with their patients/carers to enable informed choices about their medicines.

This keynote will explain how it was successfully implemented in the UK, the lessons learned and the benefits realised so that other countries may learn from this experience. The highly experienced speaker duo are both qualified pharmacist prescribers. They will explain how they overcame their initial concerns about taking on the role of prescribers and how the educational framework and support, designed around the competencies required to be a prescriber, helped them overcome this. They will use personal examples from hospital and primary care to inspire pharmacist attendees to consider how they might act as a prescriber in the future. They will also consider the benefits pharmacist prescribing bring for the individual in terms of professional development, as well as for both patients and the wider health care system. The future is here!

## KEYNOTE 3 - TREATED BY COMPUTERS? - A FUTURISTIC PERSPECTIVE OF HEALTH CARE

Digitalisation is everywhere. May it be in our private life with – for example - a smart phone nowadays being able to control and monitor (nearly) every aspect of our life, even influence our social interactions. Looking at the impact of digitalisation in health care, one can recognise many different faces: monitoring patients' wellbeing via computers or wearables with automatic data transmission, distant diagnosis via video calls or electronic decision support with sophisticated algorithms and self-learning machines. Somewhat scary, isn't it? Digitalisation as an unstoppable revolution in health care can provoke questions, even induce fears. Will we leave the patient behind, with personal interactions and attention being substituted by diagnosing robots? Are all patients – considering that our population is getting older! – confident with and happy to use digital tools during their patient journey? Are we as hospital pharmacists' representative of the overall health care workforce, who are already equipped with digital competences in order to thoroughly understand and use all potentials coming with health care digitalisation? Will we still be needed?

## SECTION 1: INTRODUCTORY STATEMENTS AND GOVERNANCE

### IG1 - What's in the crystal ball - the future of healthcare - HP get ready!

Opportunities in healthcare are changing rapidly with developments of new technologies, use of AI, telemedicine, 3D printing and access to innovative drugs and treatments. This calls for hospital re-design using, for instance, robotics and digital technologies in the routine treatment of patients. At the same time, there has been increased focus on personalised medical treatment using genomics analysis, nano-technology (devices inside the body), treatment of patients in their own homes etc. These opportunities will most likely lead to better treatment of patients.

Concurrently, the users of healthcare are changing. Patient empowerment is a new focus, and patients express higher demands to the healthcare system and healthcare providers, including hospital pharmacists. This may result in increased competition within healthcare and create new demands on healthcare professionals in the way we view, communicate and treat patients. However, healthcare professionals also experience new opportunities during their training using e.g. virtual reality and simulations to empower them to better meet patient needs.

The downside of all the new possible treatment opportunities is costs. The new technologies and drugs are often very expensive. The proportion of elderly people is growing throughout Europe, which will lead to increased pressures on healthcare systems, since elderly people have more diagnoses and treatment needs. This calls for prioritisation in healthcare and the risk of polarisation in access to healthcare services.

### IG2 - The art of benchmarking

The aim of Benchmarking is to improve outcomes by the identification of best practice and comparison with our own. This system can provide a structured approach to develop the way we work, and if well implemented, it can also be a motivating force for our team to change the way things are done.

Clinical pharmacists are dedicated to promoting safe and effective drug therapy and enhancing patient outcomes. Applying this system to clinical services offered by the pharmacy department can have a direct impact on patient care. But how can this be done? What clinical pharmacy key performance indicators should be used? Is our team made-up by personnel from our department only?

Benchmarking experiences will be shared with attendants with the spirit of collaboration that this system is all about!

### IG3 - Hospital pharmacists facing new demands – transform your pharmacy team!

The scope of practice and the workload of the hospital pharmacist has expanded in the last decades. Traditionally, pharmacists focused on dispensing and compounding. Nowadays, we are still dispensing, we compound complex products, perform quality controls and are generally expected to be experts in all matters concerning pharmaceutical products and drug distribution. Newer tasks include bedside clinical pharmacy services where we educate patients, perform medication reconciliation and comprehensive medication reviews, are part of multidisciplinary team discussions.

Thus, the workload increases, but pharmacists generally do not dispose of or delegate tasks to make up for this. Also, pharmacists are traditionally trained to relentlessly check things (medication orders and procedures) to reduce the risks of medication errors. All of this results in a conflict between what pharmacists are used to do and what they are expected to do. Good leadership is then crucial - to prioritise tasks, to involve other members of the pharmacy team (such as pharmacy technicians) and to ensure tasks are still being performed efficiently and with adequate quality.

Within Europe there is a great variety in how hospital pharmacies are organised, in the degree and qualification of supporting personnel available and the tasks that are performed by the supporting personnel. To get all the work done, now and in the future, hospital pharmacists need to show leadership within their teams - because they simply cannot do everything themselves anymore, especially since there is often a shortage of trained pharmacists. Furthermore, hospital pharmacists need to keep up with all changes in health care and this requires a critical look on how efficient pharmacy teams are and how they could evolve in the future.

So how do pharmacists use and empower their team members in different settings and countries? Which tasks can (and should?) be delegated and what training is needed for the supporting personnel? How could new IT solutions be used?

In this session the participants will be shown examples of successful pharmacy teams where novel ideas of task sharing have been employed. In a following panel debate potential barriers and solutions will be addressed.

### W1 - Design your own “Elevator Pitch” – speed dating for hospital pharmacists

Have you ever tried speed dating? Those of you who have, know

the rules, and what really matters. The all-dominant objective is to convince, impress and get your message across in a very short period of time. Your vis-à-vis has to be amazed! And first impressions matter. Breaking it down to the hospital pharmacy setting: If you want to start a project, ask for additional funding or need the support of your management, the same criteria apply and are key to you being successful when selling your ideas. Provocatively speaking, pharmacists could improve in selling themselves and convincing others. In order to have greater impact and success, you have to be prepared, have a clear message and a clear communication strategy. Design your own elevator pitch and get your message across and sell your idea in a short time. Come and prove the opposite of pharmacists being modest and prepare to have an impact!

## SECTION 2: SELECTION, PROCUREMENT AND DISTRIBUTION

### SPD1 - New strategies to overcome drug shortages

Drug shortages are a cause of significant patient safety concerns. The results of the 2018 EAHP Medicines Shortages Survey underline that medicines shortages remain a major problem for patients in European hospitals. Clinical needs represent an estimate of an appropriate treatment strategy. In case of non-availability of the right medicine a number of risks have to be considered with the evaluations of substitute treatments. Drug product supply issues are a frequent problem affecting hospitals, healthcare organisations and health systems. Hospital pharmacists have a key-role in the pharmaceutical supply chain.

Managing drug product shortages is particularly complex for practitioners in hospitals and other acute care settings. Since these facilities routinely treat patients with acute or emergent conditions and use a significant number of medically necessary or single-source products, including high-cost new drugs and technologies.

Healthcare providers are challenged during drug shortages to ensure the provision of seamless, safe, and therapeutically equivalent drug therapy, preferably at comparable costs. Although, no leadership is seen from governments, to provide incentives and to line up interests.

Strategic planning is required for managing drug product shortages, just as it is for a physical disaster. The purpose of these guidelines is to provide a framework for healthcare teams in patient care settings that can be used to develop policies and procedures which minimise the effects of drug shortages on quality of care. The most promising approach lies in the comprehensive approach involving all stakeholders to create a network within the medicines supply (COST Action CA15105 running 2016-2020).

The key to reduce adverse effects on patient care, healthcare organisation costs and prevent problems from escalating into crises. Can be found in the efficiency of information gathering, effective teamwork when assessing options, ability to rapidly make changes in information systems, and communication with patients, providers and administrators.

Hospital pharmacists can (and must) take a leadership role in the efforts to develop and implement appropriate strategies and processes for informing patients and all health care practitioners about shortages and ensuring the safe and effective use of therapeutic alternatives.

### SPD2 - Medicines for every disease – Return on investment vs unmet clinical needs

It is not without controversy that we require new drugs in those indications with an unmet need in therapy. The pharmaceutical industry is in a position, either alone or together with university research, to address this unmet need to the benefit of all patients.

However, we see that the pharmaceutical industry is only focussed on a few indications, coupled with extremely high prices making affordability and access a significant challenge. Even with campaigns like “The 10 [antibiotics] x ‘20” from the Infectious Diseases Society of America (IDSA) these goals have not been realised.

The pharmaceutical industry complains of low investment returns and an unpredictable and often infeasible regulatory approval pathway, this in turn has caused many companies to leave indications that don't bring the desired return on investment. Conversely, we see companies focussed on biologicals, biosimilars and generics primarily in the field of oncology drugs for their developmental pipeline.

What options are there to overcome this situation and have those pipelines filled in indications where we find an unmet need?

This seminar attempts to give an answer to this question by presenting different viewpoints from two different stakeholders in the health system: pharmaceutical industry and health faculty/drug approval body.

### INT1 - The pros and cons of the telepharmacy

The hospital pharmacy as a key actor in safety and providing cost-effective medicines and medical devices for inpatients and outpatients. Face increasing pressure to look for new ideas and methods to do so. IT technology will affect pharmacy and medication use systems. Telepharmacy is the delivery



of pharmaceutical care via telecommunications to patients in locations where they may not have direct contact with a pharmacist. Telepharmacy services include drug therapy monitoring, patient counselling, prior authorisation for prescription drugs and monitoring of formulary compliance with the aid of teleconferencing or videoconferencing. Remote dispensing of medications by automated packaging and labelling systems, the cabinet medicines used after-hours pharmacy access, can also be thought of an instance of telepharmacy. Telepharmacy services can be delivered at retail pharmacy sites or through a hospital pharmacy. The implementation of telepharmacy varies by region and jurisdiction. Factors including geographical laws, the regulations and economic influence affect its implementation. Let us look at the North Dakota Telepharmacy Project which was established in 2002 for the purpose of restoring, retaining, or establishing pharmacy services in medically underserved rural communities through the use of telepharmacy technology.

The benefits and disadvantages of telepharmacy should be considered when assessing whether to upgrade patient services. Patients who live in remote locations or who are homebound or just can't take time off from work, can access care virtually. Video conferencing, smartphone apps and online management systems connect more patients with providers than ever before.

But what about the direct contact with a hospital pharmacist and adherence to pharmacotherapy? And what about vulnerable groups such as elderly or young patients? And what about the computer- based medical records? As they can be hacked, illegally downloaded, lost in a crash, etc.

## SECTION 3: PRODUCTION AND COMPOUNDING

### PC1 - Lay back. Your 3D printer is doing your work

There is a need for tailoring medicines according to a patient's specific needs due to his/her genetic profile, phenotypic response, and pathophysiology. To enable the manufacturing of individualised oral medication in a scalable manner, new technologies such as multi-dimensional printing (3D printing or 3DP) might be the suitable option for pharmaceutical manufacturing.

Traditional galenic manufacturing and compounding comprise sequential manipulations to build a homogeneous mixture of powders, suspensions, or solutions from various amounts of starting materials. With 3D printing technology, additional potential is provided to production and preparation. 3DP is developing towards a mature and promising technology for coping with challenges arising from highly precise dosing, coating of surfaces, production of slow-release galenic forms, formulation of gastric acid-resistant coating, complex release kinetics formulations, and easily dissolving hydrogels for dysphagia patients or for elderly patients who have difficulties swallowing.

3D printing can even be applied to the construction of medical devices. As printed layers are of minor thickness, 3D printing creates opportunities to design and produce medication with specific shapes, colours and flavours, wound dressings, implants, reconstructive and prosthetic surgery mouldages, prosthetic dentistry devices, or the "poly pill".

3DP related terminology such as inkjet printing, powder bed printing, Fused Deposition Modelling, hot melt extrusion (the two 3D printing techniques with the greatest progress towards personalized pharmaceutical tablets), will be presented.

Although 3D printing suffers from several limitations, as it is still slow and printed layers have to dry before a next layer can be added, there is obviously a huge potential to automate production, even in small-scale productions. Not to forget: Automation might provide further protections to technicians from exposure to toxic ingredients.

### PC2 - GMP - more than a 3-letter word

In 2016 the EU updated their resolution on quality and safety for medicinal products prepared in pharmacies, which defines the standards for the art of compounding. Just like the pharmaceutical industry has to comply with Eudralex GMP, the medication prepared in the hospital pharmacy must meet the requirements of Good Manufacturing Practices (GMP) or Good Preparation Practices (GPP), also known as PIC/S PE009-04 and PIC/S PE010-04. The goal of this resolution is to close the gap between pharmacy and industrial preparations and to lower the variation between the member states.

Therefore, hospital pharmacists started to invest in a better preparation environment but many of them underestimated the scope of a quality management system (QMS). It takes more than just a validated cleanroom with a high-tech air treatment system to deliver a quality product.

All steps in the processes should add to the quality and safety based on a risk assessment and a plan-do-check-act cycle (PDCA). The personnel must be adequately trained. The environmental parameters (temperature, humidity, pressure, number of particles, ...) must be controlled. Follow-up on bioburden (air sampling, sedimentation plates, Rodac plates, ...), operator skills (fingerprints, media fills, video training, ...) and quality of the raw materials and final products is mandatory. And for batch productions a full product dossier is a requirement.

Besides the positive impact on the quality of the preparations all these measures result in a higher operational cost and a longer lead time for this service. Therefore, hospitals must standardise their formularies and start to cooperate in networks to keep compounding cost-effective. All this requires prescribers to think and work differently. As not every personalised preparation is available on the fly. Other galenic formulations, dose-banding and standardized formularies might bring solace to guarantee better care. But how far can we go and when does one become a manufacturer instead of a compounding hospital pharmacist?

This seminar will focus on requirements, opportunities, limitations, affordability and on a pragmatic approach of GMP/ GPP in a hospital pharmacy.

## INT2 - Chemotherapy dose banding - development and implementation

Chemotherapy dose standardisation is a system where doses of intravenous anticancer therapy calculated on an individual basis are rounded up or down to predetermined standard doses.

Historically, intravenous chemotherapy doses have been calculated for individual patients based on weight or body surface area. This led to a large number of similar, but not identical, products being made as bespoke orders within compounding units. These small product differences significantly increase time and costs of preparation and drug wastage.

Standardisation of chemotherapy doses (dose banding) offers an avenue for achieving improved value in this area with benefits for patients, providers and commissioners. The discrete dose bands lie within 6 % of the patient's calculated dose for standard chemotherapy drugs and 10 % for biological drugs. Available products can then be standardised to match the recommended doses. There are currently 54 chemotherapy drugs with approved dose-banding tables in the UK.

Alongside standardised doses, the next step of the initiative is to standardise chemotherapy products by diluent, volume and labelling. This is the precursor to accessing ready to administer chemotherapy.

Chemotherapy dose standardisation system was developed for adult patients, but the potential impact of dose banding for systemic anti-cancer therapy in the paediatric setting based on pharmacokinetic evidence has also been investigated.

## SECTION 4: CLINICAL PHARMACY SERVICES

### CPS1 - Combining centralised and bedside clinical pharmacy

Centralised or "back office" clinical pharmacy is often described as a pharmaceutical analysis of patient specific medication orders, by pharmacists based in the hospital pharmacy. Electronic clinical decision support systems (CDSS), basic and more advanced, can play a role; screening all orders and extracting the ones needing extra attention. Identified medication errors and risk situations can then be communicated to the prescribers via the prescription software, by e-mail or by phone.

In ward-based or "bedside" clinical pharmacy, the pharmacist, who is integrated in the decision-making team, typically performs standardised services for all patients, such as medication reviews and medication counselling at discharge.

This seminar will provide an overview of the recent developments in back-office clinical medication surveillance. Integrating advanced clinical rules, in the form of algorithms, into computerised physician order entry (CPOE) systems, is one way of identifying orders that are erroneous or propose risks. The new advanced systems combine information from several sources such as laboratory values, diagnoses and body weight (from individual patients' electronic health records) with the information in the CPOE. This enables the generation of alerts that are more clinically relevant and patient specific compared to basic CDSS alerts (typically drug-drug interaction warnings).

The seminar will present strategies on how to integrate these digital alerts into the daily practice of ward based clinical pharmacists - to achieve synergetic effects and develop pharmacy practice. One hypothesis is that alerts, generated digitally, may be more effectively addressed by ward based clinical pharmacists, working daily with the physicians on the ward, than by pharmacy-based pharmacists - and thus have a greater impact on patient safety. The seminar is directed both to pharmacists practicing (or considering the introduction of) clinical pharmacy - centralised from the hospital pharmacy, bedside on the wards or in a combination of both methods.

### CPS2 - The role of a Hospital Pharmacist in Addressing Health Literacy

Health literacy (HL) is defined by the World Health Organisation as "the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health". There are direct links between individual health literacy and (i) self-management skills, (ii) treatment adherence (including proper and sustained use of prescribed medication regimens) (iii) use of preventative services, (iv) health outcomes, (v) hospitalisation rates, and (vi) mortality risk.

While considerable attention has been paid to promoting health literacy in ambulatory care settings including pharmacies, there

has been less attention directed at inpatient settings despite the critical role hospital pharmacists play to ensure patient safety and that medications are optimised for each patient. Yet transitions from the hospital back to the community are often problematic; 1 in 5 patients experience adverse events within 3 weeks of hospital discharge. One of the major root causes are preventable, unintentional medication errors. Taking medications safely is essential to achieve optimal therapeutic benefit and reduce harms. Yet studies have repeatedly found that patients are often poorly informed about their medication's risks, benefits and instructions for use. Few mechanisms exist in clinical practice to monitor patients' medication use, leading to dosing errors and inadequate adherence. Our session will provide an overview of how hospital pharmacists, in particular, can apply their unique skillset and vantage point - upon hospital admission, duration of stay and at discharge - can promote patients' safe medication use and adherence once they transition to home.

## CPS3 - Antimicrobial Resistance - did we lose the magic bullet?

Antimicrobial resistance is a global threat. Everybody can read on this problem. But if we ask ourselves as experts, we have to acknowledge that we have perhaps not performed a perfect job ourselves. The implementation of Antimicrobial Stewardship as one possible measure is still not taking place across European countries. Antibiotic consumption analysis struggles in getting the data from ambulatory and hospital care in order to have the broad overview. Resistance rates are rising, we only seem to control the spread of resistant bacteria in few infections. Risk factors like use of antibiotics in non-infection situations (men and animal) has not significantly changed in the last years.

The speakers will give an overview on the different problems driving antibiotic resistance and will then analyse the different measures on local as well as on a global basis to conquer antibiotic resistance.

## CPS4 - Good morning pharmacists! Case studies on antimicrobial resistance

Hospital Pharmacists are an important part of the multidisciplinary team implementing "Antimicrobial Stewardship Programmes" in hospitals. Hospital pharmacists are therefore required to deal with infections, and they should know about symptoms, diagnoses and different approaches to management of infections.

In this seminar hospital pharmacists will present a clinical case focusing on an infectious disease. This will be followed by a discussion led by a panel of experts where the different therapeutic approaches will be discussed in depth. This will be an interactive session and participants will be involved in discussion and putting forward their recommendations.

## INT3 - Peri-operative pharmacy services and the enhanced recovery pathway

An operating room (OR) pharmacist is a great asset for the multidisciplinary team delivering care to the patient having surgery. Their primary tasks are to support the hospital's goals on quality and safety, to develop perioperative treatment algorithms and to collaborate with the perioperative team to optimize medicines use in a patient-centered way. This last task is achieved through reconciliation and review of medication history, in particular for antimicrobial stewardship and pain management. In those countries where medical devices are under hospital pharmacy management, pharmacists contribute in their selection and management process. In addition, in many hospitals, the concept of Enhanced Recovery Pathway (ERP) has been introduced. ERP is a modern approach that helps people recover more quickly after major surgery, implementing evidence-based interventions to mitigate the undesirable effects of the surgical stress response. The multidisciplinary approach is also focused on educating, informing and coaching patients.

This interactive session will describe, through real cases, the contribution of the pharmacist to the OR team, with a focus on the role of the pharmacist in ERP.

## W2 - Critical care multidisciplinary team - the role of the pharmacist

It has been proven that the pharmacist plays an important role in the critical care multidisciplinary team (MDT). The pharmacist continuously reviews and optimises medications according to changes in the patient's clinical status and identifies drug interactions or adverse drug events. Due to the significant costs of critical care medications, the pharmacist must also provide cost-effective treatments.

This interactive workshop will teach participants how to develop a therapeutic plan and monitor response in critical care patients, improve patient safety and evaluate cost effectiveness. Participants will apply evidence-based practice across a variety of critical care scenarios and present their best-practice recommendations to a simulated critical care MDT.

The workshop is directed at existing critical care pharmacists and those who are considering the critical care specialisation as part of their future hospital career.

### W3 - Clinical prioritisation tools to improve patient care

The number of patients admitted to hospital is constantly rising but there is not a corresponding increase in the number of hospital pharmacists and therefore a proper review of all patients admitted cannot be guaranteed.

There are patients who clearly benefit from a pharmacists' input more than others, for example due to polypharmacy or comorbidities. To avoid such high-risk patients being overlooked, the current practice of ward-based reviews of patients by pharmacists needs to change. Instead, high-risk patients should be prioritised irrespective of which ward they are admitted to.

The development, validation and use of tools that allow the prioritisation of the patients according to their risks have been shown to be effective in giving appropriate pharmacist care to the patient with the greatest need. This interactive workshop will teach participants how to use clinical prioritisation tools, both in hospital where electronic prescribing is present and those where it is not. The workshop is directed at both pharmacists who are familiar with clinical prioritisation tools and those who are considering introducing clinical prioritisation tools as part of their future pharmaceutical care.

## SECTION 5: PATIENT SAFETY AND QUALITY ASSURANCE

### PSQ1 - Involve patients in improving their care!

It is increasingly recognised that patients and carers can play a key role in their own healthcare, including safe use of medicines and identifying aspects of unsafe or poor care. This session will focus on two aspects of this role.

First, pharmacovigilance aims to enhance patient care and safety regarding the use of medicines through effective lifecycle monitoring. Information on adverse drug reactions (ADRs) under real-life conditions allows for a comprehensive assessment of the risk-benefit profile of medicines. Patient reporting of ADRs has shown to provide new information and perspectives on ADRs that would otherwise be inaccessible. So, how can hospital pharmacists support and encourage patients to report ADRs? What is known of the cooperation pharmacist-patient regarding drug safety? What strategies and processes can be used to support the contribution of hospital pharmacists in pharmacovigilance? The first part of this session will therefore outline the evidence regarding the contribution of patients and carers in identifying and reporting ADRs, highlighting cases of safety signals and the impact of ADRs on patients' lives. It will also explore the role and participation of hospital pharmacists as key safety officers, helping in the detection of ADRs and engaging with patients to enhance patient care and safety in relation to the use of medicines.

Second, while hospital pharmacists are more involved in, and even leading, medication safety initiatives, patient or carer involvement in medication error reporting and learning is not yet widespread. The second part of this session will therefore summarise the evidence for patients and carers being able to identify medication errors in the hospital setting, being willing to raise their concerns with healthcare professionals, and being willing to report incidents of concern. It will then consider patient and public involvement in the analysis of medication error data, both in practice and as part of research. Finally, the potential role of hospital pharmacy staff in encouraging and supporting such patient, carer and public involvement will be explored.

### PSQ2. When Chatbots meet patients and can assist hospital pharmacist!

Information technology is on the rise and is changing the way patients; physicians and hospitals pharmacists interact together. Digital health interventions have the potential to support patients all day long and connect them to medical staff thanks to smartphone apps or wearable devices. A chatbot is a software that interact with users by using an algorithm, with or without human back-end intervention. Chatbots could be a solution to follow up with patients during their patient pathway and save time for health care providers and hospital pharmacists. They create a dynamic interaction, are easy to use, and simulate a human conversation through text or voice via smartphones or computers. Clinical pharmacy services should continuously evolve to optimize patients' outcomes. Hospital pharmacists should be aware of the very promising potential application and should considered them to enhance the efficacy of their interventions.

In this session, we will discuss the available literature that demonstrates the power of chatbots and discuss the few examples of their applications. We will also describe the ongoing trials evaluating chatbots and discuss the challenges that remain to be addressed for a successful implementation. Finally, we will demonstrate that it is possible to obtain support for hospital pharmacists through a chatbot and to improve patients' outcomes.

### PSQ3 - Transfer of care - mind the gap

Transfer of care is integral part of a patient's journey throughout a health care system. Managing the transition of patients effectively from the primary care into hospital care and vice versa is essential. Transitioning between hospital and primary care settings is recognised as a high-risk scenario for patient safety. The impact of problems include increase in mortality, morbidity, adverse events, delays in receiving appropriate treatment and community support

as well as preventable admissions to hospital.

Several initiatives have been described to improve the transfer of care, many of which involve pharmacists. Medication reconciliation, medication therapy management, education of patients are examples of pharmacists' interventions that could improve the care during transmission. Unfortunately, many of the interventions are mostly focused on either the inpatient or outpatient settings with a lack of collaboration between community and hospital pharmacists.

During the workshop we will introduce a model referral system which was developed to improve the communication and transfer of information between hospital and community pharmacy. The new system model helps to identify and refer to community pharmacy patients with a special follow-up need after a discharge. Community pharmacist receives the same information as the general practitioner about the hospital treatment, discharge changes and follow-up plans. Pharmacists in hospital feel assured that patients will get the appropriate support with a treatment. At the end it can save time at the hospital and community, improve productivity, patient safety, medicines adherence and empower hospital and community pharmacy professional to work together.

## SECTION 6: EDUCATION AND RESEARCH

### ER1 - Hospital pharmacy career - By design or left to chance?

For many one of the most significant life events, a career, is left to chance. We may start well, a degree in pharmacy followed by hospital specialisation. After which our career and development is left to chance.

It is possible to actively design your career pathway. This seminar sets out an argument that would support a hospital pharmacist to employ career pathway ownership. It will argue for having a systematic approach to gaining, developing and maintaining competencies in a way that stands peer review. Added to which is taken evolving experience together with underpinning learning.

This dynamic learning and guided self-assessment would be under the supervision of a mentor resulting in the creation of a continually evolving portfolio of evidence. This portfolio of evidence would have an immediate relevance, enabling an objective assessment of their expertise to be arrived at and in addition a longer-term developmental aim to be worked towards.

### W4 Pharmacists - to prescribe or not to prescribe, that is the question...

A legal framework has enabled pharmacists to gain a competence-based qualification to prescribe since 2003 in the UK. Initially, 'supplementary prescribing' allowed pharmacists to prescribe within an agreed patient-specific clinical management plan. Independent prescribing was subsequently introduced in 2006 being defined as: a pharmacist responsible and accountable for the assessment of patients with undiagnosed or diagnosed conditions and for decisions about the clinical management required, including prescribing.

So how have prescribing roles developed following this significant legislative change and what influence has this had on patients and the healthcare system in the UK? This workshop will share a clinical pharmacists' journey developing their role in cardiology to become an independent prescribing practitioner. We will explore what additional skills were required, barriers encountered and what measurable impact this had on patient care and the wider local health economy.

Despite the success story of pharmacist prescribing in the UK, several countries still do not have, or are likely to have, comparable structures to enable pharmacist prescribing. However, hospital pharmacists are considered an important member of the multidisciplinary team and are instrumental in optimising the use of medicines. To enable this, many elements are needed such as effective communication, good relationships with other members of the team and the development of efficient individual medication processes. This workshop will explore how this works in Germany - a country where the possibility of legal pharmacist prescribing is unlikely to happen anytime soon.

By comparing and discussing the benefits as well as the 'slings and arrows' of these different models for the integration of clinical pharmacist's recommendations into the prescribing process, this workshop aims to highlight how to implement pharmacist prescribing directly or 'indirectly' into patient care. Participants will be empowered to develop pharmacist prescribing services that best fit the current legal status of their respective countries as well as the settings of their hospitals.

### W5 - Design your career here!

For many one of the most significant life events, a career, is left to chance. We may start well, a degree in pharmacy followed by hospital specialisation. After which our career and development is left to chance. Yet, It is possible to actively design your career pathway.

In this workshop you will be led through constructing

an active work portfolio beginning with a competency framework. Then layering on relevant experience from your own day-to-day work. Followed by identifying supporting education, training courses and programs, as well as any potential issues that might be raised with a mentor.

Finally, examples of building a competency-experience future pathway will be developed.

## STUDENT PROGRAMME

### Healthcare professionals' collaboration as a key to patient-centred care

Patients' needs have become more and more complex, requiring the collaboration of multiple health workers from different professional backgrounds together with patients, families, carers, and communities to deliver the highest quality of care. Interprofessional collaboration is the key to avoiding errors attributed to poor communication and ineffective teamwork. However, due to the cultural differences that exist between the different professions making up the health workforce, collaboration is not always easy. To better prepare the future workforce, the development of interprofessional skills and collaborative practice should be part of every pharmacy students' education.

Despite the benefits of interprofessional collaboration for patient-centred care, hospital pharmacists can encounter obstacles at their workplace. During this year's student programme the hospital pharmacists of tomorrow will explore the benefits and obstacles of collaborative work to promote understanding of the complementary skills of different healthcare professionals, exploring how any barriers can be overcome. Efforts to improve collaboration and the relationship of different professionals working in the hospital environment must focus on the strategic introduction of agreed changes in working practices as well as in the education and training of pharmacists. Collaboration with other hospital workers is seen as a key part of improving patient-centred healthcare.

## OTHER SESSIONS

### Synergy Satellite events, hot topics...

Audio and Video presentations  
from the Barcelona Congress  
are now available via the  
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